

# SAP Detailed Design

**Requested by:**

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2/28/03

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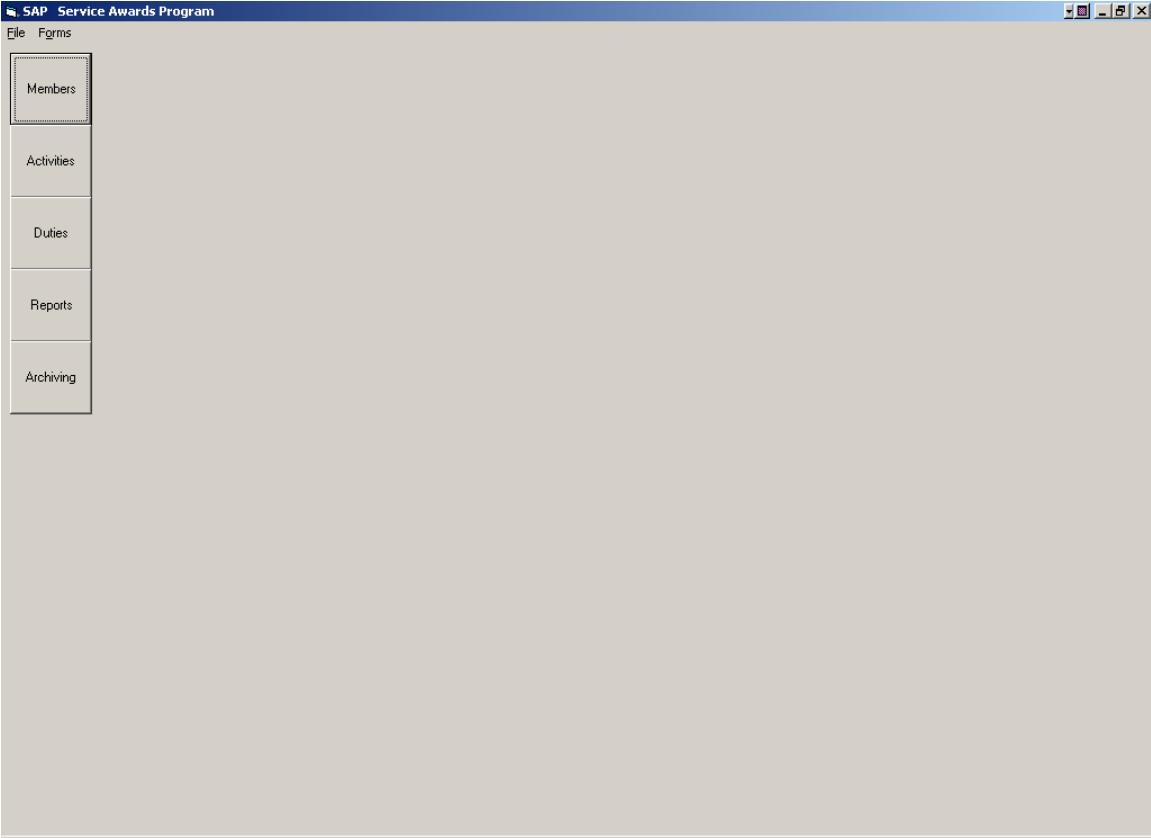
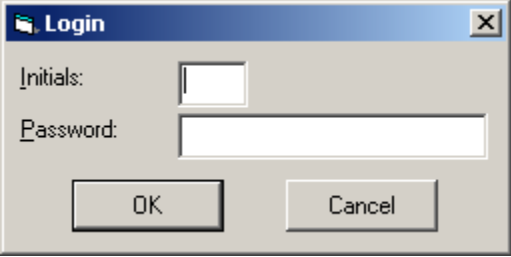
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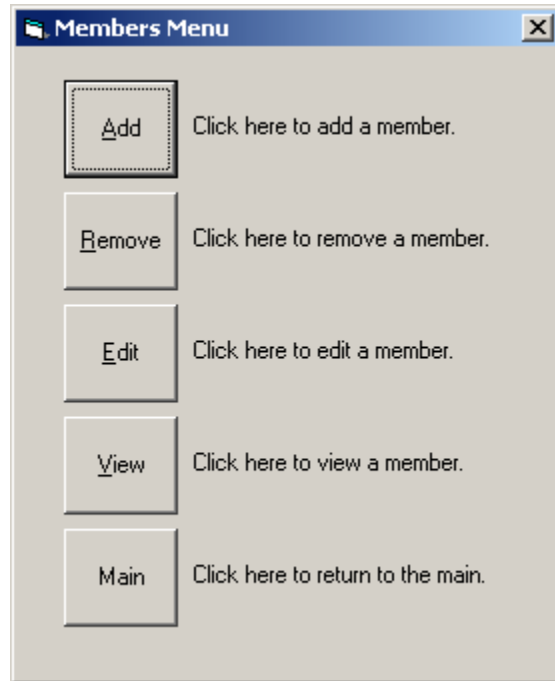
## **Project Overview**

The SAP (Service Award Program) will be a software package that works in conjunction with a Microsoft Access database. This package will allow for information to be easily accessible, data entry to be performed more efficiently, and making point calculations an automated task provided by the system. This system is being developed in cooperation with our client, Dr. Timoth Lederman, on behalf of the Castleton Volunteer Ambulance Service. Operators of the SAP system will interface with menus, forms, and reports. All of these attributes of the system will be developed through the use of Microsoft Visual Basic 6.0, and Microsoft Access. To summarize, this system will make the management of data much easier than was ever possible before, along with creating a product that will be timely and efficient.

**Section 1: External Design Specifications**

**User Displays and Report Formats**





**Add New Member**

Name

First  MI  Last

Address

Street

City  State  ZIP

Phone Numbers

Home    Work    (Optional)

Personal Information

SSN  DOB  Age

Member Standings

Type  Changed

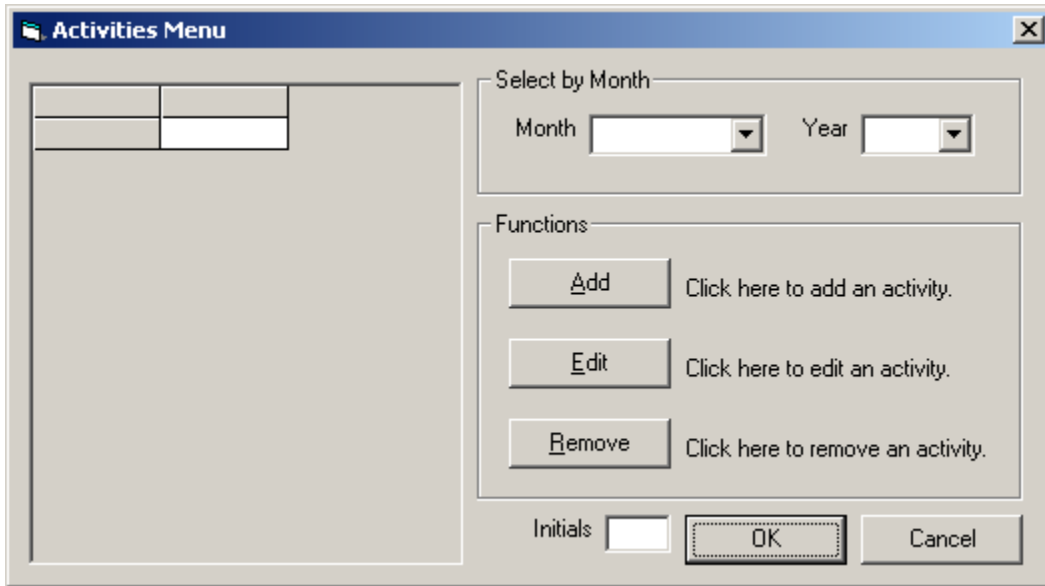
Status  Changed

Officer Changed

Authentication

Initials

Add Cancel



**Activity**

Member Names

Activity

Title

Location

Date / Duration

Single     Multiple   

Date     Duration  hrs.  mins.

Click Select All Active to select all active members or click Select All to select all members.

   Click to clear all selected names.

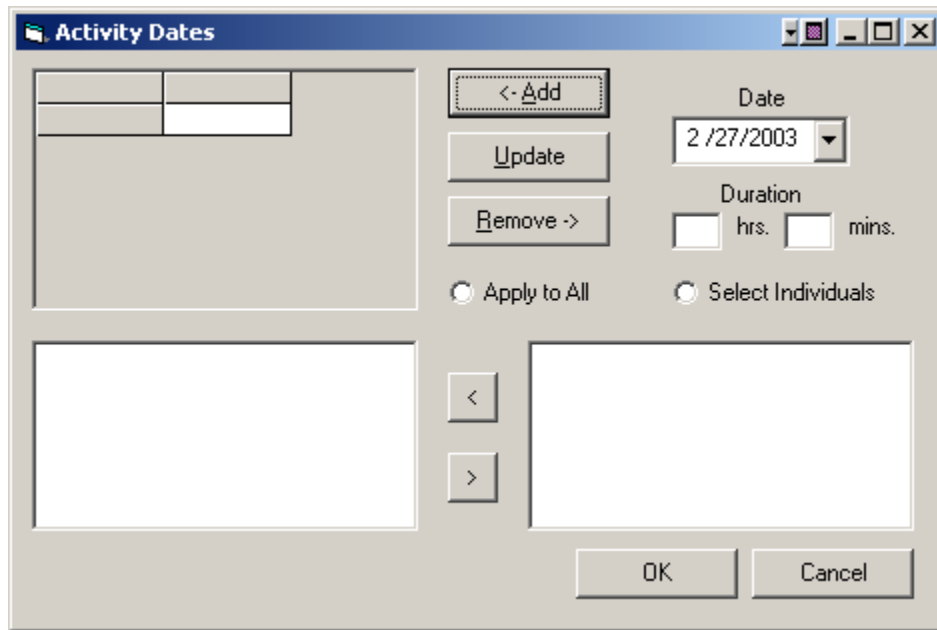
   Click to see list of all attendees.

Comments

Authorization

Initials





**Duties**

Name

Click here if you would like to add an activity for this member.

Select Month

Month  Year

Calls per Month

Duty Entry

Day

Duration  hrs.  mins.

Authorization

Initials

**Create Report** [X]

Select Report Type

Squad     Individual     Service Awards Program Annual Report

Time Period

Year-to-Date     Prior Year    [Dropdown]

Squad Report For:

All members  
 All active members  
 All members who've earned retirement credits

Individual Report For:

[Select Member Name] [Dropdown]

Generate    Cancel

**Archiving** [X]

Select the location you wish to store your archive.

[Text Field]    Browse

OK    Cancel

## User Command Summary

### Log In

The user may enter in their initials along with the system password and then click Ok. They will then enter the main menu. If the user opts to click the Cancel button, the program will then close.

### Main Screen

The user is prompted with several options. If the Members button is clicked the user will be brought to the Member profile sub-menu. If the user clicks on the Activities button, it will bring them to the Activities Menu. If they click on Duties, it will bring them to the Duty Form. By clicking on Reports, the Report Form will be displayed. If they click on Archiving, it brings the user to the Archiving screen. The majority of the main screen will be occupied by the generated reports.

### Members

The user can choose to Add, Remove, Edit, or View a member's information. If they click on Add, the user is brought to the add member form. If they click Remove, they are brought to the Remove Member screen, and if the user clicks on Edit, they will be taken to the Edit User form. The member's profile can be viewed by clicking on the View button. The user may also choose to return to the Main menu by clicking on Main.

### Activity Menu

If the activity the user wishes to enter information about is not shown in the column displayed on the left of the screen, which is searchable by month, they can then choose to Add a new Activity by clicking Add. A new activity form will be displayed.

If the activity is displayed in the column, the user can edit the activity information by selecting the activity and then clicking Edit. The user will be taken to an Existing Activity Form.

If the user wants to remove an activity from the database, they can select the activity and then click remove. After the user is done making changes, they will click Ok and return to the Main Menu. The user can choose to return to the Main Menu at any time by clicking Cancel.

### New Activity Form

The user enters in the activity type, title and location. Then selects whether the activity took place over one day or over several. If the user selects a single date, they will then enter in that date. If they select multiple, they will then select edit dates and enter in the dates the activity took place. The user also has the option of applying the additional dates to all attending members, or individual ones. After the dates are entered in both instances, the user will then select the member names for the entire activity. The user also has the option of selecting single users by clicking on each individual name, by selecting all members and selecting all active members by clicking on their respective buttons. There is also the option of clearing all names that have been selected by clicking Clear All. The user may also view the names that have been selected by clicking on View Attendees. The user then enters their initials, and when all information has been entered,

clicks OK. The user will then be taken back to the Activity Menu. At any point, the user can return to the Activity Menu by clicking Cancel.

### **Existing Activity Form**

The user can edit any information pertaining to a specific activity on this form. All steps in the New Activity Form apply to this form as well. At any point, the user can return to the Activity Menu by clicking Cancel.

### **Duties**

The user enters in all Duty Data and then clicks add. The added duty information will be displayed to the user. The user can then enter in more duty data until they have entered all the duty for the member. To commit the data to the database, the user will click Update and the database will be updated. The user is sent a verification message and will then return to the duty form. The user can remove any duty data by selecting the duty in the display screen and then clicking Remove. The user will be giving a remove verification and then go back to Duty Data. If the user wants to enter in a full activity, they can enter the date in and then select Activity and the user will be taken to the New Activity form.

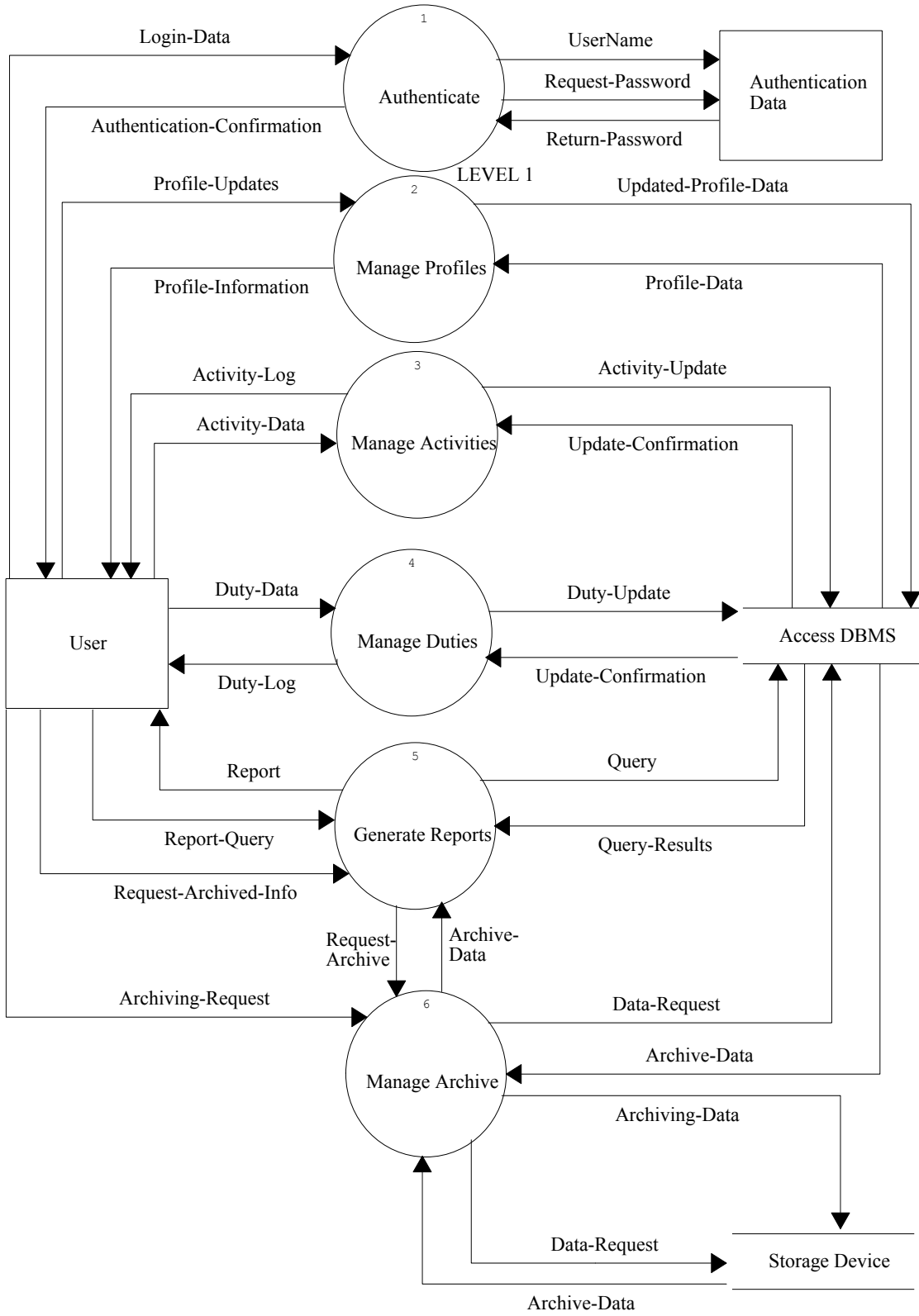
### **Reports**

The user can request several reports. They can request an Individual Report, a Squad Report or a Service Awards Program Annual Report. To view an Individual Report, the user will click on Individual box, select the year that they want the report for, and the member the report is for, then click Generate to create and view the report. If the user would like to request a Squad Report, they will click on the Squad box, select the year they want the report for, type of squad report they which to view, and click Generate to create and view the report. If the user would like a Service Awards Program Annual Report, they would click on the Service Awards Program Annual Report box, select the year of the report they wish to view, and again click Generate to create and view the report.

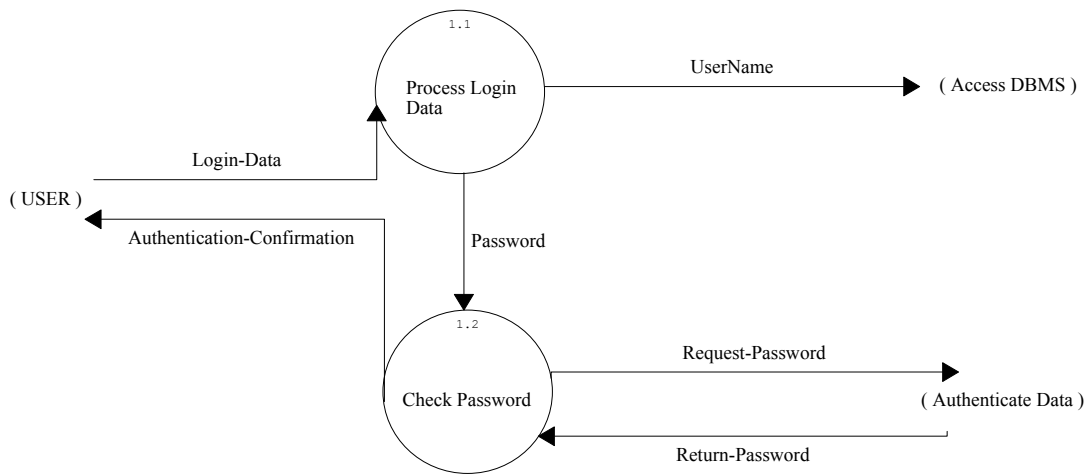
### **Archiving**

The user will be prompted to select the device where they want to store the database. The database will be stored as a Microsoft Access Database with an \*.mdb extension. They will click Ok, and receive a verification message when the storage is completed or an error message if there is a problem with storing the data.

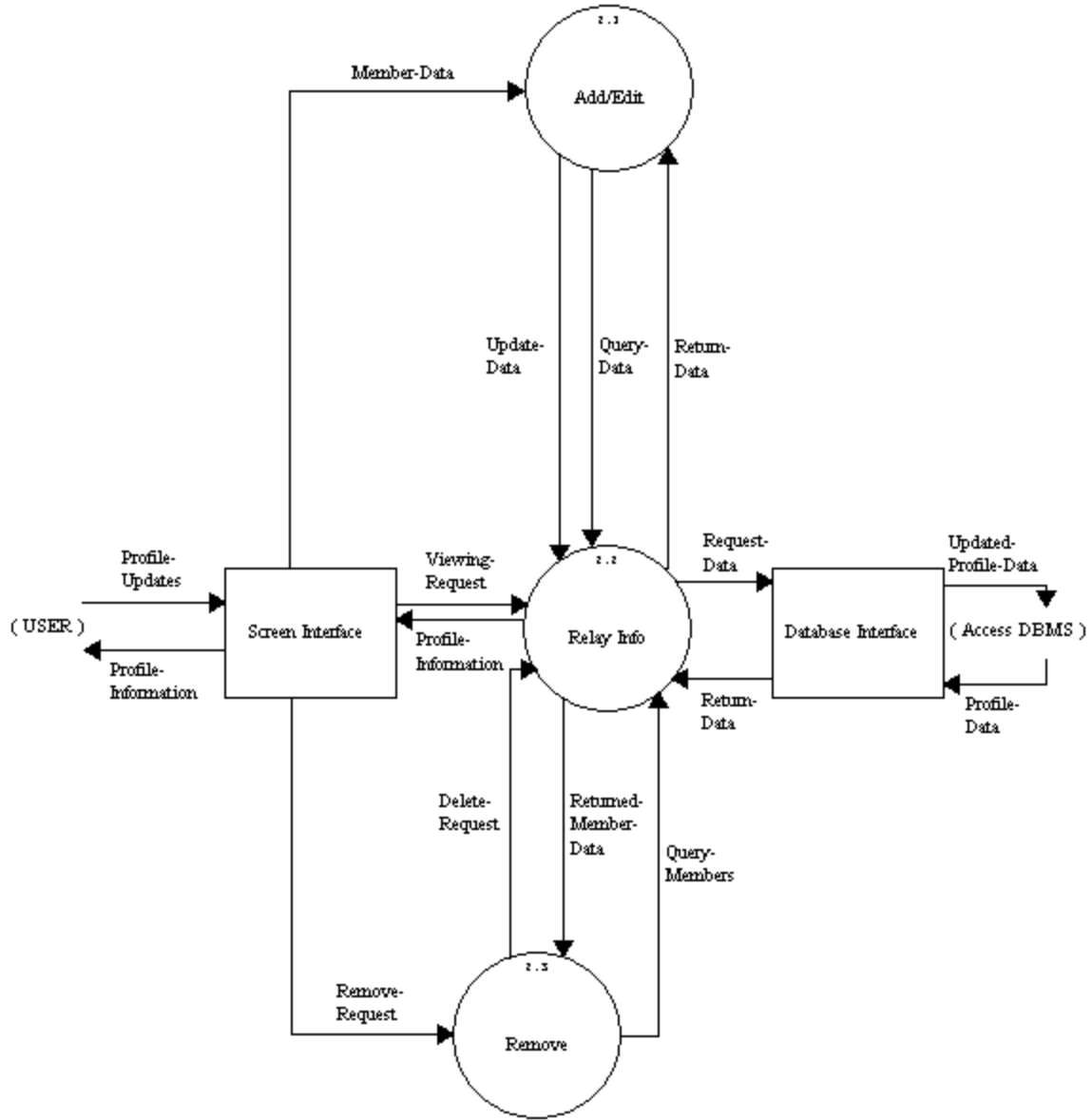
## Detailed Data Flow Diagrams



# AUTHENTICATE

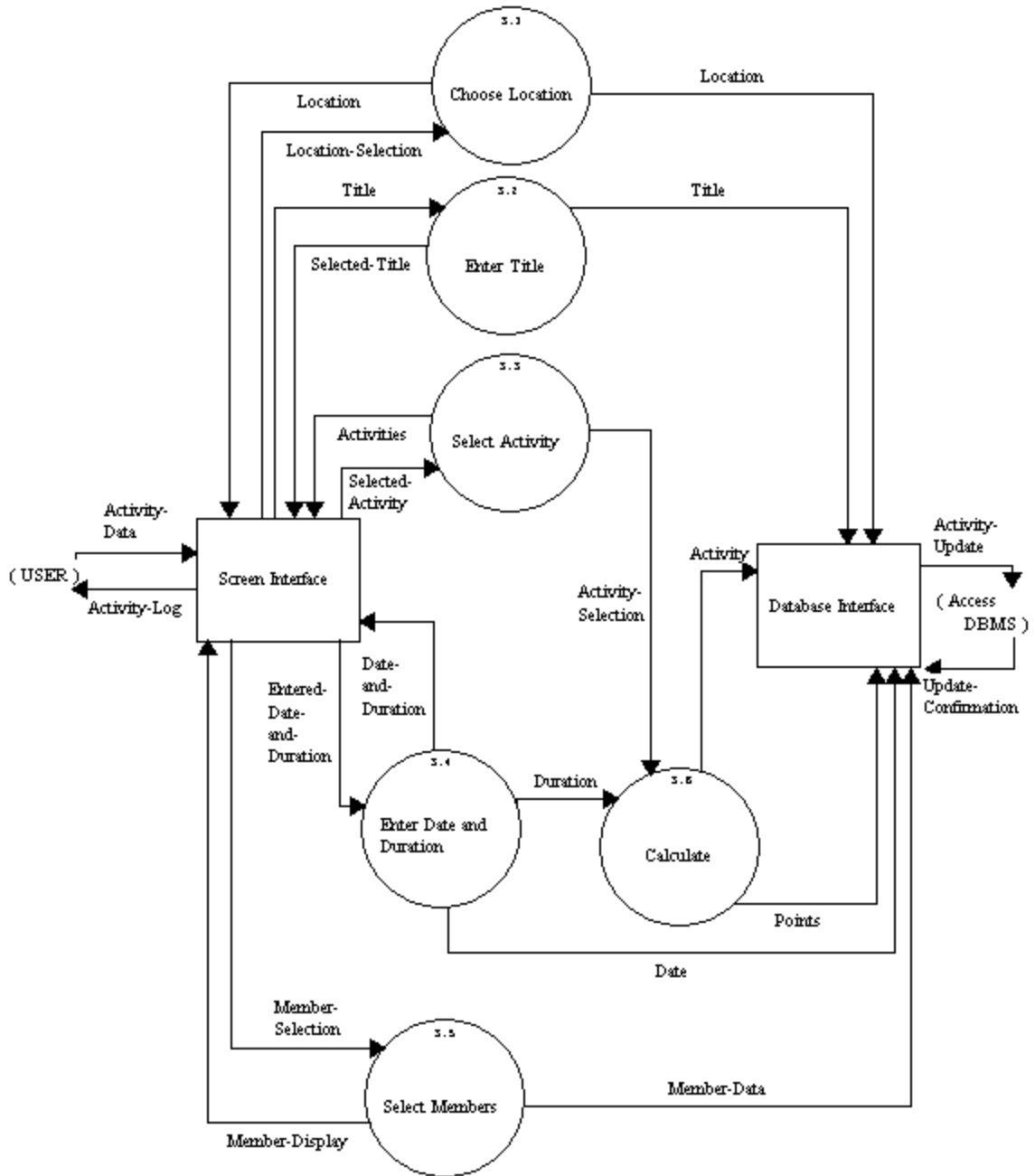


MANAGE PROFILES

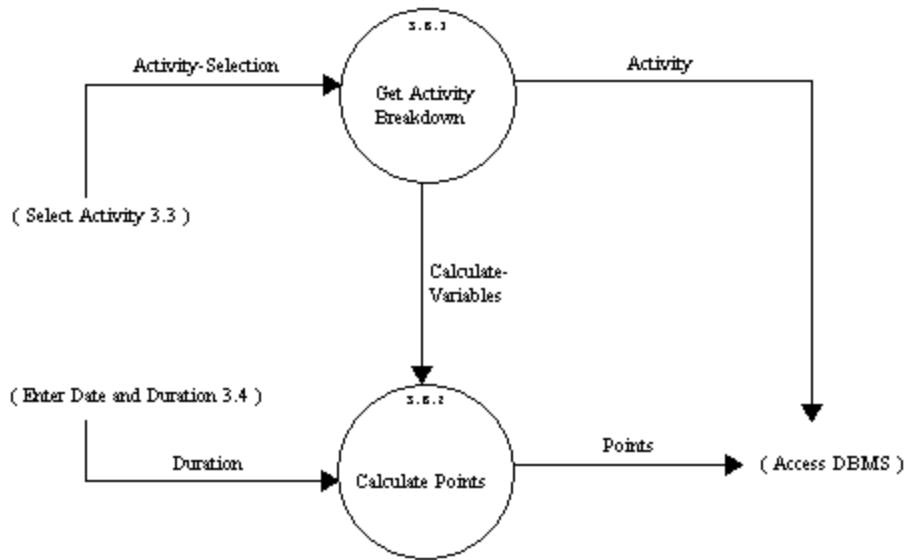




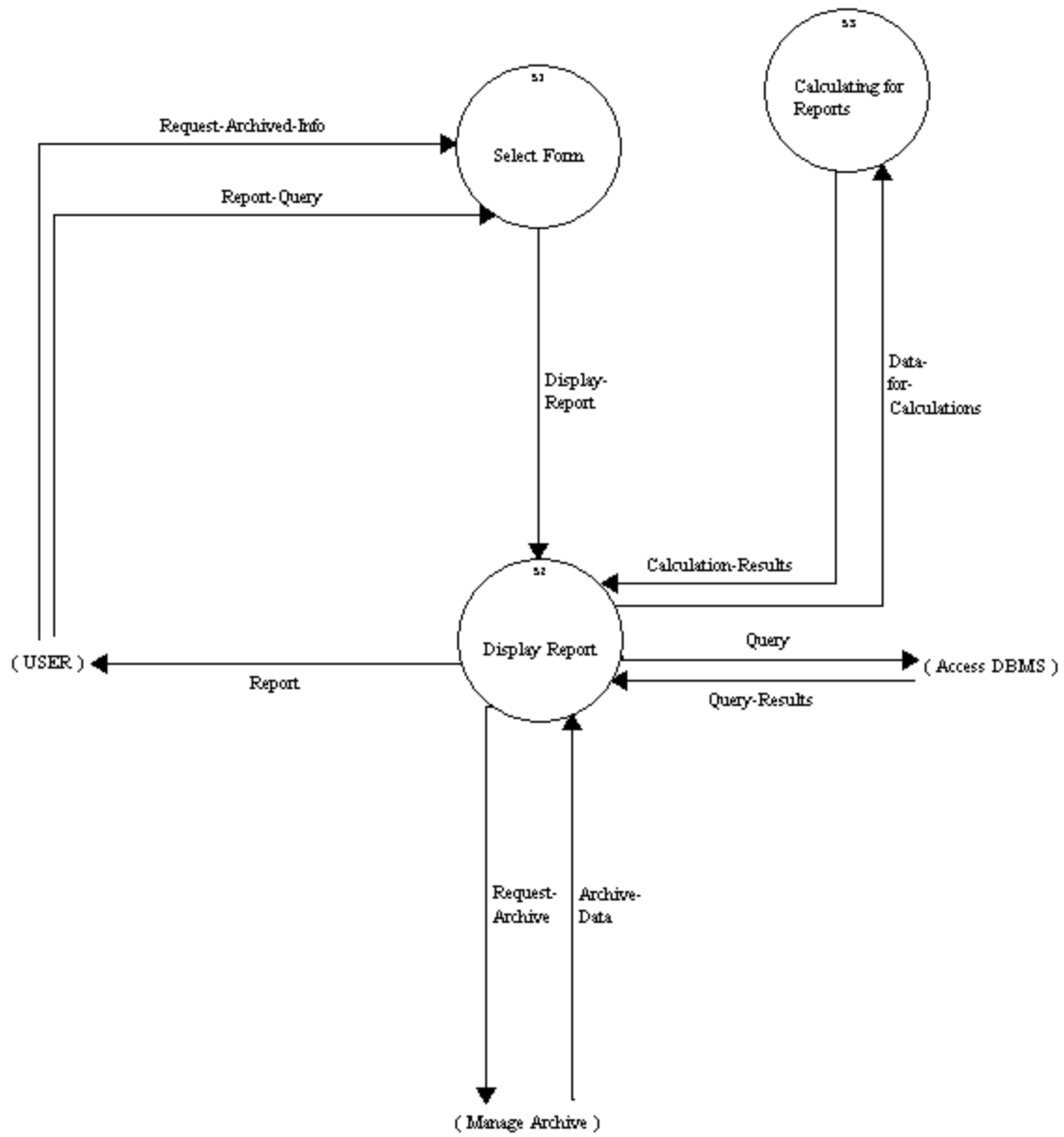
MANAGE ACTIVITIES



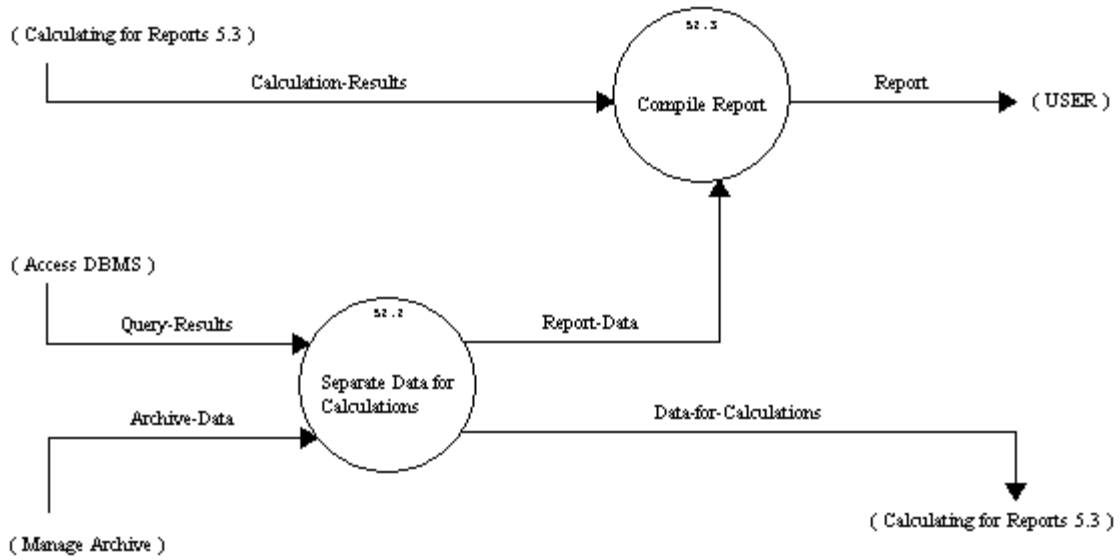
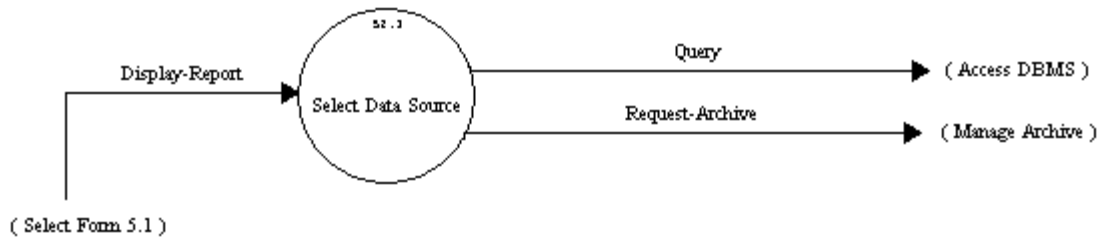
CALCULATE



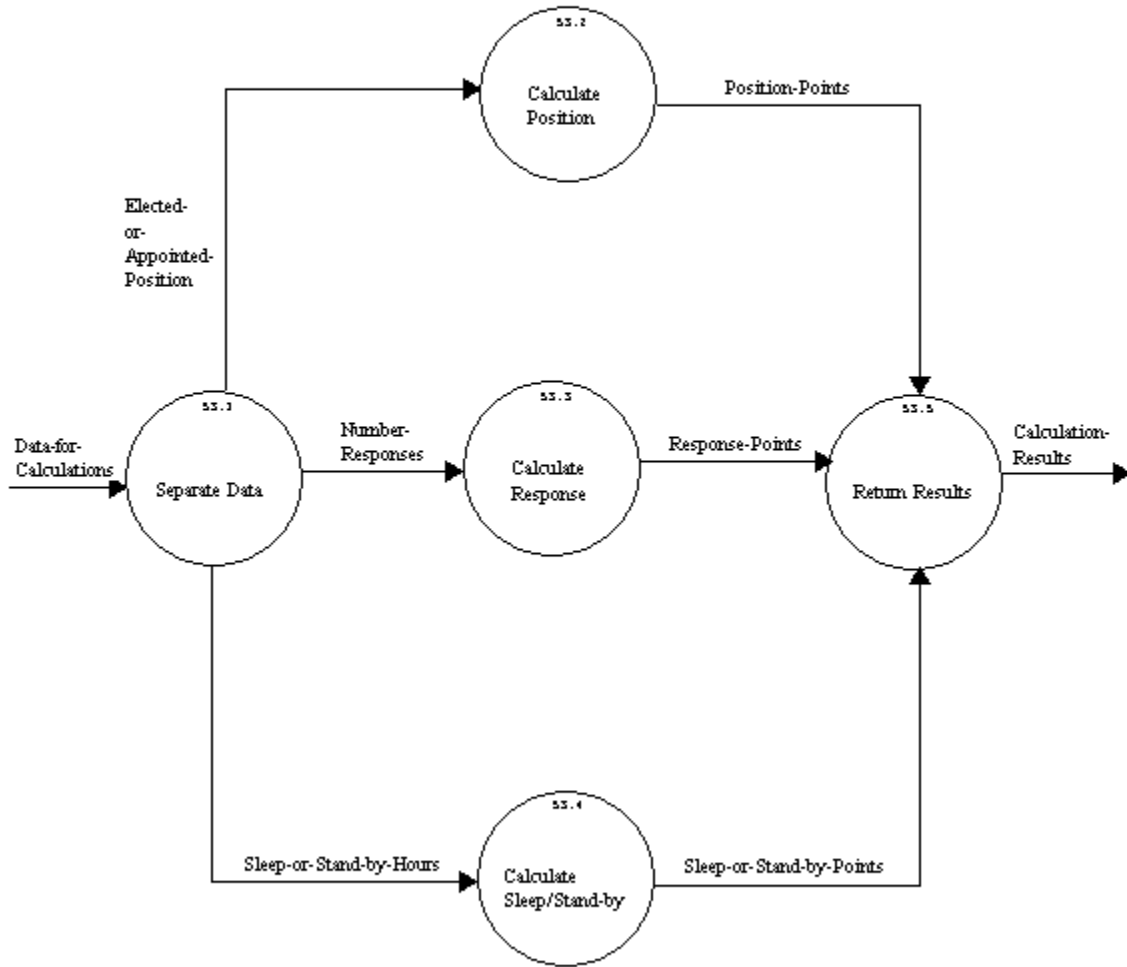
GENERATE REPORTS



DISPLAY REPORT



CALCULATING FOR REPORTS



# Logical Data Dictionary

## LEVEL 1

Authentication Data                      Source/Sink  
Description:  
    A file holding the information that allows users to access the system.  
Location:  
    level 1 ( 0 )  
    Input Flows:  
        Request-Password  
        Initials  
    Output Flows:  
        Return-Password  
Date Last Altered:11/24/2002    Date Created:11/24/2002

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User                                      Source/Sink  
Description:  
    The person logged in and operating the software.  
Location:  
    level 1 ( 0 )  
    Input Flows:  
        Duty-Log  
        Activity-Log  
        Report  
        Authentication-Confirmation  
        Profile-Information  
        Authentication-Confirmation  
    Output Flows:  
        Activity-DAta  
        Request-Archived-Info  
        Archiving-Request  
        Login-Data  
        Profile-Updates  
        Duty-Data  
        Login-Data  
        Profile-Updates  
        Request-Archived-Info  
Date Last Altered:11/24/2002    Date Created:11/24/2002

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Access DBMS                              File  
Description:  
    The Microsoft Access Database in which all Member/Activity/Duty data  
will  
    be stored.  
Composition:

Activity-Update  
Archive-Data  
Data-Request  
Profile-Data  
Query  
Query-Results  
Update-Confirmation  
Updated-Profile-Data

Location:

level 1 ( 0 )

Input Flows:

Duty-Update  
Activity-Update  
Query  
Data-Request  
Updated-Profile-Data  
Initials  
Updated-Profile-Data  
Data-Request

Output Flows:

Update-Confirmation  
Archive-Data  
Profile-Data  
Update-Confirmation  
Profile-Data  
Query-Results  
Archive-Data

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Storage Device

File

Description:

Anything that data will be archived to, such as disk, cd or hard drive, etc.

Location:

level 1 ( 0 )

Input Flows:

Data-Request  
Archiving-Data  
Data-Request

Output Flows:

Archive-Data  
Archive-Data

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Authenticate

Process

Description:

Secures the system from entry from unwanted users.

Process #: 1

Process Description:

Takes the user entered log in data and sends the password on to be verified and sends the user's initials to the database. A confirmation is then sent back to the user.

Location:

level 1 ( 0 )

Input Flows:

Return-Password

Login-Data

Output Flows:

Request-Password

Authentication-Confirmation

Initials

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Generate Reports

Process

Description:

Allows the user to choose from five different query types from the database, this includes current information and archived data.

Process #: 5

Process Description:

Takes in a query or archive request from the user and returns the report from the database or storage device.

Notes:

The five types of queries are: annual report, individual summary, individual detailed, squad summary and squad detailed.

Location:

level 1 ( 0 )

Input Flows:

Report-Query

Archive-Data

Report-Query

Query-Results

Output Flows:

Request-Archive

Query

Report

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Manage Activities

Process

Description:

Stores activity information in the database.

Process #: 3

Process Description:

Takes the activities information as input by the user and stores them



into the database.

Location:

level 1 ( 0 )

Input Flows:

Activity-DAta

Update-Confirmation

Output Flows:

Activity-Log

Activity-Update

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Manage Archive

Process

Description:

Archives data from database to a specific storage device.

Process #: 6

Process Description:

Retrieves the requested data from the database as specified by the user and stores to a storage device.

Location:

level 1 ( 0 )

Input Flows:

Archiving-Request

Request-Archive

Archive-Data

Archive-Data

Output Flows:

Data-Requst

Archiving-Data

Data-Request

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Manage Duties

Process

Description:

Stores Duty information entered by the user in the database.

Process #: 4

Process Description:

Takes the Duty information as inputed by the user and stores them into the database.

Location:

level 1 ( 0 )

Input Flows:

Update-Confirmation

Duty-Data

Output Flows:

Duty-Log

Duty-Update

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Manage Profiles Process  
Description:  
Allows the addition, editing, deletion and viewing of member profiles.  
Process #: 2  
Process Description:  
Any changes the user may need to make are modified in the database.  
Location:  
level 1 ( 0 )  
Input Flows:  
Profile-Updates  
Profile-Data  
Output Flows:  
Profile-Information  
Updated-Profile-Data  
Date Last Altered:11/24/2002 Date Created:11/24/2002

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Activity-DAta Data Flow  
Description:  
All the activity data inputted by the user.  
Location:  
level 1 ( 0 )  
Source:User ( Source/Sink )  
Dest: Manage Activities ( Process )  
Manage Activities ( 3 )  
Source:\*\*\* Not on Diagram \*\*\*  
Dest: Screen Interface ( Source/Sink )  
Date Last Altered:11/24/2002 Date Created:11/24/2002

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Activity-Log Data Flow  
Description:  
The activity information which needs to be displayed to the user .  
Location:  
level 1 ( 0 )  
Source:Manage Activities ( Process )  
Dest: User ( Source/Sink )  
Manage Activities ( 3 )  
Source:Screen Interface ( Source/Sink )  
Dest: \*\*\* Not on Diagram \*\*\*  
Date Last Altered:11/24/2002 Date Created:11/24/2002

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Activity-Update Data Flow  
Description:  
The new activity information to be sent to the database to update it.  
Location:

level 1 ( 0 )  
Source:Manage Activities ( Process )  
Dest: Access DBMS ( File )  
Manage Activities ( 3 )  
Source:Database Interface ( Source/Sink )  
Dest: \*\*\* Not on Diagram \*\*\*  
File --> Access DBMS  
Date Last Altered:11/24/2002 Date Created:11/24/2002

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Archive-Data Data Flow  
Description:  
Data that has been archived already and it being inputed from a storage device.  
Location:  
level 1 ( 0 )  
Source:Manage Archive ( Process )  
Dest: Generate Reports ( Process )  
Source:Access DBMS ( File )  
Dest: Manage Archive ( Process )  
Source:Storage Device ( File )  
Dest: Manage Archive ( Process )  
Generate Reports ( 5 )  
Source:\*\*\* Not on Diagram \*\*\*  
Dest: Display Report ( Process )  
Manage Archive ( 6 )  
Source:\*\*\* Not on Diagram \*\*\*  
Dest: Manage Storage Device ( Process )  
Source:Manage Storage Device ( Process )  
Dest: \*\*\* Not on Diagram \*\*\*  
Source:Storage Device ( File )  
Dest: \*\*\* Not on Diagram \*\*\*  
File --> Access DBMS  
Display Report ( 5.2 )  
Source:\*\*\* Not on Diagram \*\*\*  
Dest: Separate Data for Calculations ( Process )  
Date Last Altered:11/24/2002 Date Created:11/24/2002

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Archiving-Data Data Flow  
Description:  
Data that is being transferred to a storage device to be archived.  
Location:  
level 1 ( 0 )  
Source:Manage Archive ( Process )  
Dest: Storage Device ( File )  
Manage Archive ( 6 )  
Source:\*\*\* Not on Diagram \*\*\*

Dest: Handle Archiving ( Process )  
Source:Manage Archive ( Process )  
Dest: \*\*\* Not on Diagram \*\*\*  
Date Last Altered:11/24/2002 Date Created:11/24/2002

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Archiving-Request Data Flow

Description:  
An index to data that is going to be transferred from a database to a storage device.

Location:  
level 1 ( 0 )  
Source:User ( Source/Sink )  
Dest: Manage Archive ( Process )  
Manage Archive ( 6 )  
Source:\*\*\* Not on Diagram \*\*\*  
Dest: Handle Archiving ( Process )

Date Last Altered:11/24/2002 Date Created:11/24/2002

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Authentication-Confirmation Data Flow

Description:  
The information displayed to the user verifying their sucessful/failed log in attempt.

Location:  
level 1 ( 0 )  
Source:Authenticate ( Process )  
Dest: User ( Source/Sink )  
Generate Reports ( 5 )  
Source:\*\*\* Not on Diagram \*\*\*  
Dest: \*\*\* Not on Diagram \*\*\*  
Authenticate ( 1 )  
Source:Check Password ( Process )  
Dest: \*\*\* Not on Diagram \*\*\*  
Source:Authenticate ( Process )  
Dest: User ( Source/Sink )

Date Last Altered:11/24/2002 Date Created:11/24/2002

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Data-Request Data Flow

Description:  
The archived data requested to be retrieved from the storage device.

Location:  
level 1 ( 0 )  
Source:Manage Archive ( Process )  
Dest: Storage Device ( File )  
Manage Archive ( 6 )  
Source:Manage Storage Device ( Process )  
Dest: \*\*\* Not on Diagram \*\*\*

Source:Manage Archive ( Process )  
Dest: Storage Device ( File )  
File --> Access DBMS  
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Duty-Data Data Flow

Description:  
The name, date, duration of duties, and calls per month.  
Location:  
level 1 ( 0 )  
Source:User ( Source/Sink )  
Dest: Manage Duties ( Process )  
Manage Duties ( 4 )  
Source:\*\*\* Not on Diagram \*\*\*  
Dest: Screen Interface ( Source/Sink )  
Date Last Altered:11/24/2002 Date Created:11/24/2002

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Duty-Log Data Flow

Description:  
The duty information which needs to be displayed to the user.  
Location:  
level 1 ( 0 )  
Source:Manage Duties ( Process )  
Dest: User ( Source/Sink )  
Manage Duties ( 4 )  
Source:Screen Interface ( Source/Sink )  
Dest: \*\*\* Not on Diagram \*\*\*  
Date Last Altered:11/24/2002 Date Created:11/24/2002

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Duty-Update Data Flow

Description:  
All new duty data to be inputed into the Access DBMS.  
Location:  
level 1 ( 0 )  
Source:Manage Duties ( Process )  
Dest: Access DBMS ( File )  
Manage Duties ( 4 )  
Source:Database Interface ( Source/Sink )  
Dest: \*\*\* Not on Diagram \*\*\*  
Date Last Altered:11/24/2002 Date Created:11/24/2002

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Initials Data Flow

Description:  
The user's initials that are inputed at the log in screen that will be stored in the database.  
Notes:

2-3 characters in length

Location:

level 1 ( 0 )

Source:Authenticate ( Process )

Dest: Access DBMS ( File )

Source:Authenticate ( Process )

Dest: Authentication Data ( Source/Sink )

Authenticate ( 1 )

Source:Process Login Data ( Process )

Dest: \*\*\* Not on Diagram \*\*\*

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Login-Data Data Flow

Description:

The initials and password inputed by the user at the log-in screen.

Location:

level 1 ( 0 )

Source:User ( Source/Sink )

Dest: Authenticate ( Process )

Generate Reports ( 5 )

Source:\*\*\* Not on Diagram \*\*\*

Dest: \*\*\* Not on Diagram \*\*\*

Authenticate ( 1 )

Source:\*\*\* Not on Diagram \*\*\*

Dest: Process Login Data ( Process )

Source:User ( Source/Sink )

Dest: \*\*\* Not on Diagram \*\*\*

Date Last Altered:11/24/2002 Date Created:11/24/2002

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Profile-Data Data Flow

Description:

Member data requested from the database.

Location:

level 1 ( 0 )

Source:Access DBMS ( File )

Dest: Manage Profiles ( Process )

Manage Profiles ( 2 )

Source:Access DBMS ( File )

Dest: Database Interface ( Source/Sink )

File --> Access DBMS

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Profile-Information Data Flow

Description:

The member information to be displayed to the user.

Location:

level 1 ( 0 )  
Source:Manage Profiles ( Process )  
Dest: User ( Source/Sink )  
Manage Profiles ( 2 )  
Source:Screen Interface ( Source/Sink )  
Dest: \*\*\* Not on Diagram \*\*\*  
Source:Relay Info ( Process )  
Dest: Screen Interface ( Source/Sink )  
Date Last Altered:11/24/2002 Date Created:11/24/2002

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Profile-Updates Data Flow

Description:  
Changes made to member profiles.  
Location:  
level 1 ( 0 )  
Source:User ( Source/Sink )  
Dest: Manage Profiles ( Process )  
Manage Profiles ( 2 )  
Source:User ( Source/Sink )  
Dest: Manage Profiles ( Process )  
Date Last Altered:11/24/2002 Date Created:11/24/2002

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Query Data Flow

Description:  
The report requested from the database.  
Location:  
level 1 ( 0 )  
Source:Generate Reports ( Process )  
Dest: Access DBMS ( File )  
Generate Reports ( 5 )  
Source:Display Report ( Process )  
Dest: \*\*\* Not on Diagram \*\*\*  
File --> Access DBMS  
Display Report ( 5.2 )  
Source:Select Data Source ( Process )  
Dest: \*\*\* Not on Diagram \*\*\*  
Date Last Altered:11/24/2002 Date Created:11/24/2002

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Query-Results Data Flow

Description:  
The requested report information as queried from the database.  
Location:  
level 1 ( 0 )  
Source:Access DBMS ( File )  
Dest: Generate Reports ( Process )  
Generate Reports ( 5 )

Source:\*\*\* Not on Diagram \*\*\*  
Dest: Display Report ( Process )  
File --> Access DBMS  
Display Report ( 5.2 )  
Source:\*\*\* Not on Diagram \*\*\*  
Dest: Separate Data for Calculations ( Process )  
Date Last Altered:11/24/2002 Date Created:11/24/2002

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Report Data Flow

Description:  
One of the 5 different forms of data to be displayed to the user.  
Location:  
level 1 ( 0 )  
Source:Generate Reports ( Process )  
Dest: User ( Source/Sink )  
Generate Reports ( 5 )  
Source:Display Report ( Process )  
Dest: \*\*\* Not on Diagram \*\*\*  
Display Report ( 5.2 )  
Source:Compile Report ( Process )  
Dest: \*\*\* Not on Diagram \*\*\*  
Date Last Altered:11/24/2002 Date Created:11/24/2002

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Report-Query Data Flow

Description:  
Request for one of the 5 types of reports.  
Location:  
level 1 ( 0 )  
Source:User ( Source/Sink )  
Dest: Generate Reports ( Process )  
Generate Reports ( 5 )  
Source:\*\*\* Not on Diagram \*\*\*  
Dest: Select Form ( Process )  
Date Last Altered:11/24/2002 Date Created:11/24/2002

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Request-Archive Data Flow

Description:  
Information requested to be archived from the database.  
Location:  
level 1 ( 0 )  
Source:Generate Reports ( Process )  
Dest: Manage Archive ( Process )  
Generate Reports ( 5 )  
Source:Display Report ( Process )  
Dest: \*\*\* Not on Diagram \*\*\*  
Manage Archive ( 6 )



Source:\*\*\* Not on Diagram \*\*\*  
Dest: Manage Storage Device ( Process )  
Display Report ( 5.2 )  
Source:Select Data Source ( Process )  
Dest: \*\*\* Not on Diagram \*\*\*  
Date Last Altered:11/24/2002 Date Created:11/24/2002

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Request-Archived-Info Data Flow

Description:  
Requested information to be retrieved from a storage device.  
Location:  
level 1 ( 0 )  
Source:User ( Source/Sink )  
Dest: Generate Reports ( Process )  
Generate Reports ( 5 )  
Source:\*\*\* Not on Diagram \*\*\*  
Dest: Select Form ( Process )  
Date Last Altered:11/24/2002 Date Created:11/24/2002

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Request-Password Data Flow

Description:  
The password entered by the user to be sent to the authenticate data for verification.  
Location:  
level 1 ( 0 )  
Source:Authenticate ( Process )  
Dest: Authentication Data ( Source/Sink )  
Generate Reports ( 5 )  
Source:\*\*\* Not on Diagram \*\*\*  
Dest: \*\*\* Not on Diagram \*\*\*  
Authenticate ( 1 )  
Source:Check Password ( Process )  
Dest: \*\*\* Not on Diagram \*\*\*  
Source:\*\*\* Not on Diagram \*\*\*  
Dest: \*\*\* Not on Diagram \*\*\*  
Date Last Altered:11/24/2002 Date Created:11/24/2002

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Return-Password Data Flow

Description:  
Returns whether or not the entered password was found in Authenticate Data.  
Location:  
level 1 ( 0 )  
Source:Authentication Data ( Source/Sink )  
Dest: Authenticate ( Process )  
Generate Reports ( 5 )

Source:\*\*\* Not on Diagram \*\*\*  
Dest: Authenticate ( Process )  
Authenticate ( 1 )  
Source:\*\*\* Not on Diagram \*\*\*  
Dest: Check Password ( Process )  
Source:\*\*\* Not on Diagram \*\*\*  
Dest: \*\*\* Not on Diagram \*\*\*  
Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Update-Confirmation Data Flow  
Description:  
The data sent back to the database interface confirming that an update has been made to the database.  
Location:  
level 1 ( 0 )  
Source:Access DBMS ( File )  
Dest: Manage Duties ( Process )  
Source:Access DBMS ( File )  
Dest: Manage Activities ( Process )  
Manage Duties ( 4 )  
Source:\*\*\* Not on Diagram \*\*\*  
Dest: Database Interface ( Source/Sink )  
Manage Activities ( 3 )  
Source:\*\*\* Not on Diagram \*\*\*  
Dest: Database Interface ( Source/Sink )  
File --> Access DBMS  
Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Updated-Profile-Data Data Flow  
Description:  
Member data that has been edited by the user that is being sent to update the database  
Location:  
level 1 ( 0 )  
Source:Manage Profiles ( Process )  
Dest: Access DBMS ( File )  
Manage Profiles ( 2 )  
Source:Database Interface ( Source/Sink )  
Dest: Access DBMS ( File )  
File --> Access DBMS  
Date Last Altered:11/24/2002 Date Created:11/24/2002

---

## LEVEL 2

### AUTHENTICATE (1)

Check Password                      Process

Description:

Verifies the user password to allow access to the system.

Process #: 1.2

Process Description:

Takes in the user entered password, sends it to be authenticated and then sends the user confirmation on the successful or failed log in attempt.

Location:

Authenticate ( 1 )

Input Flows:

Return-Password

Password

Output Flows:

Request-Password

Authentication-Confirmation

Date Last Altered: 11/24/2002    Date Created: 11/24/2002

---

Process Login Data                      Process

Description:

Separates the log in data into initials and password.

Process #: 1.1

Process Description:

Takes the log in information entered by the user and sends the initials to be stored in the database and the password to be verified.

Location:

Authenticate ( 1 )

Input Flows:

Login-Data

Output Flows:

Initials

Password

Date Last Altered: 11/24/2002    Date Created: 11/24/2002

---

Authentication-Confirmation                      Data Flow

Description:

The information displayed to the user verifying their successful/failed log in attempt.

Location:

level 1 ( 0 )  
Source:Authenticate ( Process )  
Dest: User ( Source/Sink )  
Generate Reports ( 5 )  
Source:\*\*\* Not on Diagram \*\*\*  
Dest: \*\*\* Not on Diagram \*\*\*  
Authenticate ( 1 )  
Source:Check Password ( Process )  
Dest: \*\*\* Not on Diagram \*\*\*  
Source:Authenticate ( Process )  
Dest: User ( Source/Sink )  
Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Initials Data Flow

Description:

The user's initials that are inputed at the log in screen that will be stored in the database.

Notes:

2-3 characters in length

Location:

level 1 ( 0 )  
Source:Authenticate ( Process )  
Dest: Access DBMS ( File )  
Source:Authenticate ( Process )  
Dest: Authentication Data ( Source/Sink )  
Authenticate ( 1 )  
Source:Process Login Data ( Process )  
Dest: \*\*\* Not on Diagram \*\*\*

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Login-Data Data Flow

Description:

The initials and password inputed by the user at the log-in screen.

Location:

level 1 ( 0 )  
Source:User ( Source/Sink )  
Dest: Authenticate ( Process )  
Generate Reports ( 5 )  
Source:\*\*\* Not on Diagram \*\*\*  
Dest: \*\*\* Not on Diagram \*\*\*  
Authenticate ( 1 )  
Source:\*\*\* Not on Diagram \*\*\*  
Dest: Process Login Data ( Process )  
Source:User ( Source/Sink )  
Dest: \*\*\* Not on Diagram \*\*\*

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Password Data Flow

Description:

The password entered by the user.

Location:

Authenticate ( 1 )

Source:Process Login Data ( Process )

Dest: Check Password ( Process )

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Request-Password Data Flow

Description:

The password entered by the user to be sent to the authenticate data for verification.

Location:

level 1 ( 0 )

Source:Authenticate ( Process )

Dest: Authentication Data ( Source/Sink )

Generate Reports ( 5 )

Source:\*\*\* Not on Diagram \*\*\*

Dest: \*\*\* Not on Diagram \*\*\*

Authenticate ( 1 )

Source:Check Password ( Process )

Dest: \*\*\* Not on Diagram \*\*\*

Source:\*\*\* Not on Diagram \*\*\*

Dest: \*\*\* Not on Diagram \*\*\*

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Return-Password Data Flow

Description:

Returns whether or not the entered password was found in Authenticate Data.

Location:

level 1 ( 0 )

Source:Authentication Data ( Source/Sink )

Dest: Authenticate ( Process )

Generate Reports ( 5 )

Source:\*\*\* Not on Diagram \*\*\*

Dest: Authenticate ( Process )

Authenticate ( 1 )

Source:\*\*\* Not on Diagram \*\*\*

Dest: Check Password ( Process )

Source:\*\*\* Not on Diagram \*\*\*

Dest: \*\*\* Not on Diagram \*\*\*

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

## MANAGE PROFILES (2)

Add/Edit Process

Description:  
Allows the user to add or edit members and member information into the database.

Process #: 2.1

Process Description:  
Takes the inputted user updates and sends it to Relay Info which will send it on to the database interface.

Location:  
Manage Profiles ( 2 )

Input Flows:  
Member-Data  
Return-Data

Output Flows:  
Update-Data  
Query-Data

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Relay Info Process

Description:  
Transfers the requested member information to the process in which it is needed.

Process #: 2.2

Process Description:  
It can 1) relay member information to be viewed to user. 2) Allow member data in the database to be added or edited or 3) Allow member data stored in the database to be removed.

Location:  
Manage Profiles ( 2 )

Input Flows:  
Viewing-Request  
Query-Members  
Delete-Request  
Update-Data  
Query-Data  
Return-Data

Output Flows:  
Returned-Member-Data  
Return-Data  
Request-Data

Profile-Information

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Remove Process

Description:

Allows the user to remove a member and their corresponding member information from the database.

Process #: 2.3

Process Description:

Takes the remove request made by the user and matches it with the database information and removes all relevant information.

Location:

Manage Profiles ( 2 )

Input Flows:

Remove-Request

Returned-Member-Data

Output Flows:

Query-Members

Delete-Request

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Delete-Request Data Flow

Description:

The index of the data to be deleted.

Location:

Manage Profiles ( 2 )

Source:Remove ( Process )

Dest: Relay Info ( Process )

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Member-Data Data Flow

Description:

Information regarding a volunteer, as entered by the user.

Notes:

Data to be stored: First Name, Last Name, Middle Initial,SSN, Street, Street2, City, State, Zip, Home Phone, Work Phone.

Location:

Manage Activities ( 3 )

Source:Select Members ( Process )

Dest: Database Interface ( Source/Sink )

Manage Profiles ( 2 )

Source:Screen Interface ( Source/Sink )

Dest: Add/Edit ( Process )

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Profile-Data Data Flow

Description:

Member data requested from the database.

Location:

level 1 ( 0 )

Source:Access DBMS ( File )

Dest: Manage Profiles ( Process )

Manage Profiles ( 2 )

Source:Access DBMS ( File )

Dest: Database Interface ( Source/Sink )

File --> Access DBMS

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Profile-Information

Data Flow

Description:

The member information to be displayed to the user.

Location:

level 1 ( 0 )

Source:Manage Profiles ( Process )

Dest: User ( Source/Sink )

Manage Profiles ( 2 )

Source:Screen Interface ( Source/Sink )

Dest: \*\*\* Not on Diagram \*\*\*

Source:Relay Info ( Process )

Dest: Screen Interface ( Source/Sink )

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Profile-Updates

Data Flow

Description:

Changes made to member profiles.

Location:

level 1 ( 0 )

Source:User ( Source/Sink )

Dest: Manage Profiles ( Process )

Manage Profiles ( 2 )

Source:User ( Source/Sink )

Dest: Manage Profiles ( Process )

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Query-Data

Data Flow

Description:

The requested data to be edited by the user.

Location:

Manage Profiles ( 2 )

Source:Add/Edit ( Process )

Dest: Relay Info ( Process )

Date Last Altered:11/24/2002 Date Created:11/24/2002



---

Query-Members                      Data Flow  
Description:  
    Member information to be matched up with database members for deletion.  
Location:  
    Manage Profiles ( 2 )  
        Source:Remove ( Process )  
        Dest: Relay Info ( Process )  
Date Last Altered:11/24/2002    Date Created:11/24/2002

---

Remove-Request                      Data Flow  
Description:  
    The requested member information to be removed from the database.  
Location:  
    Manage Profiles ( 2 )  
        Source:Screen Interface ( Source/Sink )  
        Dest: Remove ( Process )  
Date Last Altered:11/24/2002    Date Created:11/24/2002

---

Request-Data                      Data Flow  
Description:  
    Information to be retrieved from the database to be viewed by the user.  
Location:  
    Manage Profiles ( 2 )  
        Source:Relay Info ( Process )  
        Dest: Database Interface ( Source/Sink )  
Date Last Altered:11/24/2002    Date Created:11/24/2002

---

Return-Data                      Data Flow  
Description:  
    Member data retrieved from the database to be edited or viewed by the user.  
Location:  
    Manage Profiles ( 2 )  
        Source:Relay Info ( Process )  
        Dest: Add/Edit ( Process )  
        Source:Database Interface ( Source/Sink )  
        Dest: Relay Info ( Process )  
Date Last Altered:11/24/2002    Date Created:11/24/2002

---

Returned-Member-Data                      Data Flow  
Description:  
    Member data from the database to be removed.  
Location:  
    Manage Profiles ( 2 )  
        Source:Relay Info ( Process )

Dest: Remove ( Process )  
Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Update-Data Data Flow

Description:  
Sends the data edited by the user to be updated to Relay Info to be updated to the database.

Location:

Manage Profiles ( 2 )  
Source:Add/Edit ( Process )  
Dest: Relay Info ( Process )

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Updated-Profile-Data Data Flow

Description:  
Member data that has been edited by the user that is being sent to update the database

Location:

level 1 ( 0 )  
Source:Manage Profiles ( Process )  
Dest: Access DBMS ( File )  
Manage Profiles ( 2 )  
Source:Database Interface ( Source/Sink )  
Dest: Access DBMS ( File )

File --> Access DBMS

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Viewing-Request Data Flow

Description:  
The member information requested from the database by the user to be viewed.

Location:

Manage Profiles ( 2 )  
Source:Screen Interface ( Source/Sink )  
Dest: Relay Info ( Process )

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

### MANAGE ACTIVITIES (3)

Calculate

Process

Description:

Tallies the points in which the members receive for various activities/duties performed.

Process #: 3.6

Process Description:

Takes the inputted activity/duty, by using the guidelines the comptroller has designed, it will calculate the points the member receives.

Location:

Manage Activities ( 3 )

Input Flows:

Activity-Selection

Duration

Output Flows:

Activity

Points

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Choose Location

Process

Description:

Allows the user to enter or select the location of an activity and store it in the database.

Process #: 3.1

Process Description:

Takes the user selected/entered location and stores it in the database and then displays that information back to the user.

Location:

Manage Activities ( 3 )

Input Flows:

Location-Selection

Output Flows:

Location

Location

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Enter Date And Duration

Process

Description:

Stores inputted Date and Duration as objects to be entered into the database and also used for calculations.

Process #: 3.4

Process Description:

User enters the date and duration, they are processed through Calculate and then stored into the database.

Location:

Manage Activities ( 3 )

Input Flows:

Entered-Date-and-Duration

Output Flows:

Date-and-Duration

Duration

Date

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Enter Title Process

Description:

The user selects the activity title.

Process #: 3.2

Process Description:

The title is highlighted from the screen menu.

Location:

Manage Activities ( 3 )

Input Flows:

Title

Output Flows:

Title

Selected-Title

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Select Activity Process

Description:

Takes activity selected by the user and sends it to be calculated which is process 2.5

Process #: 3.3

Location:

Manage Activities ( 3 )

Input Flows:

Selected-Activity

Output Flows:

Activities

Activity-Selection

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Select Members Process

Description:

Allows the user to select the members who attended a certain activity.

Process #: 3.5

Process Description:

The user inputs the names of members who were in attendance and then sends that information to be calculated.

Location:

Manage Activities ( 3 )

Input Flows:

Member-Selection

Output Flows:

Member-Display

Member-Data

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Activities Data Flow

Description:

The activity information to be displayed to the user for confirmation.

Location:

Manage Activities ( 3 )

Source:Select Activity ( Process )

Dest: Screen Interface ( Source/Sink )

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Activity Data Flow

Description:

The selected activity transferred to the database after calculations take place.

Location:

Manage Activities ( 3 )

Source:Calculate ( Process )

Dest: Database Interface ( Source/Sink )

Calculate ( 3.6 )

Source:Get Activity Breakdown ( Process )

Dest: \*\*\* Not on Diagram \*\*\*

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Activity-DAta Data Flow

Description:

All the activity data inputted by the user.

Location:

level 1 ( 0 )

Source:User ( Source/Sink )

Dest: Manage Activities ( Process )

Manage Activities ( 3 )

Source:\*\*\* Not on Diagram \*\*\*

Dest: Screen Interface ( Source/Sink )

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Activity-Log Data Flow  
Description:  
The activity information which needs to be displayed to the user .  
Location:  
level 1 ( 0 )  
Source:Manage Activities ( Process )  
Dest: User ( Source/Sink )  
Manage Activities ( 3 )  
Source:Screen Interface ( Source/Sink )  
Dest: \*\*\* Not on Diagram \*\*\*  
Date Last Altered:11/24/2002 Date Created:11/24/2002

-----  
Activity-Selection Data Flow  
Description:  
The user selected activity which is being sent to be calculated.  
Location:  
Manage Activities ( 3 )  
Source:Select Activity ( Process )  
Dest: Calculate ( Process )  
Calculate ( 3.6 )  
Source:\*\*\* Not on Diagram \*\*\*  
Dest: Get Activity Breakdown ( Process )  
Date Last Altered:11/24/2002 Date Created:11/24/2002

-----  
Activity-Update Data Flow  
Description:  
The new activity information to be sent to the database to update it.  
Location:  
level 1 ( 0 )  
Source:Manage Activities ( Process )  
Dest: Access DBMS ( File )  
Manage Activities ( 3 )  
Source:Database Interface ( Source/Sink )  
Dest: \*\*\* Not on Diagram \*\*\*  
File --> Access DBMS  
Date Last Altered:11/24/2002 Date Created:11/24/2002

-----  
Date Data Flow  
Description:  
The date, composed of the day, month and year.  
Location:  
Manage Activities ( 3 )  
Source:Enter Date and Duration ( Process )  
Dest: Database Interface ( Source/Sink )  
Date Last Altered:11/24/2002 Date Created:11/24/2002

Date-and-Duration                      Data Flow  
Description:  
    The date of the activity or duty along with the duration.  
Location:  
    Manage Activities ( 3 )  
        Source:Enter Date and Duration ( Process )  
        Dest: Screen Interface ( Source/Sink )  
Date Last Altered:11/24/2002    Date Created:11/24/2002

---

Duration                                  Data Flow  
Description:  
    The amount of time spent, in hours and minutes.  
Location:  
    Manage Activities ( 3 )  
        Source:Enter Date and Duration ( Process )  
        Dest: Calculate ( Process )  
    Calculate ( 3.6 )  
        Source:\*\*\* Not on Diagram \*\*\*  
        Dest: Calculate Points ( Process )  
Date Last Altered:11/24/2002    Date Created:11/24/2002

---

Entered-Date-and-Duration              Data Flow  
Description:  
    It is the date and duration as inputed by the user.  
Location:  
    Manage Activities ( 3 )  
        Source:Screen Interface ( Source/Sink )  
        Dest: Enter Date And Duration ( Process )  
Date Last Altered:11/24/2002    Date Created:11/24/2002

---

Location                                  Data Flow  
Description:  
    The location of the activity as inputed by the user.  
Location:  
    Manage Activities ( 3 )  
        Source:Choose Location ( Process )  
        Dest: Screen Interface ( Source/Sink )  
        Source:Choose Location ( Process )  
        Dest: Database Interface ( Source/Sink )  
Date Last Altered:11/24/2002    Date Created:11/24/2002

---

Location-Selection                      Data Flow  
Description:  
    The location to be displayed through the screen interface.  
Location:  
    Manage Activities ( 3 )

Source:Screen Interface ( Source/Sink )  
Dest: Choose Location ( Process )  
Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Member-Data Data Flow

Description:

Information regarding a volunteer, as entered by the user.

Notes:

Data to be stored: First Name, Last Name, Middle Initial,SSN, Street,  
Street2, City, State, Zip, Home Phone, Work Phone.

Location:

Manage Activities ( 3 )

Source:Select Members ( Process )

Dest: Database Interface ( Source/Sink )

Manage Profiles ( 2 )

Source:Screen Interface ( Source/Sink )

Dest: Add/Edit ( Process )

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Member-Display Data Flow

Description:

The information to be displayed regarding a specific member.

Location:

Manage Activities ( 3 )

Source:Select Members ( Process )

Dest: Screen Interface ( Source/Sink )

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Member-Selection Data Flow

Description:

The name of the member selected by the user.

Location:

Manage Activities ( 3 )

Source:Screen Interface ( Source/Sink )

Dest: Select Members ( Process )

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Points Data Flow

Description:

The calculated points the member receives towards retirement based on  
the activities/duties performed.

Location:

Manage Activities ( 3 )

Source:Calculate ( Process )

Dest: Database Interface ( Source/Sink )

Calculate ( 3.6 )



Source:Calculate Points ( Process )  
Dest: \*\*\* Not on Diagram \*\*\*  
Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Selected-Activity Data Flow  
Description:  
The activity selected by the user in the screen interface.  
Location:  
Manage Activities ( 3 )  
Source:Screen Interface ( Source/Sink )  
Dest: Select Activity ( Process )  
Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Selected-Title Data Flow  
Description:  
The title that has been highlighted by the user.  
Location:  
Manage Activities ( 3 )  
Source:Enter Title ( Process )  
Dest: Screen Interface ( Source/Sink )  
Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Title Data Flow  
Description:  
The activity title; user will be able to select from a pull down menu.  
Location:  
Manage Activities ( 3 )  
Source:Screen Interface ( Source/Sink )  
Dest: Enter Title ( Process )  
Source:Enter Title ( Process )  
Dest: Database Interface ( Source/Sink )  
Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Update-Confirmation Data Flow  
Description:  
The data sent back to the database interface confirming that an update has been made to the database.  
Location:  
level 1 ( 0 )  
Source:Access DBMS ( File )  
Dest: Manage Duties ( Process )  
Source:Access DBMS ( File )  
Dest: Manage Activities ( Process )  
Manage Duties ( 4 )  
Source:\*\*\* Not on Diagram \*\*\*  
Dest: Database Interface ( Source/Sink )

Manage Activities ( 3 )

Source:\*\*\* Not on Diagram \*\*\*

Dest: Database Interface ( Source/Sink )

File --> Access DBMS

Date Last Altered:11/24/2002 Date Created:11/24/2002

---



Process #: 43

Process Description:

User enters all duty data through the screen interface and as entered, the display will refresh and show the new data. When the user is done, the data is committed to the database.

Location:

Manage Duties ( 4 )

Input Flows:

Enter-Duty-Data

Output Flows:

New-Duty-Data

Commit-Data

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Commit-Data Data Flow

Description:

The information that the user made which is sent to the database for update.

Location:

Manage Duties ( 4 )

Source:Enter Duty Info ( Process )

Dest: Database Interface ( Source/Sink )

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Display-Member-Data Data Flow

Description:

The member information that is to be displayed to the user.

Location:

Manage Duties ( 4 )

Source:Display Info ( Process )

Dest: Screen Interface ( Source/Sink )

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Duty-Data Data Flow

Description:

The name, date, duration of duties, and calls per month.

Location:

level 1 ( 0 )

Source:User ( Source/Sink )

Dest: Manage Duties ( Process )

Manage Duties ( 4 )

Source:\*\*\* Not on Diagram \*\*\*

Dest: Screen Interface ( Source/Sink )

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Duty-Log Data Flow

Description:

The duty information which needs to be displayed to the user.

Location:

level 1 ( 0 )

Source:Manage Duties ( Process )

Dest: User ( Source/Sink )

Manage Duties ( 4 )

Source:Screen Interface ( Source/Sink )

Dest: \*\*\* Not on Diagram \*\*\*

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Duty-Update Data Flow

Description:

All new duty data to be inputed into the Access DBMS.

Location:

level 1 ( 0 )

Source:Manage Duties ( Process )

Dest: Access DBMS ( File )

Manage Duties ( 4 )

Source:Database Interface ( Source/Sink )

Dest: \*\*\* Not on Diagram \*\*\*

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Enter-Duty-Data Data Flow

Description:

Holds the name, year, month, day, duration, minutes and calls per month.

Location:

Manage Duties ( 4 )

Source:Screen Interface ( Source/Sink )

Dest: Enter Duty Info ( Process )

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Member-Name Data Flow

Description:

The name of the specific volunteer to be stored in the database.

Location:

Manage Duties ( 4 )

Source:Choose Name ( Process )

Dest: Display Info ( Process )

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Name-Selection Data Flow

Description:

The name of the volunteer selected by the user.

Location:

Manage Duties ( 4 )

Source:Screen Interface ( Source/Sink )  
Dest: Choose Name ( Process )  
Date Last Altered:11/24/2002 Date Created:11/24/2002

---

New-Duty-Data Data Flow  
Description:  
The duty information that was entered by the user to be displayed.  
Location:  
Manage Duties ( 4 )  
Source:Enter Duty Info ( Process )  
Dest: Display Info ( Process )  
Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Query-Member-Info Data Flow  
Description:  
Member name sent to the database in order to retrieve the other member information.  
Location:  
Manage Duties ( 4 )  
Source:Display Info ( Process )  
Dest: Database Interface ( Source/Sink )  
Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Query-Names Data Flow  
Description:  
Name to be matched up with the database.  
Location:  
Manage Duties ( 4 )  
Source:Choose Name ( Process )  
Dest: Database Interface ( Source/Sink )  
Date Last Altered:11/24/2002 Date Created:11/24/2002

Return-Member-Info Data Flow  
Description:  
Retrieved duty information from the database to be displayed to the user.  
Location:  
Manage Duties ( 4 )  
Source:Database Interface ( Source/Sink )  
Dest: Display Info ( Process )  
Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Return-Names Data Flow  
Description:  
Names retrieved from the database to be sent to process 1.1  
Location:  
Manage Duties ( 4 )  
Source:Database Interface ( Source/Sink )

Dest: Choose Name ( Process )  
Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Update-Confirmation Data Flow

Description:

The data sent back to the database interface confirming that an update has been made to the database.

Location:

level 1 ( 0 )

Source:Access DBMS ( File )

Dest: Manage Duties ( Process )

Source:Access DBMS ( File )

Dest: Manage Activities ( Process )

Manage Duties ( 4 )

Source:\*\*\* Not on Diagram \*\*\*

Dest: Database Interface ( Source/Sink )

Manage Activities ( 3 )

Source:\*\*\* Not on Diagram \*\*\*

Dest: Database Interface ( Source/Sink )

File --> Access DBMS

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

## GENERATE REPORTS (5)

Calculating for Reports                      Process  
Description:  
    Determines which members have met the requirements for retirement benefits.  
Process #: 5.3  
Process Description:  
    Takes the calculations for all the activities and duties and then determines whether or not the members meet the retirement benefits.  
Location:  
    Generate Reports ( 5 )  
    Input Flows:  
        Data-for-Calculations  
    Output Flows:  
        Calculation-Results  
Date Last Altered:11/24/2002    Date Created:11/24/2002

---

Display Report                              Process  
Description:  
    Displays the information for report the user has selected.  
Process #: 5.2  
Process Description:  
    Displays the information for one of the 5 main reports.  
Location:  
    Generate Reports ( 5 )  
    Input Flows:  
        Display-Report  
        Archive-Data  
        Query-Results  
        Calculation-Results  
    Output Flows:  
        Report  
        Request-Archive  
        Query  
        Data-for-Calculations  
Date Last Altered:11/24/2002    Date Created:11/24/2002

---

Select Form                                  Process  
Description:  
    Allows the user to select one of the 5 types of forms.  
Process #: 5.1



Process Description:

Takes the type of report the user wants to view and sends it on to be processed by display reports.

Location:

Generate Reports ( 5 )

Input Flows:

Request-Archived-Info

Report-Query

Output Flows:

Display-Report

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Archive-Data Data Flow

Description:

Data that has been archived already and it being inputed from a storage device.

Location:

level 1 ( 0 )

Source:Manage Archive ( Process )

Dest: Generate Reports ( Process )

Source:Access DBMS ( File )

Dest: Manage Archive ( Process )

Source:Storage Device ( File )

Dest: Manage Archive ( Process )

Generate Reports ( 5 )

Source:\*\*\* Not on Diagram \*\*\*

Dest: Display Report ( Process )

Manage Archive ( 6 )

Source:\*\*\* Not on Diagram \*\*\*

Dest: Manage Storage Device ( Process )

Source:Manage Storage Device ( Process )

Dest: \*\*\* Not on Diagram \*\*\*

Source:Storage Device ( File )

Dest: \*\*\* Not on Diagram \*\*\*

File --> Access DBMS

Display Report ( 5.2 )

Source:\*\*\* Not on Diagram \*\*\*

Dest: Separate Data for Calculations ( Process )

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Calculation-Results Data Flow

Description:

The final information regarding whether or not the member qualifies for retirement benefits and is displayed to the user.

Location:

Generate Reports ( 5 )

Source:Calculating for Reports ( Process )  
Dest: Display Report ( Process )  
Calculating for Reports ( 5.3 )  
Source:Return Results ( Process )  
Dest: \*\*\* Not on Diagram \*\*\*  
Display Report ( 5.2 )  
Source:\*\*\* Not on Diagram \*\*\*  
Dest: Compile Report ( Process )  
Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Data-for-Calculations

Data Flow

Description:

The total credits obtained by a specific member.

Location:

Generate Reports ( 5 )

Source:Display Report ( Process )

Dest: Calculating for Reports ( Process )

Calculating for Reports ( 5.3 )

Source:\*\*\* Not on Diagram \*\*\*

Dest: Separate Data ( Process )

Display Report ( 5.2 )

Source:Separate Data for Calculations ( Process )

Dest: \*\*\* Not on Diagram \*\*\*

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Display-Report

Data Flow

Description:

Sends the report information to the process Display Report.

Location:

Generate Reports ( 5 )

Source:Select Form ( Process )

Dest: Display Report ( Process )

Display Report ( 5.2 )

Source:\*\*\* Not on Diagram \*\*\*

Dest: Select Data Source ( Process )

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Query

Data Flow

Description:

The report requested from the database.

Location:

level 1 ( 0 )

Source:Generate Reports ( Process )

Dest: Access DBMS ( File )

Generate Reports ( 5 )

Source:Display Report ( Process )

Dest: \*\*\* Not on Diagram \*\*\*  
File --> Access DBMS  
Display Report ( 5.2 )  
Source:Select Data Source ( Process )  
Dest: \*\*\* Not on Diagram \*\*\*  
Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Query-Results Data Flow  
Description:  
The requested report information as queried from the database.  
Location:  
level 1 ( 0 )  
Source:Access DBMS ( File )  
Dest: Generate Reports ( Process )  
Generate Reports ( 5 )  
Source:\*\*\* Not on Diagram \*\*\*  
Dest: Display Report ( Process )  
File --> Access DBMS  
Display Report ( 5.2 )  
Source:\*\*\* Not on Diagram \*\*\*  
Dest: Separate Data for Calculations ( Process )  
Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Report Data Flow  
Description:  
One of the 5 different forms of data to be displayed to the user.  
Location:  
level 1 ( 0 )  
Source:Generate Reports ( Process )  
Dest: User ( Source/Sink )  
Generate Reports ( 5 )  
Source:Display Report ( Process )  
Dest: \*\*\* Not on Diagram \*\*\*  
Display Report ( 5.2 )  
Source:Compile Report ( Process )  
Dest: \*\*\* Not on Diagram \*\*\*  
Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Report-Query Data Flow  
Description:  
Request for one of the 5 types of reports.  
Location:  
level 1 ( 0 )  
Source:User ( Source/Sink )  
Dest: Generate Reports ( Process )  
Generate Reports ( 5 )

Source:\*\*\* Not on Diagram \*\*\*  
Dest: Select Form ( Process )  
Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Request-Archive Data Flow  
Description:  
Information requested to be archived from the database.  
Location:  
level 1 ( 0 )  
Source:Generate Reports ( Process )  
Dest: Manage Archive ( Process )  
Generate Reports ( 5 )  
Source:Display Report ( Process )  
Dest: \*\*\* Not on Diagram \*\*\*  
Manage Archive ( 6 )  
Source:\*\*\* Not on Diagram \*\*\*  
Dest: Manage Storage Device ( Process )  
Display Report ( 5.2 )  
Source:Select Data Source ( Process )  
Dest: \*\*\* Not on Diagram \*\*\*  
Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Request-Archived-Info Data Flow  
Description:  
Requested information to be retrieved from a storage device.  
Location:  
level 1 ( 0 )  
Source:User ( Source/Sink )  
Dest: Generate Reports ( Process )  
Generate Reports ( 5 )  
Source:\*\*\* Not on Diagram \*\*\*  
Dest: Select Form ( Process )  
Date Last Altered:11/24/2002 Date Created:11/24/2002

---

## MANAGE ARCHIVE (6)

### Handle Archiving

### Process

#### Description:

Retrieves data to be archived from the database.

Process #: 6.2

#### Process Description:

Takes the inputted archive request and retrieves the data from the database and returns it to be sent to the storage device.

#### Location:

Manage Archive ( 6 )

#### Input Flows:

Archiving-Request

#### Output Flows:

Data-Request

Archiving-Data

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

### Manage Storage Device

### Process

#### Description:

Both takes the data to be archived and transfers it to the storage device, and retrieves the storage device for reports.

Process #: 6.1

#### Process Description:

Takes the requested archive information from Generate Reports and retrieves the data from the storage device or takes the archiving data from 4.2 and stores it in the storage device.

#### Location:

Manage Archive ( 6 )

#### Input Flows:

Request-Archive

Archive-Data

Archiving-Data

#### Output Flows:

Archive-Data

Data-Request

Archive-Data

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

### Archive-Data

### Data Flow

#### Description:

Data that has been archived already and it being inputted from a storage device.

Location:

level 1 ( 0 )

Source:Manage Archive ( Process )

Dest: Generate Reports ( Process )

Source:Access DBMS ( File )

Dest: Manage Archive ( Process )

Source:Storage Device ( File )

Dest: Manage Archive ( Process )

Generate Reports ( 5 )

Source:\*\*\* Not on Diagram \*\*\*

Dest: Display Report ( Process )

Manage Archive ( 6 )

Source:\*\*\* Not on Diagram \*\*\*

Dest: Manage Storage Device ( Process )

Source:Manage Storage Device ( Process )

Dest: \*\*\* Not on Diagram \*\*\*

Source:Storage Device ( File )

Dest: \*\*\* Not on Diagram \*\*\*

File --> Access DBMS

Display Report ( 5.2 )

Source:\*\*\* Not on Diagram \*\*\*

Dest: Separate Data for Calculations ( Process )

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Archiving-Data

Data Flow

Description:

Data that is being transferred to a storage device to be archived.

Location:

level 1 ( 0 )

Source:Manage Archive ( Process )

Dest: Storage Device ( File )

Manage Archive ( 6 )

Source:\*\*\* Not on Diagram \*\*\*

Dest: Handle Archiving ( Process )

Source:Manage Archive ( Process )

Dest: \*\*\* Not on Diagram \*\*\*

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Archiving-Request

Data Flow

Description:

An index to data that is going to be transferred from a database to a storage device.

Location:

level 1 ( 0 )

Source:User ( Source/Sink )

Dest: Manage Archive ( Process )

Manage Archive ( 6 )  
Source:\*\*\* Not on Diagram \*\*\*  
Dest: Handle Archiving ( Process )  
Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Data-Request Data Flow  
Description:  
The archived data requested to be retrieved from the storage device.  
Location:  
level 1 ( 0 )  
Source:Manage Archive ( Process )  
Dest: Storage Device ( File )  
Manage Archive ( 6 )  
Source:Manage Storage Device ( Process )  
Dest: \*\*\* Not on Diagram \*\*\*  
Source:Manage Archive ( Process )  
Dest: Storage Device ( File )  
File --> Access DBMS  
Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Request-Archive Data Flow  
Description:  
Information requested to be archived from the database.  
Location:  
level 1 ( 0 )  
Source:Generate Reports ( Process )  
Dest: Manage Archive ( Process )  
Generate Reports ( 5 )  
Source:Display Report ( Process )  
Dest: \*\*\* Not on Diagram \*\*\*  
Manage Archive ( 6 )  
Source:\*\*\* Not on Diagram \*\*\*  
Dest: Manage Storage Device ( Process )  
Display Report ( 5.2 )  
Source:Select Data Source ( Process )  
Dest: \*\*\* Not on Diagram \*\*\*  
Date Last Altered:11/24/2002 Date Created:11/24/2002

---

**LEVEL 3  
DISPLAY REPORT (5.2)**

Compile Report

Process

Description:

    Puts together the report to be outputed to the user.

Process #: 5.2.3

Process Description:

    Takes in the calculation results from 5.3 and the report data from 5.2.2 and generates the report to be seen by the user.

Location:

    Display Report ( 5.2 )

    Input Flows:

        Calculation-Results

        Report-Data

    Output Flows:

        Report

Date Last Altered:11/24/2002    Date Created:11/24/2002

-----

Select Data Source

Process

Description:

    Allows the user to choose to access the archive or the database.

Process #: 5.2.1

Process Description:

    Provides the link between the user and the Access DBMS or the Archives.

Location:

    Display Report ( 5.2 )

    Input Flows:

        Display-Report

    Output Flows:

        Request-Archive

        Query

Date Last Altered:11/24/2002    Date Created:11/24/2002

Separate Data for Calculations

Process

Description:

    Breaks down the data to be sent for calculating.

Process #: 5.2.2

Process Description:

    Finds the information needed for calculations from either the Access DBMS, or an archive.

Location:

    Display Report ( 5.2 )

    Input Flows:

        Query-Results



Archive-Data  
Output Flows:  
Data-for-Calculations  
Report-Data  
Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Archive-Data Data Flow

Description:

Data that has been archived already and it being inputed from a storage device.

Location:

level 1 ( 0 )

Source:Manage Archive ( Process )

Dest: Generate Reports ( Process )

Source:Access DBMS ( File )

Dest: Manage Archive ( Process )

Source:Storage Device ( File )

Dest: Manage Archive ( Process )

Generate Reports ( 5 )

Source:\*\*\* Not on Diagram \*\*\*

Dest: Display Report ( Process )

Manage Archive ( 6 )

Source:\*\*\* Not on Diagram \*\*\*

Dest: Manage Storage Device ( Process )

Source:Manage Storage Device ( Process )

Dest: \*\*\* Not on Diagram \*\*\*

Source:Storage Device ( File )

Dest: \*\*\* Not on Diagram \*\*\*

File --> Access DBMS

Display Report ( 5.2 )

Source:\*\*\* Not on Diagram \*\*\*

Dest: Separate Data for Calculations ( Process )

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Calculation-Results Data Flow

Description:

The final information regarding whether or not the member qualifies for retirement benefits and is displayed to the user.

Location:

Generate Reports ( 5 )

Source:Calculating for Reports ( Process )

Dest: Display Report ( Process )

Calculating for Reports ( 5.3 )

Source:Return Results ( Process )

Dest: \*\*\* Not on Diagram \*\*\*

Display Report ( 5.2 )

Source:\*\*\* Not on Diagram \*\*\*  
Dest: Compile Report ( Process )  
Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Data-for-Calculations Data Flow

Description:

The total credits obtained by a specific member.

Location:

Generate Reports ( 5 )

Source:Display Report ( Process )

Dest: Calculating for Reports ( Process )

Calculating for Reports ( 5.3 )

Source:\*\*\* Not on Diagram \*\*\*

Dest: Separate Data ( Process )

Display Report ( 5.2 )

Source:Separate Data for Calculations ( Process )

Dest: \*\*\* Not on Diagram \*\*\*

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Display-Report Data Flow

Description:

Sends the report information to the process Display Report.

Location:

Generate Reports ( 5 )

Source:Select Form ( Process )

Dest: Display Report ( Process )

Display Report ( 5.2 )

Source:\*\*\* Not on Diagram \*\*\*

Dest: Select Data Source ( Process )

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Query Data Flow

Description:

The report requested from the database.

Location:

level 1 ( 0 )

Source:Generate Reports ( Process )

Dest: Access DBMS ( File )

Generate Reports ( 5 )

Source:Display Report ( Process )

Dest: \*\*\* Not on Diagram \*\*\*

File --> Access DBMS

Display Report ( 5.2 )

Source:Select Data Source ( Process )

Dest: \*\*\* Not on Diagram \*\*\*

Date Last Altered:11/24/2002 Date Created:11/24/2002

-----  
Query-Results                      Data Flow  
Description:  
    The requested report information as queried from the database.  
Location:  
    level 1 ( 0 )  
        Source:Access DBMS ( File )  
        Dest: Generate Reports ( Process )  
Generate Reports ( 5 )  
    Source:\*\*\* Not on Diagram \*\*\*  
    Dest: Display Report ( Process )  
File -->            Access DBMS  
Display Report ( 5.2 )  
    Source:\*\*\* Not on Diagram \*\*\*  
    Dest: Separate Data for Calculations ( Process )  
Date Last Altered:11/24/2002    Date Created:11/24/2002  
-----

Report                              Data Flow  
Description:  
    One of the 5 different forms of data to be displayed to the user.  
Location:  
    level 1 ( 0 )  
        Source:Generate Reports ( Process )  
        Dest: User ( Source/Sink )  
Generate Reports ( 5 )  
    Source:Display Report ( Process )  
    Dest: \*\*\* Not on Diagram \*\*\*  
Display Report ( 5.2 )  
    Source:Compile Report ( Process )  
    Dest: \*\*\* Not on Diagram \*\*\*  
Date Last Altered:11/24/2002    Date Created:11/24/2002  
-----

Report-Data                        Data Flow  
Description:  
    Contains all the report data from either the archive or the database.  
Location:  
    Display Report ( 5.2 )  
        Source:Separate Data for Calculations ( Process )  
        Dest: Compile Report ( Process )  
Date Last Altered:11/24/2002    Date Created:11/24/2002  
-----

Request-Archive                    Data Flow  
Description:  
    Information requested to be archived from the database.  
Location:  
    level 1 ( 0 )

Source:Generate Reports ( Process )  
Dest: Manage Archive ( Process )  
Generate Reports ( 5 )  
Source:Display Report ( Process )  
Dest: \*\*\* Not on Diagram \*\*\*  
Manage Archive ( 6 )  
Source:\*\*\* Not on Diagram \*\*\*  
Dest: Manage Storage Device ( Process )  
Display Report ( 5.2 )  
Source:Select Data Source ( Process )  
Dest: \*\*\* Not on Diagram \*\*\*  
Date Last Altered:11/24/2002 Date Created:11/24/2002

---

## CALCULATING FOR REPORTS (5.3)

Calculate Position                      Process  
Description:  
    Calculates the number of points you get for the position of the member.  
Process #: 5.3.2  
Process Description:  
    Takes in the separated data and calculates the number of points that should be returned based on the members position.  
Location:  
    Calculating for Reports ( 5.3 )  
    Input Flows:  
        Elected-or-Appointed-Position  
    Output Flows:  
        Position-Points  
Date Last Altered:11/24/2002    Date Created:11/24/2002

---

Calculate Response                      Process  
Description:  
    Calculates the points to be allotted for the responses the member responded to.  
Process #: 5.3.3  
Process Description:  
    Takes in the number of responses from the separated data and calculates the number of points to be given for the specific number responded to.  
Location:  
    Calculating for Reports ( 5.3 )  
    Input Flows:  
        Number-Responses  
    Output Flows:  
        Response-Points  
Date Last Altered:11/24/2002    Date Created:11/24/2002

Calculate Sleep/Stand-by              Process  
Description:  
    Calculates the number of points to be given out for sleep and stand-by time.  
Process #: 5.3.4  
Process Description:  
    Takes in the sleep or stand-by hours and uses the calculations to compute the number of points to be given out.  
Location:  
    Calculating for Reports ( 5.3 )

Input Flows:  
Sleep-or-Stand-by-Hours  
Output Flows:  
Sleep-or-Stand-by-Points  
Date Last Altered: 11/24/2002 Date Created: 11/24/2002

---

Return Results Process

Description:  
Returns the total number of points calculated.  
Process #: 5.3.5  
Process Description:  
Adds together the points found from the members position, calls responded to, and sleep/stand-by time, and returns them.  
Location:  
Calculating for Reports ( 5.3 )  
Input Flows:  
Position-Points  
Response-Points  
Sleep-or-Stand-by-Points  
Output Flows:  
Calculation-Results  
Date Last Altered: 11/24/2002 Date Created: 11/24/2002

---

Separate Data Process

Description:  
Breaks the data down into specific variables.  
Process #: 5.3.1  
Process Description:  
The variables that are broken down by this process are the members position, number of calls responded to, and sleep/stand-by hours.  
Location:  
Calculating for Reports ( 5.3 )  
Input Flows:  
Data-for-Calculations  
Output Flows:  
Elected-or-Appointed-Position  
Sleep-or-Stand-by-Hours  
Number-Responses  
Date Last Altered: 11/24/2002 Date Created: 11/24/2002

---

Calculation-Results Data Flow

Description:  
The final information regarding whether or not the member qualifies for retirement benefits and is displayed to the user.  
Location:  
Generate Reports ( 5 )

Source:Calculating for Reports ( Process )  
Dest: Display Report ( Process )  
Calculating for Reports ( 5.3 )  
Source:Return Results ( Process )  
Dest: \*\*\* Not on Diagram \*\*\*  
Display Report ( 5.2 )  
Source:\*\*\* Not on Diagram \*\*\*  
Dest: Compile Report ( Process )  
Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Data-for-Calculations

Data Flow

Description:

The total credits obtained by a specific member.

Location:

Generate Reports ( 5 )

Source:Display Report ( Process )

Dest: Calculating for Reports ( Process )

Calculating for Reports ( 5.3 )

Source:\*\*\* Not on Diagram \*\*\*

Dest: Separate Data ( Process )

Display Report ( 5.2 )

Source:Separate Data for Calculations ( Process )

Dest: \*\*\* Not on Diagram \*\*\*

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Elected-or-Appointed-Position

Data Flow

Description:

The current position of the member.

Location:

Calculating for Reports ( 5.3 )

Source:Separate Data ( Process )

Dest: Calculate Position ( Process )

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Number-Responses

Data Flow

Description:

The number of responses a member has responded to.

Location:

Calculating for Reports ( 5.3 )

Source:Separate Data ( Process )

Dest: Calculate Response ( Process )

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Position-Points

Data Flow

Description:

The points calculated from the members position.

Location:

Calculating for Reports ( 5.3 )  
Source:Calculate Position ( Process )  
Dest: Return Results ( Process )

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Response-Points Data Flow

Description:

The number of points calculated based on the number of calls responded to.

Location:

Calculating for Reports ( 5.3 )  
Source:Calculate Response ( Process )  
Dest: Return Results ( Process )

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Sleep-or-Stand-by-Hours Data Flow

Description:

The number of hours a member has spent on stand-by or sleeping on call.

Location:

Calculating for Reports ( 5.3 )  
Source:Separate Data ( Process )  
Dest: Calculate Sleep/Stand-by ( Process )

Date Last Altered:11/24/2002 Date Created:11/24/2002

---

Sleep-or-Stand-by-Points Data Flow

Description:

The calculated number of points based on sleep or stand-by hours.

Location:

Calculating for Reports ( 5.3 )  
Source:Calculate Sleep/Stand-by ( Process )  
Dest: Return Results ( Process )

Date Last Altered:11/24/2002 Date Created:11/24/2002

---



## CALCULATE (5.6)

Calculate Points                      Process  
Description:  
    Calculates the amount of points that should be allotted.  
Process #: 3.6.2  
Process Description:  
    Takes in the variables required from activity and calculates the number of points to enter into the database.  
Location:  
    Calculate ( 3.6 )  
    Input Flows:  
        Duration  
        Calculate-Variables  
    Output Flows:  
        Points  
Date Last Altered:11/24/2002    Date Created:11/24/2002

---

Get Activity Breakdown              Process  
Description:  
    Breaks down the activity information.  
Process #: 3.6.1  
Process Description:  
    Takes the variables needed from activities to be passed on to calculate the points with.  
Location:  
    Calculate ( 3.6 )  
    Input Flows:  
        Activity-Selection  
    Output Flows:  
        Activity  
        Calculate-Variables  
Date Last Altered:11/24/2002    Date Created:11/24/2002

---

Activity                              Data Flow  
Description:  
    The selected activity transferred to the database after calculations take place.  
Location:  
    Manage Activities ( 3 )  
        Source:Calculate ( Process )  
        Dest: Database Interface ( Source/Sink )  
    Calculate ( 3.6 )

Source: Get Activity Breakdown ( Process )  
Dest: \*\*\* Not on Diagram \*\*\*  
Date Last Altered: 11/24/2002 Date Created: 11/24/2002

---

Activity-Selection Data Flow

Description:

The user selected activity which is being sent to be calculated.

Location:

Manage Activities ( 3 )

Source: Select Activity ( Process )

Dest: Calculate ( Process )

Calculate ( 3.6 )

Source: \*\*\* Not on Diagram \*\*\*

Dest: Get Activity Breakdown ( Process )

Date Last Altered: 11/24/2002 Date Created: 11/24/2002

---

Calculate-Variables Data Flow

Description:

The specific data required for point calculations that are taken from activities.

Location:

Calculate ( 3.6 )

Source: Get Activity Breakdown ( Process )

Dest: Calculate Points ( Process )

Date Last Altered: 11/24/2002 Date Created: 11/24/2002

---

Duration Data Flow

Description:

The amount of time spent, in hours and minutes.

Location:

Manage Activities ( 3 )

Source: Enter Date and Duration ( Process )

Dest: Calculate ( Process )

Calculate ( 3.6 )

Source: \*\*\* Not on Diagram \*\*\*

Dest: Calculate Points ( Process )

Date Last Altered: 11/24/2002 Date Created: 11/24/2002

---

Points Data Flow

Description:

The calculated points the member receives towards retirement based on the activities/duties performed.

Location:

Manage Activities ( 3 )

Source: Calculate ( Process )

Dest: Database Interface ( Source/Sink )

Calculate ( 3.6 )

Source: Calculate Points ( Process )

Dest: \*\*\* Not on Diagram \*\*\*

Date Last Altered: 11/24/2002 Date Created: 11/24/2002

---

Detailed Listing -- by Type  
All Entries -- Data Flow Diagrams

---

Add/Edit	Process
Description: Allows the user to add or edit members and member information into the database.	
Process #: 6.1	
Process Description: Takes the inputted user updates and sends it to Relay Info which will send it on to the database interface.	
Location: Manage Profiles ( 6 )	
Input Flows: Member-Data Return-Data	
Output Flows: Update-Data Query-Data	
Date Last Altered:10/28/2002    Date Created:10/28/2002	

-----

Authenticate	Process
Description: Secures the system from entry from unwanted users.	
Process #: 5	
Process Description: Takes the user entered log in data and sends the password on to be verified and sends the user's initials to the database. A confirmation is then sent back to the user.	
Location: level 1 ( 0 )	
Input Flows: Return-Password Login-Data	
Output Flows: Request-Password	
Date: 10/28/2002	Project: FNA
Time: 2:30 AM	

Detailed Listing -- by Type  
All Entries -- Data Flow Diagrams

---

Authentication-Confirmation

Initials

Date Last Altered:10/28/2002 Date Created:10/28/2002

---

Calculate Process

Description:

Tallies the points in which the members receive for various activities/duties performed.

Process #: 2.5

Process Description:

Takes the inputted activity/duty, by using the guidelines the comptroller has designed, it will calculate the points the member receives.

Location:

Manage Activities ( 2 )

Input Flows:

Activity-Selection  
Date-and-Duration  
Member-Data

Output Flows:

Date-and-Duration  
Activity  
Points  
Member-Name

Date Last Altered:10/28/2002 Date Created:10/28/2002

---

Calculating for Reports Process

Description:

Determines which members have met the requirements for retirement benefits.

Process #: 3.3

Process Description:

Takes the calculations for all the activities and duties and then

Date: 10/28/2002 Project: FNA

Time: 2:30 AM

Detailed Listing -- by Type  
All Entries -- Data Flow Diagrams

---

determines whether or not the members meet the retirement benefits.

Location:

Generate Reports ( 3 )

Input Flows:

Data-for-Calculations

Output Flows:

Calculation-Results

Date Last Altered:10/28/2002 Date Created:10/28/2002



database.

Process #: 1.1

Process Description:

The user selects a name and the name is displayed to the user and the information is updated in the database.

Location:

Manage Duties ( 1 )

Input Flows:

Name-Selection

Return-Names

Output Flows:

Member-Name

Query-Names

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-----  
Date: 10/28/2002

Project: FNA

Time: 2:30 AM

Detailed Listing -- by Type

All Entries -- Data Flow Diagrams

---

Display Info

Process

Description:

Displays the member names chosen by the user along with all other relevant information.

Process #: 1.2

Process Description:

Takes the member name which has been selected by the user and retrieves all corresponding data from the database and displays it.

Location:

Manage Duties ( 1 )

Input Flows:

New-Duty-Data

Member-Name

Return-Member-Info

Output Flows:

Display-Member-Data

Query-Member-Info

Date Last Altered:10/28/2002 Date Created:10/28/2002

-----  
Display Report

Process

Description:

Displays the information for report the user has selected.

Process #: 3.2

Process Description:

Displays the information for one of the 5 main reports.

Location:

Generate Reports ( 3 )

Input Flows:

Display-Report

Archive-Data

Query-Results

Calculation-Results

Date: 10/28/2002

Project: FNA

Time: 2:30 AM

Detailed Listing -- by Type

All Entries -- Data Flow Diagrams

---

Output Flows:

Report

Request-Archive

Query

Data-for-Calculations

Date Last Altered:10/28/2002

Date Created:10/28/2002

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Enter Date And Duration

Process

Description:

Stores inputted Date and Duration as objects to be entered into the database and also used for calculations.

Process #: 2.3

Process Description:

User enters the date and duration, they are processed through Calculate and then stored into the database.

Location:

Manage Activities ( 2 )

Input Flows:

Entered-Date-and-Duration

Output Flows:

Date-and-Duration

Date Last Altered:10/28/2002

Date Created:10/28/2002

---

Enter Duty Info

Process

Description:

Takes the inputted duty data and stores it into the database.

Process #: 1.3

Process Description:

User enters all duty data through the screen interface and as entered, the display will refresh and show the new data. When the user is done, the data is committed to the database.



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Detailed Listing -- by Type  
All Entries -- Data Flow Diagrams

---

Location:

Manage Duties ( 1 )

Input Flows:

Enter-Duty-Data

Output Flows:

New-Duty-Data

Commit-Data

Date Last Altered:10/28/2002    Date Created:10/28/2002

---

Generate Reports

Process

Description:

Allows the user to choose from five different query types from the database, this includes current information and archived data.

Process #: 3

Process Description:

Takes in a query or archive request from the user and returns the report from the database or storage device.

Notes:

The five types of queries are: annual report, individual summary, individual detailed, squad summary and squad detailed.

Location:

level 1 ( 0 )

Input Flows:

Report-Query

Request-Archived-Info

Archive-Data

Query-Results

Output Flows:

Report

Request-Archive

Query

Date Last Altered:10/28/2002    Date Created:10/28/2002

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Date: 10/28/2002      Project: FNA  
Time: 2:30 AM

Detailed Listing -- by Type  
All Entries -- Data Flow Diagrams

---

Handle Archiving

Process

Description:

Retrieves data to be archived from the database

Process #: 4.2

Process Description:

Takes the inputted archive request and retrieves the data from the database and returns it to be sent to the storage device.

Location:

Manage Archive ( 4 )

Input Flows:

Archiving-Request

Output Flows:

Data-Request

Archiving-Data

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Manage Activities

Process

Description:

Stores activity information in the database.

Process #: 2

Process Description:

Takes the activities information as inputted by the user and stores them into the database.

Location:

level 1 ( 0 )

Input Flows:

Activity-Data

Update-Confirmation

Output Flows:

Activity-Log

Activity-Update

Date: 10/28/2002 Project: FNA

Time: 2:30 AM

Detailed Listing -- by Type

All Entries -- Data Flow Diagrams

---

Date Last Altered:10/28/2002 Date Created:10/28/2002

---

Manage Archive

Process

Description:

Archives data from database to a specific storage device

Process #: 4

Process Description:

Retrieves the requested data from the database as specified by the user and stores to a storage device.

Location:

level 1 ( 0 )

Input Flows:

Archiving-Request

Request-Archive

Archive-Data

Archive-Data

Output Flows:

Archive-Data

Data-Request

Archiving-Data

Data-Request

Date Last Altered:10/28/2002 Date Created:10/28/2002

---

Manage Duties Process

Description:

Stores Duty information entered by the user in the database.

Process #: 1

Process Description:

Takes the Duty information as inputted by the user and stores them into the database.

Location:

level 1 ( 0 )

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Time: 2:30 AM

Detailed Listing -- by Type

All Entries -- Data Flow Diagrams

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Input Flows:

Duty-Data

Update-Confirmation

Output Flows:

Duty-Log

Duty-Update

Date Last Altered:10/28/2002 Date Created:10/28/2002

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Manage Profiles Process

Description:

Allows the addition, editing, deletion and viewing of member profiles.

Process #: 6

Process Description:

Any changes the user may need to make are modified in the database.

Location:

level 1 ( 0 )

Input Flows:

Profile-Updates

Profile-Data

Output Flows:

Profile-Information

Updated-Profile-Data

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Manage Storage Device Process

Description:

Both takes the data to be archived and transfers it to the storage device, and retrieves the storage device for reports.

Process #: 4.1

Process Description:

Takes the requested archive information from Generate Reports and retrieves the data from the storage device or takes the archiving data

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Time: 2:30 AM

Detailed Listing -- by Type  
All Entries -- Data Flow Diagrams

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from 4.2 and stores it in the storage device.

Location:

Manage Archive ( 4 )

Input Flows:

Request-Archive

Archive-Data

Archiving-Data

Output Flows:

Archive-Data

Data-Request

Archive-Data

Date Last Altered:10/28/2002 Date Created:10/28/2002

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Process Login Data Process

Description:

Separates the log in data into initials and password.

Process #: 5.1

Process Description:

Takes the log in information entered by the user and sends the initials to

be stored in the database and the password to be verified.

Location:

Authenticate ( 5 )

Input Flows:

Login-Data

Output Flows:

Initials

Password

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Relay Info

Process

Description:

Transfers the requested member information to the process in which it is needed.

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Detailed Listing -- by Type

All Entries -- Data Flow Diagrams

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Process #: 6.2

Process Description:

It can 1) relay member information to be viewed to user. 2) Allow member data in the database to be added or edited or 3) Allow member data stored in the database to be removed.

Location:

Manage Profiles ( 6 )

Input Flows:

Viewing-Request

Query-Members

Delete-Request

Update-Data

Query-Data

Return-Data

Output Flows:

Returned-Member-Data

Return-Data

Request-Data

Profile-Information

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Remove

Process

Description:

Allows the user to remove a member and their corresponding member information from the database.

Process #: 6.3

Process Description:

Takes the remove request made by the user and matches it with the database information and removes all relevant information.

Location:

Manage Profiles ( 6 )

Input Flows:

Remove-Request

Returned-Member-Data

Output Flows:

Query-Members

Date: 10/28/2002 Project: FNA

Time: 2:30 AM

Detailed Listing -- by Type

All Entries -- Data Flow Diagrams

---

Delete-Request

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Select Activity Process

Description:

Takes activity selected by the user and sends it to be calculated which is process 2.5

Process #: 2.2

Location:

Manage Activities ( 2 )

Input Flows:

Selected-Activity

Output Flows:

Activities

Activity-Selection

Date Last Altered:10/28/2002 Date Created:10/28/2002

Select Form Process

Description:

Allows the user to select one of the 5 types of forms.

Process #: 3.1

Process Description:

Takes the type of report the user wants to view and sends it on to be processed by display reports.

Location:

Generate Reports ( 3 )

Input Flows:

Request-Archived-Info

Report-Query  
Output Flows:  
Display-Report  
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Detailed Listing -- by Type  
All Entries -- Data Flow Diagrams

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Date Last Altered:10/28/2002 Date Created:10/28/2002

---

Select Members Process

Description:

Allows the user to select the members who attended a certain activity.

Process #: 2.4

Process Description:

The user inputs the names of members who were in attendance and then sends that information to be calculated.

Location:

Manage Activities ( 2 )

Input Flows:

Member-Selection

Output Flows:

Member-Display

Member-Data

Date Last Altered:10/28/2002 Date Created:10/28/2002

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Access DBMS File

Description:

will The Microsoft Access Database in which all Member/Activity/Duty data be stored.

Location:

level 1 ( 0 )

Input Flows:

Duty-Update

Activity-Update

Query

Data-Request

Updated-Profile-Data

Initials

Initials

Output Flows:

Update-Confirmation

Query-Results

Date: 10/28/2002  
Time: 2:30 AM

Project: FNA

Detailed Listing -- by Type  
All Entries -- Data Flow Diagrams

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---

Archive-Data  
Profile-Data  
Update-Confirmation

...



## File and Data Cross Reference

ActivityDay	Data Element
Entered-Date-and-Duration	Data Flow
Manage Activities ( 3 )	
Date-and-Duration	Data Flow
Manage Activities ( 3 )	
Date	Data Flow
Manage Activities ( 3 )	

---

ActivityMonth	Data Element
Entered-Date-and-Duration	Data Flow
Manage Activities ( 3 )	
Date-and-Duration	Data Flow
Manage Activities ( 3 )	
Date	Data Flow
Manage Activities ( 3 )	

---

ActivityYear	Data Element
Entered-Date-and-Duration	Data Flow
Manage Activities ( 3 )	
Date-and-Duration	Data Flow
Manage Activities ( 3 )	
Date	Data Flow
Manage Activities ( 3 )	

---

Age	Data Element
Member-Data	Data Flow
Manage Activities ( 3 )	
Manage Profiles ( 2 )	
Update-Data	Data Flow
Manage Profiles ( 2 )	
Return-Data	Data Flow
Manage Profiles ( 2 )	
Request-Data	Data Flow
Manage Profiles ( 2 )	
Updated-Profile-Data	Data Flow
level 1 ( 0 )	
Manage Profiles ( 2 )	
File -->	Access DBMS
Profile-Data	Data Flow
level 1 ( 0 )	
Manage Profiles ( 2 )	
File -->	Access DBMS
Returned-Member-Data	Data Flow

Manage Profiles ( 2 )  
 Profile-Information            Data Flow  
     level 1 ( 0 )  
     Manage Profiles ( 2 )  
 Activity-Update                Data Flow  
     level 1 ( 0 )  
     Manage Activities ( 3 )  
     File -->        Access DBMS  
 Update-Confirmation            Data Flow  
     level 1 ( 0 )  
     Manage Activities ( 3 )  
     File -->        Access DBMS  
 Activity-Data                  Data Flow  
     level 1 ( 0 )  
     Manage Activities ( 3 )  
 Activity-Log                  Data Flow  
     level 1 ( 0 )  
     Manage Activities ( 3 )  
 Archiving-Request              Data Flow  
     level 1 ( 0 )  
     Manage Archive ( 6 )  
 Archiving-Data                Data Flow  
     level 1 ( 0 )  
     Manage Archive ( 6 )  
 Data-Request                  Data Flow  
     level 1 ( 0 )  
     Manage Archive ( 6 )  
     File -->        Access DBMS  
 Archive-Data                  Data Flow  
     level 1 ( 0 )  
     Generate Reports ( 5 )  
     Manage Archive ( 6 )  
     File -->        Access DBMS  
     Display Report ( 5.2 )  
 Request-Archive                Data Flow  
     level 1 ( 0 )  
     Generate Reports ( 5 )  
     Manage Archive ( 6 )  
     Display Report ( 5.2 )  
 Display-Report                Data Flow  
     Generate Reports ( 5 )  
     Display Report ( 5.2 )  
 Query-Results                 Data Flow  
     level 1 ( 0 )  
     Generate Reports ( 5 )  
     File -->        Access DBMS

## Display Report ( 5.2 )

CallsPerMonth	Data Element
Duty-Data	Data Flow
level 1 ( 0 )	
Manage Duties ( 4 )	
Duty-Log	Data Flow
level 1 ( 0 )	
Manage Duties ( 4 )	
Return-Member-Info	Data Flow
Manage Duties ( 4 )	
Duty-Update	Data Flow
level 1 ( 0 )	
Manage Duties ( 4 )	
Duty-Update-Confirmation	Data Flow
Manage Duties ( 4 )	
Commit-Data	Data Flow
Manage Duties ( 4 )	
Enter-Duty-Data	Data Flow
Manage Duties ( 4 )	
New-Duty-Data	Data Flow
Manage Duties ( 4 )	
Archiving-Request	Data Flow
level 1 ( 0 )	
Manage Archive ( 6 )	
Archiving-Data	Data Flow
level 1 ( 0 )	
Manage Archive ( 6 )	
Data-Request	Data Flow
level 1 ( 0 )	
Manage Archive ( 6 )	
File -->	Access DBMS
Archive-Data	Data Flow
level 1 ( 0 )	
Generate Reports ( 5 )	
Manage Archive ( 6 )	
File -->	Access DBMS
Display Report ( 5.2 )	
Request-Archive	Data Flow
level 1 ( 0 )	
Generate Reports ( 5 )	
Manage Archive ( 6 )	
Display Report ( 5.2 )	
Display-Report	Data Flow
Generate Reports ( 5 )	
Display Report ( 5.2 )	

Query-Results	Data Flow
level 1 ( 0 )	
Generate Reports ( 5 )	
File --> Access DBMS	
Display Report ( 5.2 )	
City	Data Element
Member-Data	Data Flow
Manage Activities ( 3 )	
Manage Profiles ( 2 )	
Update-Data	Data Flow
Manage Profiles ( 2 )	
Return-Data	Data Flow
Manage Profiles ( 2 )	
Request-Data	Data Flow
Manage Profiles ( 2 )	
Updated-Profile-Data	Data Flow
level 1 ( 0 )	
Manage Profiles ( 2 )	
File --> Access DBMS	
Profile-Data	Data Flow
level 1 ( 0 )	
Manage Profiles ( 2 )	
File --> Access DBMS	
Returned-Member-Data	Data Flow
Manage Profiles ( 2 )	
Profile-Information	Data Flow
level 1 ( 0 )	
Manage Profiles ( 2 )	
Activity-Update	Data Flow
level 1 ( 0 )	
Manage Activities ( 3 )	
File --> Access DBMS	
Update-Confirmation	Data Flow
level 1 ( 0 )	
Manage Activities ( 3 )	
File --> Access DBMS	
Activity-Data	Data Flow
level 1 ( 0 )	
Manage Activities ( 3 )	
Activity-Log	Data Flow
level 1 ( 0 )	
Manage Activities ( 3 )	
Archiving-Request	Data Flow
level 1 ( 0 )	
Manage Archive ( 6 )	
Archiving-Data	Data Flow

- level 1 ( 0 )
- Manage Archive ( 6 )
- Data-Request                      Data Flow
  - level 1 ( 0 )
  - Manage Archive ( 6 )
  - File -->            Access DBMS
- Archive-Data                      Data Flow
  - level 1 ( 0 )
  - Generate Reports ( 5 )
  - Manage Archive ( 6 )
  - File -->            Access DBMS
  - Display Report ( 5.2 )
- Request-Archive                    Data Flow
  - level 1 ( 0 )
  - Generate Reports ( 5 )
  - Manage Archive ( 6 )
  - Display Report ( 5.2 )
- Display-Report                    Data Flow
  - Generate Reports ( 5 )
  - Display Report ( 5.2 )
- Query-Results                    Data Flow
  - level 1 ( 0 )
  - Generate Reports ( 5 )
  - File -->            Access DBMS
  - Display Report ( 5.2 )

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- Comments                          Data Element
- Activity-Update                  Data Flow
  - level 1 ( 0 )
  - Manage Activities ( 3 )
  - File -->            Access DBMS

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- DOBDay                            Data Element
- Member-Data                      Data Flow
  - Manage Activities ( 3 )
  - Manage Profiles ( 2 )
- Update-Data                      Data Flow
  - Manage Profiles ( 2 )
- Return-Data                      Data Flow
  - Manage Profiles ( 2 )
- Request-Data                    Data Flow
  - Manage Profiles ( 2 )
- Updated-Profile-Data            Data Flow
  - level 1 ( 0 )
  - Manage Profiles ( 2 )
  - File -->            Access DBMS

Profile-Data                      Data Flow  
     level 1 ( 0 )  
     Manage Profiles ( 2 )  
     File -->            Access DBMS  
 Returned-Member-Data              Data Flow  
     Manage Profiles ( 2 )  
 Profile-Information                Data Flow  
     level 1 ( 0 )  
     Manage Profiles ( 2 )  
 Activity-Update                    Data Flow  
     level 1 ( 0 )  
     Manage Activities ( 3 )  
     File -->            Access DBMS  
 Update-Confirmation                Data Flow  
     level 1 ( 0 )  
     Manage Activities ( 3 )  
     File -->            Access DBMS  
 Activity-Data                      Data Flow  
     level 1 ( 0 )  
     Manage Activities ( 3 )  
 Activity-Log                        Data Flow  
     level 1 ( 0 )  
     Manage Activities ( 3 )  
 Archiving-Request                  Data Flow  
     level 1 ( 0 )  
     Manage Archive ( 6 )  
 Archiving-Data                    Data Flow  
     level 1 ( 0 )  
     Manage Archive ( 6 )  
 Data-Request                        Data Flow  
     level 1 ( 0 )  
     Manage Archive ( 6 )  
     File -->            Access DBMS  
 Archive-Data                        Data Flow  
     level 1 ( 0 )  
     Generate Reports ( 5 )  
     Manage Archive ( 6 )  
     File -->            Access DBMS  
     Display Report ( 5.2 )  
 Request-Archive                    Data Flow  
     level 1 ( 0 )  
     Generate Reports ( 5 )  
     Manage Archive ( 6 )  
     Display Report ( 5.2 )  
 Display-Report                    Data Flow  
     Generate Reports ( 5 )

Display Report ( 5.2 )  
 Query-Results                      Data Flow  
   level 1 ( 0 )  
 Generate Reports ( 5 )  
 File -->                      Access DBMS  
 Display Report ( 5.2 )

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DOBMonth                              Data Element  
 Member-Data                          Data Flow  
   Manage Activities ( 3 )  
   Manage Profiles ( 2 )  
 Update-Data                          Data Flow  
   Manage Profiles ( 2 )  
 Return-Data                          Data Flow  
   Manage Profiles ( 2 )  
 Request-Data                         Data Flow  
   Manage Profiles ( 2 )  
 Updated-Profile-Data                 Data Flow  
   level 1 ( 0 )  
   Manage Profiles ( 2 )  
   File -->                      Access DBMS  
 Profile-Data                          Data Flow  
   level 1 ( 0 )  
   Manage Profiles ( 2 )  
   File -->                      Access DBMS  
 Returned-Member-Data                 Data Flow  
   Manage Profiles ( 2 )  
 Profile-Information                   Data Flow  
   level 1 ( 0 )  
   Manage Profiles ( 2 )  
 Activity-Update                       Data Flow  
   level 1 ( 0 )  
   Manage Activities ( 3 )  
   File -->                      Access DBMS  
 Update-Confirmation                 Data Flow  
   level 1 ( 0 )  
   Manage Activities ( 3 )  
   File -->                      Access DBMS  
 Activity-Data                         Data Flow  
   level 1 ( 0 )  
   Manage Activities ( 3 )  
 Activity-Log                          Data Flow  
   level 1 ( 0 )  
   Manage Activities ( 3 )  
 Archiving-Request                     Data Flow  
   level 1 ( 0 )

Manage Archive ( 6 )  
 Archiving-Data Data Flow  
     level 1 ( 0 )  
     Manage Archive ( 6 )  
 Data-Request Data Flow  
     level 1 ( 0 )  
     Manage Archive ( 6 )  
     File --> Access DBMS  
 Archive-Data Data Flow  
     level 1 ( 0 )  
     Generate Reports ( 5 )  
     Manage Archive ( 6 )  
     File --> Access DBMS  
     Display Report ( 5.2 )  
 Request-Archive Data Flow  
     level 1 ( 0 )  
     Generate Reports ( 5 )  
     Manage Archive ( 6 )  
     Display Report ( 5.2 )  
 Display-Report Data Flow  
     Generate Reports ( 5 )  
     Display Report ( 5.2 )  
 Query-Results Data Flow  
     level 1 ( 0 )  
     Generate Reports ( 5 )  
     File --> Access DBMS  
     Display Report ( 5.2 )

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DOBYear Data Element  
 Member-Data Data Flow  
     Manage Activities ( 3 )  
     Manage Profiles ( 2 )  
 Update-Data Data Flow  
     Manage Profiles ( 2 )  
 Return-Data Data Flow  
     Manage Profiles ( 2 )  
 Request-Data Data Flow  
     Manage Profiles ( 2 )  
 Updated-Profile-Data Data Flow  
     level 1 ( 0 )  
     Manage Profiles ( 2 )  
     File --> Access DBMS  
 Profile-Data Data Flow  
     level 1 ( 0 )  
     Manage Profiles ( 2 )  
     File --> Access DBMS



Returned-Member-Data	Data Flow
Manage Profiles ( 2 )	
Profile-Information	Data Flow
level 1 ( 0 )	
Manage Profiles ( 2 )	
Activity-Update	Data Flow
level 1 ( 0 )	
Manage Activities ( 3 )	
File -->	Access DBMS
Update-Confirmation	Data Flow
level 1 ( 0 )	
Manage Activities ( 3 )	
File -->	Access DBMS
Activity-Data	Data Flow
level 1 ( 0 )	
Manage Activities ( 3 )	
Activity-Log	Data Flow
level 1 ( 0 )	
Manage Activities ( 3 )	
Archiving-Request	Data Flow
level 1 ( 0 )	
Manage Archive ( 6 )	
Archiving-Data	Data Flow
level 1 ( 0 )	
Manage Archive ( 6 )	
Data-Request	Data Flow
level 1 ( 0 )	
Manage Archive ( 6 )	
File -->	Access DBMS
Archive-Data	Data Flow
level 1 ( 0 )	
Generate Reports ( 5 )	
Manage Archive ( 6 )	
File -->	Access DBMS
Display Report ( 5.2 )	
Request-Archive	Data Flow
level 1 ( 0 )	
Generate Reports ( 5 )	
Manage Archive ( 6 )	
Display Report ( 5.2 )	
Display-Report	Data Flow
Generate Reports ( 5 )	
Display Report ( 5.2 )	
Query-Results	Data Flow
level 1 ( 0 )	
Generate Reports ( 5 )	

File --> Access DBMS  
 Display Report ( 5.2 )

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DutyDay	Data Element
Duty-Data	Data Flow
level 1 ( 0 )	
Manage Duties ( 4 )	
Duty-Log	Data Flow
level 1 ( 0 )	
Manage Duties ( 4 )	
Return-Member-Info	Data Flow
Manage Duties ( 4 )	
Duty-Update	Data Flow
level 1 ( 0 )	
Manage Duties ( 4 )	
Duty-Update-Confirmation	Data Flow
Manage Duties ( 4 )	
Commit-Data	Data Flow
Manage Duties ( 4 )	
Enter-Duty-Data	Data Flow
Manage Duties ( 4 )	
New-Duty-Data	Data Flow
Manage Duties ( 4 )	
Archiving-Request	Data Flow
level 1 ( 0 )	
Manage Archive ( 6 )	
Archiving-Data	Data Flow
level 1 ( 0 )	
Manage Archive ( 6 )	
Data-Request	Data Flow
level 1 ( 0 )	
Manage Archive ( 6 )	
File --> Access DBMS	
Archive-Data	Data Flow
level 1 ( 0 )	
Generate Reports ( 5 )	
Manage Archive ( 6 )	
File --> Access DBMS	
Display Report ( 5.2 )	
Request-Archive	Data Flow
level 1 ( 0 )	
Generate Reports ( 5 )	
Manage Archive ( 6 )	
Display Report ( 5.2 )	
Display-Report	Data Flow
Generate Reports ( 5 )	

Display Report ( 5.2 )  
 Query-Results           Data Flow  
   level 1 ( 0 )  
 Generate Reports ( 5 )  
 File -->           Access DBMS  
 Display Report ( 5.2 )

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DutyHours                   Data Element  
 Duty-Data                   Data Flow  
   level 1 ( 0 )  
   Manage Duties ( 4 )  
 Duty-Log                    Data Flow  
   level 1 ( 0 )  
   Manage Duties ( 4 )  
 Return-Member-Info           Data Flow  
   Manage Duties ( 4 )  
 Duty-Update                 Data Flow  
   level 1 ( 0 )  
   Manage Duties ( 4 )  
 Duty-Update-Confirmation    Data Flow  
   Manage Duties ( 4 )  
 Commit-Data                 Data Flow  
   Manage Duties ( 4 )  
 Enter-Duty-Data             Data Flow  
   Manage Duties ( 4 )  
 New-Duty-Data             Data Flow  
   Manage Duties ( 4 )  
 Archiving-Request           Data Flow  
   level 1 ( 0 )  
   Manage Archive ( 6 )  
 Archiving-Data             Data Flow  
   level 1 ( 0 )  
   Manage Archive ( 6 )  
 Data-Request                Data Flow  
   level 1 ( 0 )  
   Manage Archive ( 6 )  
   File -->           Access DBMS  
 Archive-Data                Data Flow  
   level 1 ( 0 )  
   Generate Reports ( 5 )  
   Manage Archive ( 6 )  
   File -->           Access DBMS  
   Display Report ( 5.2 )  
 Request-Archive             Data Flow  
   level 1 ( 0 )  
   Generate Reports ( 5 )

Manage Archive ( 6 )  
 Display Report ( 5.2 )  
 Display-Report                      Data Flow  
     Generate Reports ( 5 )  
     Display Report ( 5.2 )  
 Query-Results                      Data Flow  
     level 1 ( 0 )  
     Generate Reports ( 5 )  
     File -->            Access DBMS  
     Display Report ( 5.2 )

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DutyMins                              Data Element  
   Duty-Data                          Data Flow  
     level 1 ( 0 )  
     Manage Duties ( 4 )  
   Duty-Log                            Data Flow  
     level 1 ( 0 )  
     Manage Duties ( 4 )  
   Return-Member-Info                Data Flow  
     Manage Duties ( 4 )  
   Duty-Update                        Data Flow  
     level 1 ( 0 )  
     Manage Duties ( 4 )  
   Duty-Update-Confirmation         Data Flow  
     Manage Duties ( 4 )  
   Commit-Data                        Data Flow  
     Manage Duties ( 4 )  
   Enter-Duty-Data                    Data Flow  
     Manage Duties ( 4 )  
   New-Duty-Data                      Data Flow  
     Manage Duties ( 4 )  
   Archiving-Request                 Data Flow  
     level 1 ( 0 )  
     Manage Archive ( 6 )  
   Archiving-Data                    Data Flow  
     level 1 ( 0 )  
     Manage Archive ( 6 )  
   Data-Request                        Data Flow  
     level 1 ( 0 )  
     Manage Archive ( 6 )  
     File -->            Access DBMS  
   Archive-Data                        Data Flow  
     level 1 ( 0 )  
     Generate Reports ( 5 )  
     Manage Archive ( 6 )  
     File -->            Access DBMS

Display Report ( 5.2 )  
 Request-Archive                      Data Flow  
     level 1 ( 0 )  
     Generate Reports ( 5 )  
     Manage Archive ( 6 )  
     Display Report ( 5.2 )  
 Display-Report                      Data Flow  
     Generate Reports ( 5 )  
     Display Report ( 5.2 )  
 Query-Results                      Data Flow  
     level 1 ( 0 )  
     Generate Reports ( 5 )  
     File -->              Access DBMS  
     Display Report ( 5.2 )

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DutyMonth                              Data Element  
 Duty-Data                              Data Flow  
     level 1 ( 0 )  
     Manage Duties ( 4 )  
 Duty-Log                              Data Flow  
     level 1 ( 0 )  
     Manage Duties ( 4 )  
 Return-Member-Info                      Data Flow  
     Manage Duties ( 4 )  
 Duty-Update                              Data Flow  
     level 1 ( 0 )  
     Manage Duties ( 4 )  
 Duty-Update-Confirmation                      Data Flow  
     Manage Duties ( 4 )  
 Commit-Data                              Data Flow  
     Manage Duties ( 4 )  
 Enter-Duty-Data                              Data Flow  
     Manage Duties ( 4 )  
 New-Duty-Data                              Data Flow  
     Manage Duties ( 4 )  
 Archiving-Request                              Data Flow  
     level 1 ( 0 )  
     Manage Archive ( 6 )  
 Archiving-Data                              Data Flow  
     level 1 ( 0 )  
     Manage Archive ( 6 )  
 Data-Request                              Data Flow  
     level 1 ( 0 )  
     Manage Archive ( 6 )  
     File -->              Access DBMS  
 Archive-Data                              Data Flow

- level 1 ( 0 )
- Generate Reports ( 5 )
- Manage Archive ( 6 )
- File --> Access DBMS
- Display Report ( 5.2 )
- Request-Archive Data Flow
  - level 1 ( 0 )
  - Generate Reports ( 5 )
  - Manage Archive ( 6 )
  - Display Report ( 5.2 )
- Display-Report Data Flow
  - Generate Reports ( 5 )
  - Display Report ( 5.2 )
- Query-Results Data Flow
  - level 1 ( 0 )
  - Generate Reports ( 5 )
  - File --> Access DBMS
  - Display Report ( 5.2 )

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DutyName	Data Element
Duty-Data	Data Flow
level 1 ( 0 )	
Manage Duties ( 4 )	
Duty-Log	Data Flow
level 1 ( 0 )	
Manage Duties ( 4 )	
Return-Member-Info	Data Flow
Manage Duties ( 4 )	
Duty-Update	Data Flow
level 1 ( 0 )	
Manage Duties ( 4 )	
Duty-Update-Confirmation	Data Flow
Manage Duties ( 4 )	
Commit-Data	Data Flow
Manage Duties ( 4 )	
Enter-Duty-Data	Data Flow
Manage Duties ( 4 )	
New-Duty-Data	Data Flow
Manage Duties ( 4 )	
Archiving-Request	Data Flow
level 1 ( 0 )	
Manage Archive ( 6 )	
Archiving-Data	Data Flow
level 1 ( 0 )	
Manage Archive ( 6 )	
Data-Request	Data Flow

- level 1 ( 0 )
- Manage Archive ( 6 )
- File --> Access DBMS
- Archive-Data Data Flow
- level 1 ( 0 )
- Generate Reports ( 5 )
- Manage Archive ( 6 )
- File --> Access DBMS
- Display Report ( 5.2 )
- Request-Archive Data Flow
- level 1 ( 0 )
- Generate Reports ( 5 )
- Manage Archive ( 6 )
- Display Report ( 5.2 )
- Display-Report Data Flow
- Generate Reports ( 5 )
- Display Report ( 5.2 )
- Query-Results Data Flow
- level 1 ( 0 )
- Generate Reports ( 5 )
- File --> Access DBMS
- Display Report ( 5.2 )

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- DutyYear Data Element
- Duty-Data Data Flow
- level 1 ( 0 )
- Manage Duties ( 4 )
- Duty-Log Data Flow
- level 1 ( 0 )
- Manage Duties ( 4 )
- Return-Member-Info Data Flow
- Manage Duties ( 4 )
- Duty-Update Data Flow
- level 1 ( 0 )
- Manage Duties ( 4 )
- Duty-Update-Confirmation Data Flow
- Manage Duties ( 4 )
- Commit-Data Data Flow
- Manage Duties ( 4 )
- Enter-Duty-Data Data Flow
- Manage Duties ( 4 )
- New-Duty-Data Data Flow
- Manage Duties ( 4 )
- Archiving-Request Data Flow
- level 1 ( 0 )
- Manage Archive ( 6 )

Archiving-Data	Data Flow
level 1 ( 0 )	
Manage Archive ( 6 )	
Data-Request	Data Flow
level 1 ( 0 )	
Manage Archive ( 6 )	
File -->	Access DBMS
Archive-Data	Data Flow
level 1 ( 0 )	
Generate Reports ( 5 )	
Manage Archive ( 6 )	
File -->	Access DBMS
Display Report ( 5.2 )	
Request-Archive	Data Flow
level 1 ( 0 )	
Generate Reports ( 5 )	
Manage Archive ( 6 )	
Display Report ( 5.2 )	
Display-Report	Data Flow
Generate Reports ( 5 )	
Display Report ( 5.2 )	
Query-Results	Data Flow
level 1 ( 0 )	
Generate Reports ( 5 )	
File -->	Access DBMS
Display Report ( 5.2 )	
Fname	Data Element
Member-Data	Data Flow
Manage Activities ( 3 )	
Manage Profiles ( 2 )	
Update-Data	Data Flow
Manage Profiles ( 2 )	
Return-Data	Data Flow
Manage Profiles ( 2 )	
Request-Data	Data Flow
Manage Profiles ( 2 )	
Updated-Profile-Data	Data Flow
level 1 ( 0 )	
Manage Profiles ( 2 )	
File -->	Access DBMS
Profile-Data	Data Flow
level 1 ( 0 )	
Manage Profiles ( 2 )	
File -->	Access DBMS
Returned-Member-Data	Data Flow
Manage Profiles ( 2 )	



Profile-Information	Data Flow
level 1 ( 0 )	
Manage Profiles ( 2 )	
Activity-Update	Data Flow
level 1 ( 0 )	
Manage Activities ( 3 )	
File -->	Access DBMS
Update-Confirmation	Data Flow
level 1 ( 0 )	
Manage Activities ( 3 )	
File -->	Access DBMS
Activity-Data	Data Flow
level 1 ( 0 )	
Manage Activities ( 3 )	
Activity-Log	Data Flow
level 1 ( 0 )	
Manage Activities ( 3 )	
Archiving-Request	Data Flow
level 1 ( 0 )	
Manage Archive ( 6 )	
Archiving-Data	Data Flow
level 1 ( 0 )	
Manage Archive ( 6 )	
Data-Request	Data Flow
level 1 ( 0 )	
Manage Archive ( 6 )	
File -->	Access DBMS
Archive-Data	Data Flow
level 1 ( 0 )	
Generate Reports ( 5 )	
Manage Archive ( 6 )	
File -->	Access DBMS
Display Report ( 5.2 )	
Request-Archive	Data Flow
level 1 ( 0 )	
Generate Reports ( 5 )	
Manage Archive ( 6 )	
Display Report ( 5.2 )	
Display-Report	Data Flow
Generate Reports ( 5 )	
Display Report ( 5.2 )	
Query-Results	Data Flow
level 1 ( 0 )	
Generate Reports ( 5 )	
File -->	Access DBMS
Display Report ( 5.2 )	

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HomePhone	Data Element
Member-Data	Data Flow
Manage Activities ( 3 )	
Manage Profiles ( 2 )	
Update-Data	Data Flow
Manage Profiles ( 2 )	
Return-Data	Data Flow
Manage Profiles ( 2 )	
Request-Data	Data Flow
Manage Profiles ( 2 )	
Updated-Profile-Data	Data Flow
level 1 ( 0 )	
Manage Profiles ( 2 )	
File --> Access DBMS	
Profile-Data	Data Flow
level 1 ( 0 )	
Manage Profiles ( 2 )	
File --> Access DBMS	
Returned-Member-Data	Data Flow
Manage Profiles ( 2 )	
Profile-Information	Data Flow
level 1 ( 0 )	
Manage Profiles ( 2 )	
Activity-Update	Data Flow
level 1 ( 0 )	
Manage Activities ( 3 )	
File --> Access DBMS	
Update-Confirmation	Data Flow
level 1 ( 0 )	
Manage Activities ( 3 )	
File --> Access DBMS	
Activity-Data	Data Flow
level 1 ( 0 )	
Manage Activities ( 3 )	
Activity-Log	Data Flow
level 1 ( 0 )	
Manage Activities ( 3 )	
Archiving-Request	Data Flow
level 1 ( 0 )	
Manage Archive ( 6 )	
Archiving-Data	Data Flow
level 1 ( 0 )	
Manage Archive ( 6 )	
Data-Request	Data Flow
level 1 ( 0 )	

Manage Archive ( 6 )  
 File --> Access DBMS  
 Archive-Data Data Flow  
 level 1 ( 0 )  
 Generate Reports ( 5 )  
 Manage Archive ( 6 )  
 File --> Access DBMS  
 Display Report ( 5.2 )  
 Request-Archive Data Flow  
 level 1 ( 0 )  
 Generate Reports ( 5 )  
 Manage Archive ( 6 )  
 Display Report ( 5.2 )  
 Display-Report Data Flow  
 Generate Reports ( 5 )  
 Display Report ( 5.2 )  
 Query-Results Data Flow  
 level 1 ( 0 )  
 Generate Reports ( 5 )  
 File --> Access DBMS  
 Display Report ( 5.2 )

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Hours Data Element  
 Duration Data Flow  
 Manage Activities ( 3 )  
 Calculate ( 3.6 )

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Mins Data Element  
 Duration Data Flow  
 Manage Activities ( 3 )  
 Calculate ( 3.6 )

Mname Data Element  
 Member-Data Data Flow  
 Manage Activities ( 3 )  
 Manage Profiles ( 2 )  
 Update-Data Data Flow  
 Manage Profiles ( 2 )  
 Return-Data Data Flow  
 Manage Profiles ( 2 )  
 Request-Data Data Flow  
 Manage Profiles ( 2 )  
 Updated-Profile-Data Data Flow  
 level 1 ( 0 )  
 Manage Profiles ( 2 )  
 File --> Access DBMS

Profile-Data                      Data Flow  
     level 1 ( 0 )  
     Manage Profiles ( 2 )  
     File -->            Access DBMS  
 Returned-Member-Data              Data Flow  
     Manage Profiles ( 2 )  
 Profile-Information                Data Flow  
     level 1 ( 0 )  
     Manage Profiles ( 2 )  
 Activity-Update                    Data Flow  
     level 1 ( 0 )  
     Manage Activities ( 3 )  
     File -->            Access DBMS  
 Update-Confirmation                Data Flow  
     level 1 ( 0 )  
     Manage Activities ( 3 )  
     File -->            Access DBMS  
 Activity-Data                      Data Flow  
     level 1 ( 0 )  
     Manage Activities ( 3 )  
 Activity-Log                        Data Flow  
     level 1 ( 0 )  
     Manage Activities ( 3 )  
 Archiving-Request                  Data Flow  
     level 1 ( 0 )  
     Manage Archive ( 6 )  
 Archiving-Data                    Data Flow  
     level 1 ( 0 )  
     Manage Archive ( 6 )  
 Data-Request                        Data Flow  
     level 1 ( 0 )  
     Manage Archive ( 6 )  
     File -->            Access DBMS  
 Archive-Data                        Data Flow  
     level 1 ( 0 )  
     Generate Reports ( 5 )  
     Manage Archive ( 6 )  
     File -->            Access DBMS  
     Display Report ( 5.2 )  
 Request-Archive                    Data Flow  
     level 1 ( 0 )  
     Generate Reports ( 5 )  
     Manage Archive ( 6 )  
     Display Report ( 5.2 )  
 Display-Report                    Data Flow  
     Generate Reports ( 5 )

Display Report ( 5.2 )  
 Query-Results            Data Flow  
   level 1 ( 0 )  
 Generate Reports ( 5 )  
 File -->            Access DBMS  
 Display Report ( 5.2 )

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Name	Data Element
Login-Data	Data Flow
level 1 ( 0 )	
Generate Reports ( 5 )	
Authenticate ( 1 )	
UserName	Data Flow
level 1 ( 0 )	
Authenticate ( 1 )	
Delete-Request	Data Flow
Manage Profiles ( 2 )	
Query-Members	Data Flow
Manage Profiles ( 2 )	
Query-Data	Data Flow
Manage Profiles ( 2 )	
Remove-Request	Data Flow
Manage Profiles ( 2 )	
Viewing-Request	Data Flow
Manage Profiles ( 2 )	
Member-Selection	Data Flow
Manage Activities ( 3 )	
Name-Selection	Data Flow
Manage Duties ( 4 )	
Member-Name	Data Flow
Manage Duties ( 4 )	
Query-Names	Data Flow
Manage Duties ( 4 )	
Return-Names	Data Flow
Manage Duties ( 4 )	
Query-Member-Info	Data Flow
Manage Duties ( 4 )	

Password	Data Element
Request-Password	Data Flow
level 1 ( 0 )	
Generate Reports ( 5 )	
Authenticate ( 1 )	
Return-Password	Data Flow
level 1 ( 0 )	
Generate Reports ( 5 )	

Authenticate ( 1 )

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SSN	Data Element
Member-Data	Data Flow
Manage Activities ( 3 )	
Manage Profiles ( 2 )	
Update-Data	Data Flow
Manage Profiles ( 2 )	
Return-Data	Data Flow
Manage Profiles ( 2 )	
Request-Data	Data Flow
Manage Profiles ( 2 )	
Updated-Profile-Data	Data Flow
level 1 ( 0 )	
Manage Profiles ( 2 )	
File -->	Access DBMS
Profile-Data	Data Flow
level 1 ( 0 )	
Manage Profiles ( 2 )	
File -->	Access DBMS
Returned-Member-Data	Data Flow
Manage Profiles ( 2 )	
Profile-Information	Data Flow
level 1 ( 0 )	
Manage Profiles ( 2 )	
Activity-Update	Data Flow
level 1 ( 0 )	
Manage Activities ( 3 )	
File -->	Access DBMS
Update-Confirmation	Data Flow
level 1 ( 0 )	
Manage Activities ( 3 )	
File -->	Access DBMS
Activity-Data	Data Flow
level 1 ( 0 )	
Manage Activities ( 3 )	
Activity-Log	Data Flow
level 1 ( 0 )	
Manage Activities ( 3 )	
Archiving-Request	Data Flow
level 1 ( 0 )	
Manage Archive ( 6 )	
Archiving-Data	Data Flow
level 1 ( 0 )	
Manage Archive ( 6 )	

Data-Request	Data Flow
level 1 ( 0 )	
Manage Archive ( 6 )	
File -->	Access DBMS
Archive-Data	Data Flow
level 1 ( 0 )	
Generate Reports ( 5 )	
Manage Archive ( 6 )	
File -->	Access DBMS
Display Report ( 5.2 )	
Request-Archive	Data Flow
level 1 ( 0 )	
Generate Reports ( 5 )	
Manage Archive ( 6 )	
Display Report ( 5.2 )	
Display-Report	Data Flow
Generate Reports ( 5 )	
Display Report ( 5.2 )	
Query-Results	Data Flow
level 1 ( 0 )	
Generate Reports ( 5 )	
File -->	Access DBMS
Display Report ( 5.2 )	

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State	Data Element
Member-Data	Data Flow
Manage Activities ( 3 )	
Manage Profiles ( 2 )	
Update-Data	Data Flow
Manage Profiles ( 2 )	
Return-Data	Data Flow
Manage Profiles ( 2 )	
Request-Data	Data Flow
Manage Profiles ( 2 )	
Updated-Profile-Data	Data Flow
level 1 ( 0 )	
Manage Profiles ( 2 )	
File -->	Access DBMS
Profile-Data	Data Flow
level 1 ( 0 )	
Manage Profiles ( 2 )	
File -->	Access DBMS
Returned-Member-Data	Data Flow
Manage Profiles ( 2 )	
Profile-Information	Data Flow
level 1 ( 0 )	

Manage Profiles ( 2 )  
 Activity-Update                      Data Flow  
     level 1 ( 0 )  
     Manage Activities ( 3 )  
     File -->            Access DBMS  
 Update-Confirmation                Data Flow  
     level 1 ( 0 )  
     Manage Activities ( 3 )  
     File -->            Access DBMS  
 Activity-Data                        Data Flow  
     level 1 ( 0 )  
     Manage Activities ( 3 )  
 Activity-Log                         Data Flow  
     level 1 ( 0 )  
     Manage Activities ( 3 )  
 Archiving-Request                  Data Flow  
     level 1 ( 0 )  
     Manage Archive ( 6 )  
 Archiving-Data                      Data Flow  
     level 1 ( 0 )  
     Manage Archive ( 6 )  
 Data-Request                         Data Flow  
     level 1 ( 0 )  
     Manage Archive ( 6 )  
     File -->            Access DBMS  
 Archive-Data                         Data Flow  
     level 1 ( 0 )  
     Generate Reports ( 5 )  
     Manage Archive ( 6 )  
     File -->            Access DBMS  
     Display Report ( 5.2 )  
 Request-Archive                     Data Flow  
     level 1 ( 0 )  
     Generate Reports ( 5 )  
     Manage Archive ( 6 )  
     Display Report ( 5.2 )  
 Display-Report                       Data Flow  
     Generate Reports ( 5 )  
     Display Report ( 5.2 )  
 Query-Results                        Data Flow  
     level 1 ( 0 )  
     Generate Reports ( 5 )  
     File -->            Access DBMS  
     Display Report ( 5.2 )

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 Status

Data Element



Member-Data	Data Flow
Manage Activities ( 3 )	
Manage Profiles ( 2 )	
Update-Data	Data Flow
Manage Profiles ( 2 )	
Return-Data	Data Flow
Manage Profiles ( 2 )	
Request-Data	Data Flow
Manage Profiles ( 2 )	
Updated-Profile-Data	Data Flow
level 1 ( 0 )	
Manage Profiles ( 2 )	
File -->	Access DBMS
Profile-Data	Data Flow
level 1 ( 0 )	
Manage Profiles ( 2 )	
File -->	Access DBMS
Returned-Member-Data	Data Flow
Manage Profiles ( 2 )	
Profile-Information	Data Flow
level 1 ( 0 )	
Manage Profiles ( 2 )	
Activity-Update	Data Flow
level 1 ( 0 )	
Manage Activities ( 3 )	
File -->	Access DBMS
Update-Confirmation	Data Flow
level 1 ( 0 )	
Manage Activities ( 3 )	
File -->	Access DBMS
Activity-Data	Data Flow
level 1 ( 0 )	
Manage Activities ( 3 )	
Activity-Log	Data Flow
level 1 ( 0 )	
Manage Activities ( 3 )	
Archiving-Request	Data Flow
level 1 ( 0 )	
Manage Archive ( 6 )	
Archiving-Data	Data Flow
level 1 ( 0 )	
Manage Archive ( 6 )	
Data-Request	Data Flow
level 1 ( 0 )	
Manage Archive ( 6 )	
File -->	Access DBMS

Archive-Data	Data Flow
level 1 ( 0 )	
Generate Reports ( 5 )	
Manage Archive ( 6 )	
File -->       Access DBMS	
Display Report ( 5.2 )	
Request-Archive	Data Flow
level 1 ( 0 )	
Generate Reports ( 5 )	
Manage Archive ( 6 )	
Display Report ( 5.2 )	
Display-Report	Data Flow
Generate Reports ( 5 )	
Display Report ( 5.2 )	
Query-Results	Data Flow
level 1 ( 0 )	
Generate Reports ( 5 )	
File -->       Access DBMS	
Display Report ( 5.2 )	

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Street	Data Element
Member-Data	Data Flow
Manage Activities ( 3 )	
Manage Profiles ( 2 )	
Update-Data	Data Flow
Manage Profiles ( 2 )	
Return-Data	Data Flow
Manage Profiles ( 2 )	
Request-Data	Data Flow
Manage Profiles ( 2 )	
Updated-Profile-Data	Data Flow
level 1 ( 0 )	
Manage Profiles ( 2 )	
File -->       Access DBMS	
Profile-Data	Data Flow
level 1 ( 0 )	
Manage Profiles ( 2 )	
File -->       Access DBMS	
Returned-Member-Data	Data Flow
Manage Profiles ( 2 )	
Profile-Information	Data Flow
level 1 ( 0 )	
Manage Profiles ( 2 )	
Activity-Update	Data Flow
level 1 ( 0 )	
Manage Activities ( 3 )	

File --> Access DBMS  
 Update-Confirmation Data Flow  
   level 1 ( 0 )  
   Manage Activities ( 3 )  
   File --> Access DBMS  
 Activity-Data Data Flow  
   level 1 ( 0 )  
   Manage Activities ( 3 )  
 Activity-Log Data Flow  
   level 1 ( 0 )  
   Manage Activities ( 3 )  
 Archiving-Request Data Flow  
   level 1 ( 0 )  
   Manage Archive ( 6 )  
 Archiving-Data Data Flow  
   level 1 ( 0 )  
   Manage Archive ( 6 )  
 Data-Request Data Flow  
   level 1 ( 0 )  
   Manage Archive ( 6 )  
   File --> Access DBMS  
 Archive-Data Data Flow  
   level 1 ( 0 )  
   Generate Reports ( 5 )  
   Manage Archive ( 6 )  
   File --> Access DBMS  
   Display Report ( 5.2 )  
 Request-Archive Data Flow  
   level 1 ( 0 )  
   Generate Reports ( 5 )  
   Manage Archive ( 6 )  
   Display Report ( 5.2 )  
 Display-Report Data Flow  
   Generate Reports ( 5 )  
   Display Report ( 5.2 )  
 Query-Results Data Flow  
   level 1 ( 0 )  
   Generate Reports ( 5 )  
   File --> Access DBMS  
   Display Report ( 5.2 )

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Type	Data Element
Member-Data	Data Flow
Manage Activities ( 3 )	
Manage Profiles ( 2 )	
Update-Data	Data Flow

Manage Profiles ( 2 )  
 Return-Data Data Flow  
 Manage Profiles ( 2 )  
 Request-Data Data Flow  
 Manage Profiles ( 2 )  
 Updated-Profile-Data Data Flow  
 level 1 ( 0 )  
 Manage Profiles ( 2 )  
 File --> Access DBMS  
 Profile-Data Data Flow  
 level 1 ( 0 )  
 Manage Profiles ( 2 )  
 File --> Access DBMS  
 Returned-Member-Data Data Flow  
 Manage Profiles ( 2 )  
 Profile-Information Data Flow  
 level 1 ( 0 )  
 Manage Profiles ( 2 )  
 Activity-Update Data Flow  
 level 1 ( 0 )  
 Manage Activities ( 3 )  
 File --> Access DBMS  
 Update-Confirmation Data Flow  
 level 1 ( 0 )  
 Manage Activities ( 3 )  
 File --> Access DBMS  
 Activity-Data Data Flow  
 level 1 ( 0 )  
 Manage Activities ( 3 )  
 Activity-Log Data Flow  
 level 1 ( 0 )  
 Manage Activities ( 3 )  
 Archiving-Request Data Flow  
 level 1 ( 0 )  
 Manage Archive ( 6 )  
 Archiving-Data Data Flow  
 level 1 ( 0 )  
 Manage Archive ( 6 )  
 Data-Request Data Flow  
 level 1 ( 0 )  
 Manage Archive ( 6 )  
 File --> Access DBMS  
 Archive-Data Data Flow  
 level 1 ( 0 )  
 Generate Reports ( 5 )  
 Manage Archive ( 6 )

File --> Access DBMS  
 Display Report ( 5.2 )  
 Request-Archive Data Flow  
 level 1 ( 0 )  
 Generate Reports ( 5 )  
 Manage Archive ( 6 )  
 Display Report ( 5.2 )  
 Display-Report Data Flow  
 Generate Reports ( 5 )  
 Display Report ( 5.2 )  
 Query-Results Data Flow  
 level 1 ( 0 )  
 Generate Reports ( 5 )  
 File --> Access DBMS  
 Display Report ( 5.2 )

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TypeDateDay Data Element  
 Member-Data Data Flow  
 Manage Activities ( 3 )  
 Manage Profiles ( 2 )  
 Update-Data Data Flow  
 Manage Profiles ( 2 )  
 Return-Data Data Flow  
 Manage Profiles ( 2 )  
 Request-Data Data Flow  
 Manage Profiles ( 2 )  
 Updated-Profile-Data Data Flow  
 level 1 ( 0 )  
 Manage Profiles ( 2 )  
 File --> Access DBMS  
 Profile-Data Data Flow  
 level 1 ( 0 )  
 Manage Profiles ( 2 )  
 File --> Access DBMS  
 Returned-Member-Data Data Flow  
 Manage Profiles ( 2 )  
 Profile-Information Data Flow  
 level 1 ( 0 )  
 Manage Profiles ( 2 )  
 Activity-Update Data Flow  
 level 1 ( 0 )  
 Manage Activities ( 3 )  
 File --> Access DBMS  
 Update-Confirmation Data Flow  
 level 1 ( 0 )  
 Manage Activities ( 3 )

File --> Access DBMS  
 Activity-Data Data Flow  
     level 1 ( 0 )  
     Manage Activities ( 3 )  
 Activity-Log Data Flow  
     level 1 ( 0 )  
     Manage Activities ( 3 )  
 Archiving-Request Data Flow  
     level 1 ( 0 )  
     Manage Archive ( 6 )  
 Archiving-Data Data Flow  
     level 1 ( 0 )  
     Manage Archive ( 6 )  
 Data-Request Data Flow  
     level 1 ( 0 )  
     Manage Archive ( 6 )  
     File --> Access DBMS  
 Archive-Data Data Flow  
     level 1 ( 0 )  
     Generate Reports ( 5 )  
     Manage Archive ( 6 )  
     File --> Access DBMS  
     Display Report ( 5.2 )  
 Request-Archive Data Flow  
     level 1 ( 0 )  
     Generate Reports ( 5 )  
     Manage Archive ( 6 )  
     Display Report ( 5.2 )  
 Display-Report Data Flow  
     Generate Reports ( 5 )  
     Display Report ( 5.2 )  
 Query-Results Data Flow  
     level 1 ( 0 )  
     Generate Reports ( 5 )  
     File --> Access DBMS  
     Display Report ( 5.2 )

---

TypeDateMonth Data Element  
 Member-Data Data Flow  
     Manage Activities ( 3 )  
     Manage Profiles ( 2 )  
 Update-Data Data Flow  
     Manage Profiles ( 2 )  
 Return-Data Data Flow  
     Manage Profiles ( 2 )  
 Request-Data Data Flow

Manage Profiles ( 2 )  
 Updated-Profile-Data            Data Flow  
   level 1 ( 0 )  
   Manage Profiles ( 2 )  
   File -->        Access DBMS  
 Profile-Data                    Data Flow  
   level 1 ( 0 )  
   Manage Profiles ( 2 )  
   File -->        Access DBMS  
 Returned-Member-Data           Data Flow  
   Manage Profiles ( 2 )  
 Profile-Information            Data Flow  
   level 1 ( 0 )  
   Manage Profiles ( 2 )  
 Activity-Update                Data Flow  
   level 1 ( 0 )  
   Manage Activities ( 3 )  
   File -->        Access DBMS  
 Update-Confirmation            Data Flow  
   level 1 ( 0 )  
   Manage Activities ( 3 )  
   File -->        Access DBMS  
 Activity-Data                  Data Flow  
   level 1 ( 0 )  
   Manage Activities ( 3 )  
 Activity-Log                    Data Flow  
   level 1 ( 0 )  
   Manage Activities ( 3 )  
 Archiving-Request              Data Flow  
   level 1 ( 0 )  
   Manage Archive ( 6 )  
 Archiving-Data                Data Flow  
   level 1 ( 0 )  
   Manage Archive ( 6 )  
 Data-Request                  Data Flow  
   level 1 ( 0 )  
   Manage Archive ( 6 )  
   File -->        Access DBMS  
 Archive-Data                  Data Flow  
   level 1 ( 0 )  
   Generate Reports ( 5 )  
   Manage Archive ( 6 )  
   File -->        Access DBMS  
   Display Report ( 5.2 )  
 Request-Archive                Data Flow  
   level 1 ( 0 )

Generate Reports ( 5 )  
 Manage Archive ( 6 )  
 Display Report ( 5.2 )  
 Display-Report                      Data Flow  
     Generate Reports ( 5 )  
     Display Report ( 5.2 )  
 Query-Results                      Data Flow  
     level 1 ( 0 )  
     Generate Reports ( 5 )  
     File -->              Access DBMS  
     Display Report ( 5.2 )

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TypeDateYear                      Data Element  
 Member-Data                      Data Flow  
     Manage Activities ( 3 )  
     Manage Profiles ( 2 )  
 Update-Data                      Data Flow  
     Manage Profiles ( 2 )  
 Return-Data                      Data Flow  
     Manage Profiles ( 2 )  
 Request-Data                      Data Flow  
     Manage Profiles ( 2 )  
 Updated-Profile-Data              Data Flow  
     level 1 ( 0 )  
     Manage Profiles ( 2 )  
     File -->              Access DBMS  
 Profile-Data                      Data Flow  
     level 1 ( 0 )  
     Manage Profiles ( 2 )  
     File -->              Access DBMS  
 Returned-Member-Data              Data Flow  
     Manage Profiles ( 2 )  
 Profile-Information              Data Flow  
     level 1 ( 0 )  
     Manage Profiles ( 2 )  
 Activity-Update                      Data Flow  
     level 1 ( 0 )  
     Manage Activities ( 3 )  
     File -->              Access DBMS  
 Update-Confirmation              Data Flow  
     level 1 ( 0 )  
     Manage Activities ( 3 )  
     File -->              Access DBMS  
 Activity-Data                      Data Flow  
     level 1 ( 0 )  
     Manage Activities ( 3 )



Activity-Log                      Data Flow  
     level 1 ( 0 )  
     Manage Activities ( 3 )  
 Archiving-Request                  Data Flow  
     level 1 ( 0 )  
     Manage Archive ( 6 )  
 Archiving-Data                      Data Flow  
     level 1 ( 0 )  
     Manage Archive ( 6 )  
 Data-Request                        Data Flow  
     level 1 ( 0 )  
     Manage Archive ( 6 )  
     File -->            Access DBMS  
 Archive-Data                        Data Flow  
     level 1 ( 0 )  
     Generate Reports ( 5 )  
     Manage Archive ( 6 )  
     File -->            Access DBMS  
     Display Report ( 5.2 )  
 Request-Archive                    Data Flow  
     level 1 ( 0 )  
     Generate Reports ( 5 )  
     Manage Archive ( 6 )  
     Display Report ( 5.2 )  
 Display-Report                      Data Flow  
     Generate Reports ( 5 )  
     Display Report ( 5.2 )  
 Query-Results                        Data Flow  
     level 1 ( 0 )  
     Generate Reports ( 5 )  
     File -->            Access DBMS  
     Display Report ( 5.2 )

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WorkPhone                          Data Element  
 Member-Data                        Data Flow  
     Manage Activities ( 3 )  
     Manage Profiles ( 2 )  
 Update-Data                        Data Flow  
     Manage Profiles ( 2 )  
 Return-Data                        Data Flow  
     Manage Profiles ( 2 )  
 Request-Data                        Data Flow  
     Manage Profiles ( 2 )  
 Updated-Profile-Data              Data Flow  
     level 1 ( 0 )  
     Manage Profiles ( 2 )

File --> Access DBMS  
 Profile-Data Data Flow  
   level 1 ( 0 )  
   Manage Profiles ( 2 )  
   File --> Access DBMS  
 Returned-Member-Data Data Flow  
   Manage Profiles ( 2 )  
 Profile-Information Data Flow  
   level 1 ( 0 )  
   Manage Profiles ( 2 )  
 Activity-Update Data Flow  
   level 1 ( 0 )  
   Manage Activities ( 3 )  
   File --> Access DBMS  
 Update-Confirmation Data Flow  
   level 1 ( 0 )  
   Manage Activities ( 3 )

---

File --> Access DBMS  
 Activity-Data Data Flow  
   level 1 ( 0 )  
   Manage Activities ( 3 )  
 Activity-Log Data Flow  
   level 1 ( 0 )  
   Manage Activities ( 3 )  
 Archiving-Request Data Flow  
   level 1 ( 0 )  
   Manage Archive ( 6 )  
 Archiving-Data Data Flow  
   level 1 ( 0 )  
   Manage Archive ( 6 )  
 Data-Request Data Flow  
   level 1 ( 0 )  
   Manage Archive ( 6 )  
   File --> Access DBMS  
 Archive-Data Data Flow  
   level 1 ( 0 )  
   Generate Reports ( 5 )  
   Manage Archive ( 6 )  
   File --> Access DBMS  
   Display Report ( 5.2 )  
 Request-Archive Data Flow  
   level 1 ( 0 )

Generate Reports ( 5 )  
 Manage Archive ( 6 )  
 Display Report ( 5.2 )  
 Display-Report                      Data Flow  
     Generate Reports ( 5 )  
     Display Report ( 5.2 )  
 Query-Results                      Data Flow  
     level 1 ( 0 )  
     Generate Reports ( 5 )  
     File -->              Access DBMS  
     Display Report ( 5.2 )

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Zip	Data Element
Member-Data	Data Flow
Manage Activities ( 3 )	
Manage Profiles ( 2 )	
Update-Data	Data Flow
Manage Profiles ( 2 )	
Return-Data	Data Flow
Manage Profiles ( 2 )	
Request-Data	Data Flow
Manage Profiles ( 2 )	

Date: 2/26/2003                      Project: SWEE                      Page: 34  
 Time: 7:51 PM

Cross Reference Listing -- Alphabetically  
 Whole Repository

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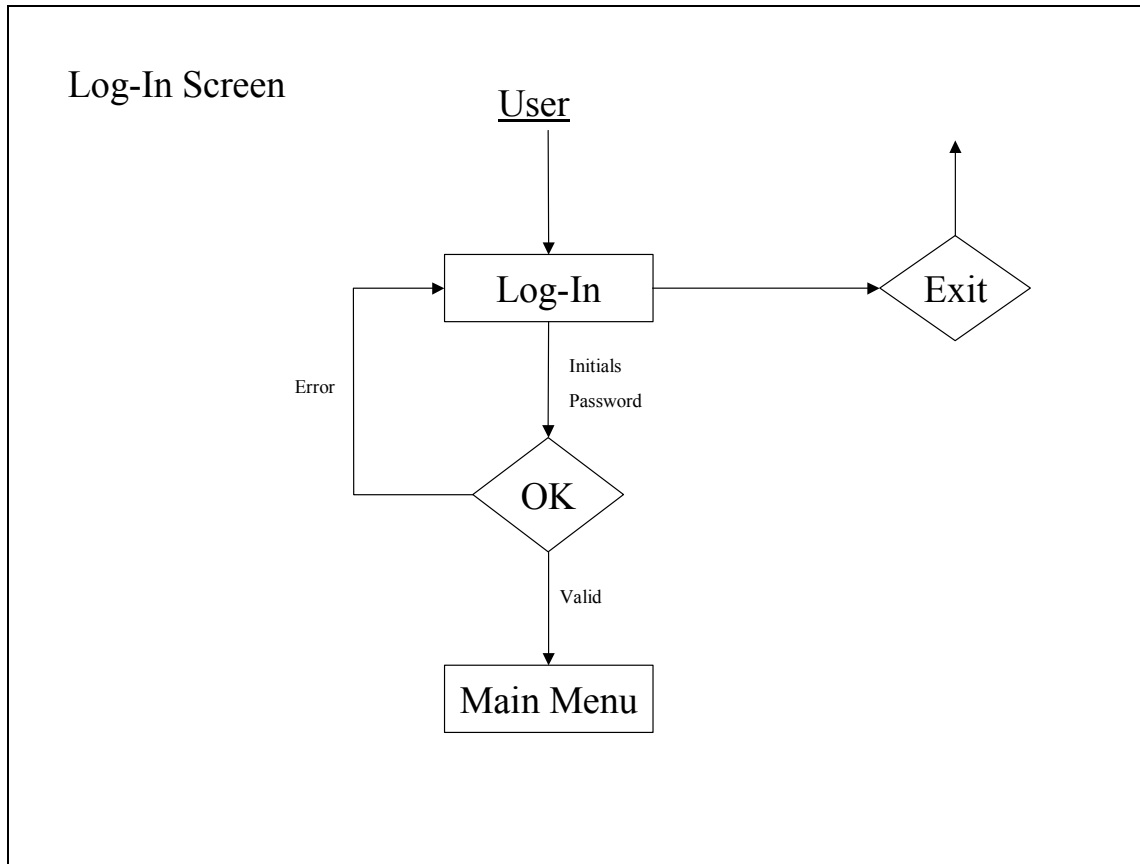
Updated-Profile-Data	Data Flow
level 1 ( 0 )	
Manage Profiles ( 2 )	
File -->              Access DBMS	
Profile-Data	Data Flow
level 1 ( 0 )	
Manage Profiles ( 2 )	
File -->              Access DBMS	
Returned-Member-Data	Data Flow
Manage Profiles ( 2 )	
Profile-Information	Data Flow
level 1 ( 0 )	
Manage Profiles ( 2 )	
Activity-Update	Data Flow
level 1 ( 0 )	
Manage Activities ( 3 )	
File -->              Access DBMS	

Update-Confirmation	Data Flow
level 1 ( 0 )	
Manage Activities ( 3 )	
File -->	Access DBMS
Activity-Data	Data Flow
level 1 ( 0 )	
Manage Activities ( 3 )	
Activity-Log	Data Flow
level 1 ( 0 )	
Manage Activities ( 3 )	
Archiving-Request	Data Flow
level 1 ( 0 )	
Manage Archive ( 6 )	
Archiving-Data	Data Flow
level 1 ( 0 )	
Manage Archive ( 6 )	
Data-Request	Data Flow
level 1 ( 0 )	
Manage Archive ( 6 )	
File -->	Access DBMS
Archive-Data	Data Flow
level 1 ( 0 )	
Generate Reports ( 5 )	
Manage Archive ( 6 )	
File -->	Access DBMS
Display Report ( 5.2 )	
Request-Archive	Data Flow
level 1 ( 0 )	
Generate Reports ( 5 )	
Manage Archive ( 6 )	
Display Report ( 5.2 )	
Display-Report	Data Flow
Generate Reports ( 5 )	
Display Report ( 5.2 )	
Query-Results	Data Flow
level 1 ( 0 )	
Generate Reports ( 5 )	
File -->	Access DBMS
Display Report ( 5.2 )	

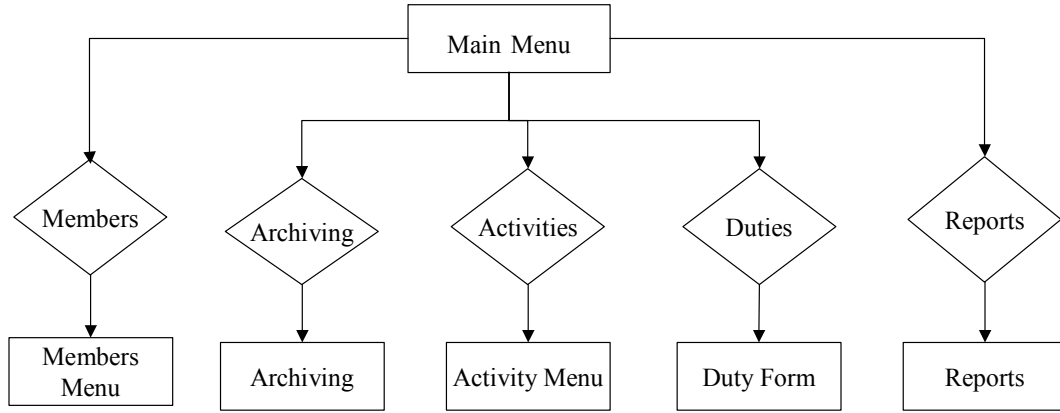
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## Section 2: Architectural Design Specification

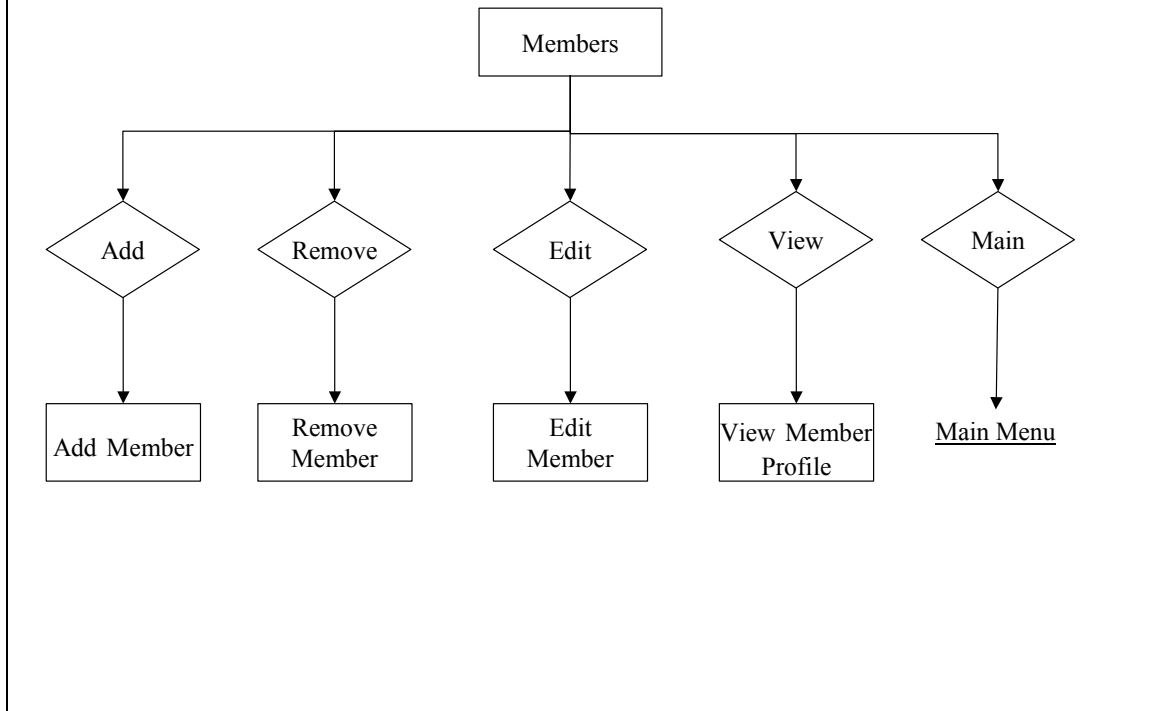
### Structure Diagrams

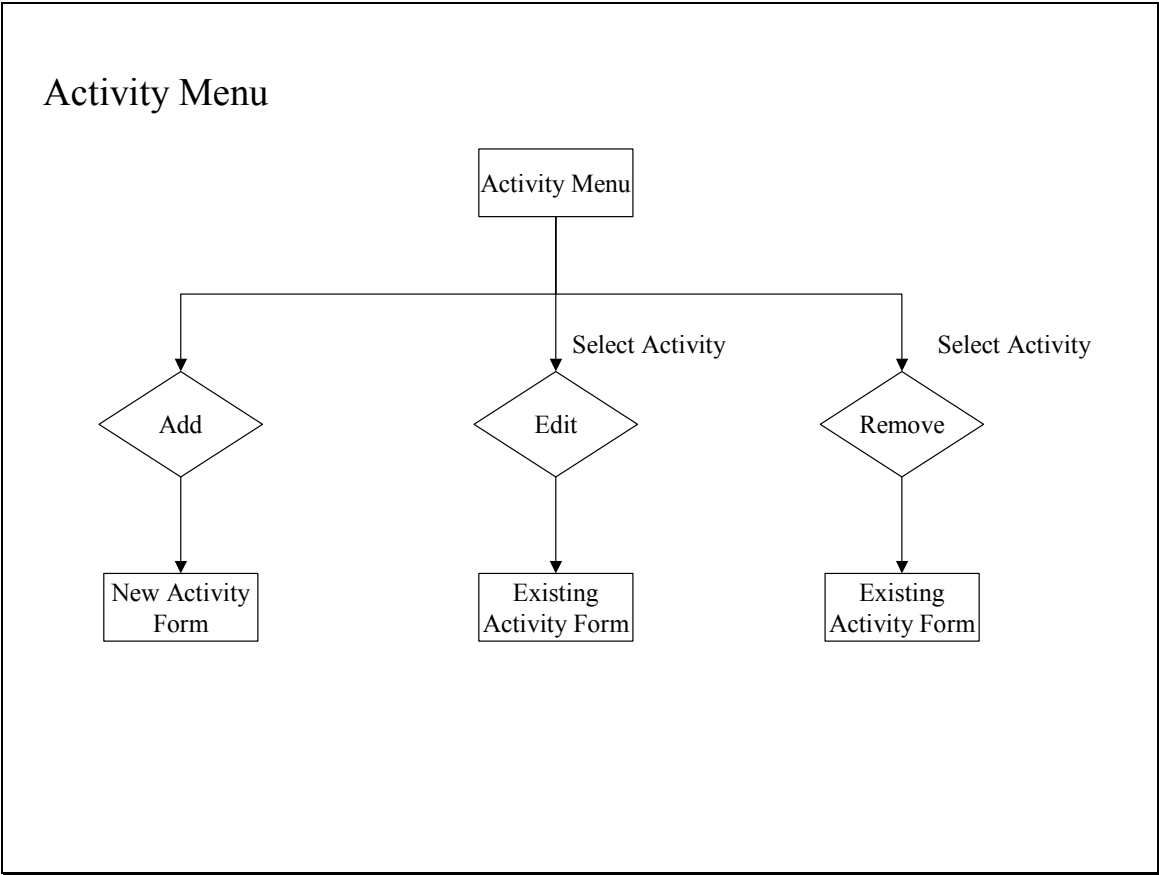


# Main Menu

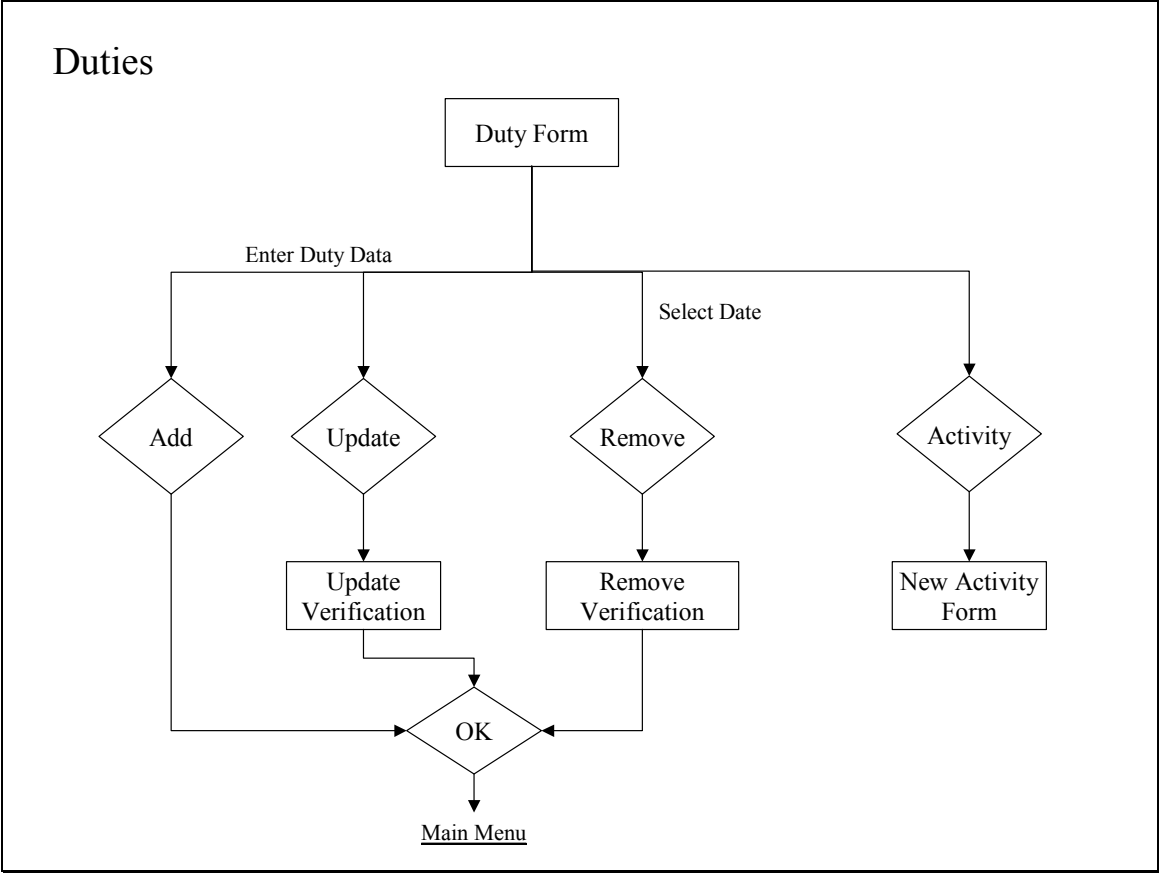


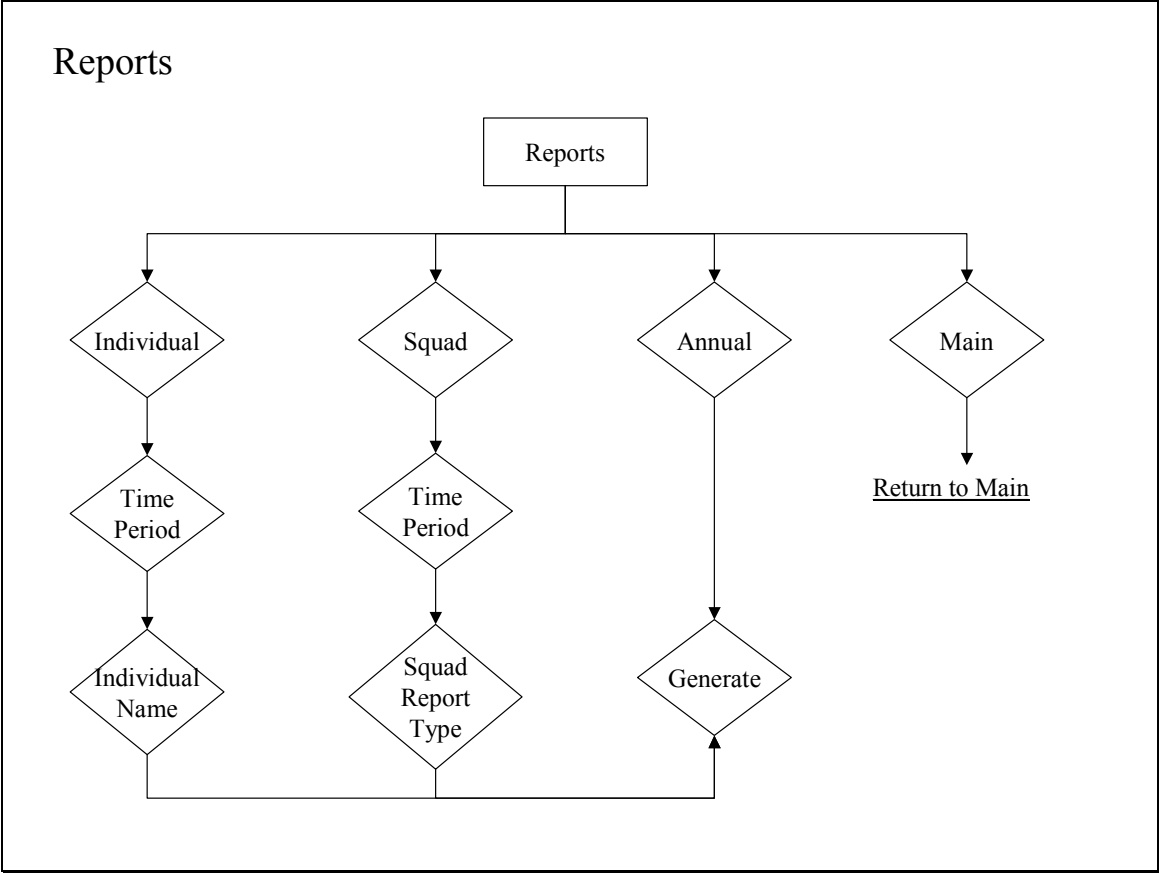
## Members

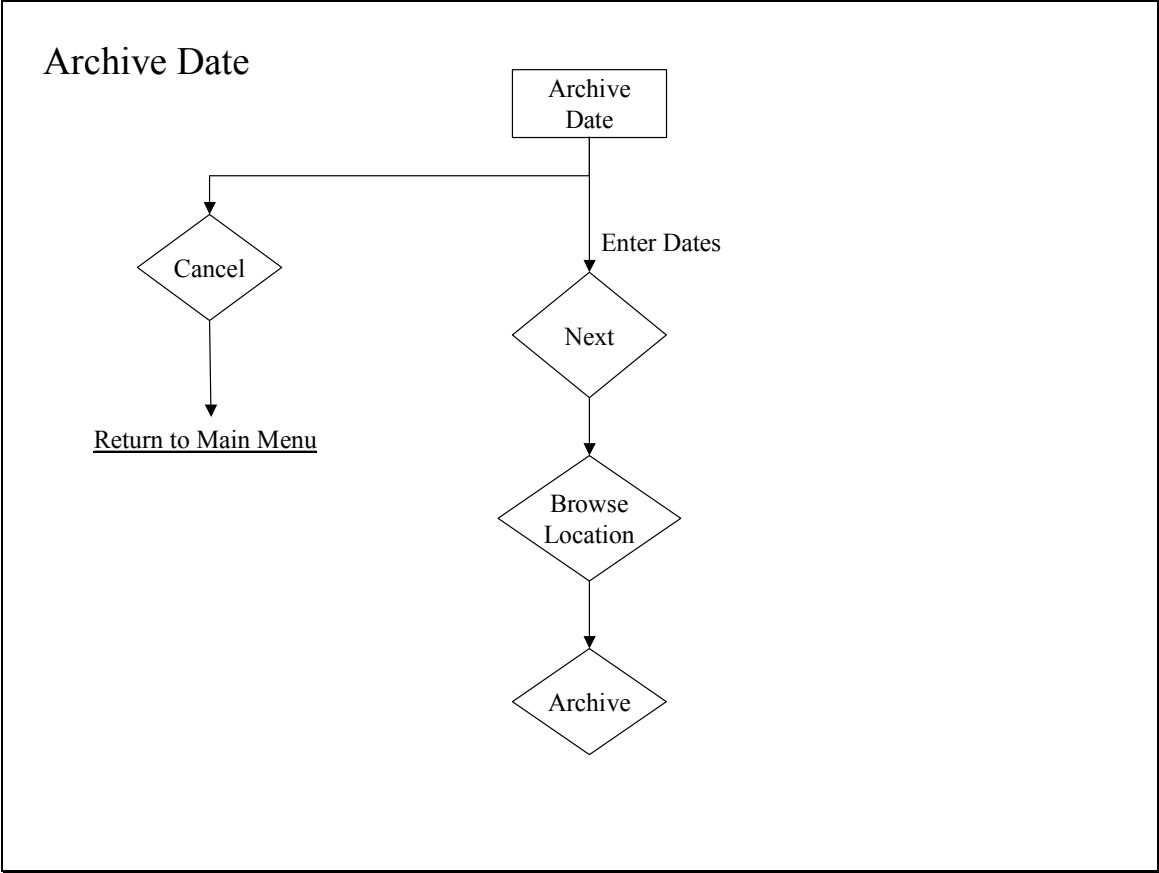




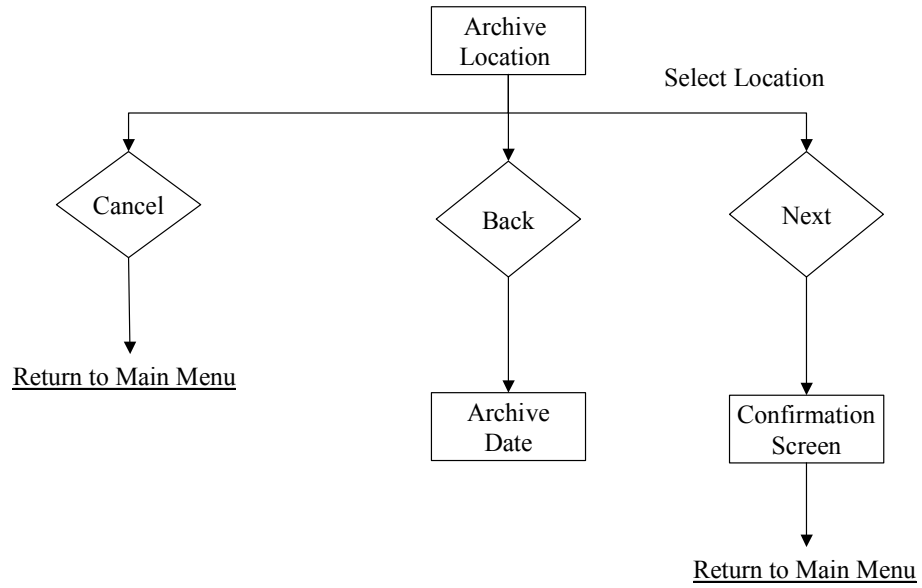








## Archive Location



## Parameter Specifications

**Members Table:** This table will store all of the personal information for each member's profile. Among the items stored will be their name, address, phone, numbers, social security number, date-of-birth, member type, member status, and whether or not they are an officer or not.

**Activity Table:** This table will store the information about each activity that is held. The information it holds will be one of the six types of activities, the title of the activity, the location and date of the activity.

**Attends Table:** This table is used to link each member to the activities that they attend. It can also be used to generate a list of members who attended an activity.

**Additional Dates Table:** This table is used to store additional dates and durations of an activity that already exists.

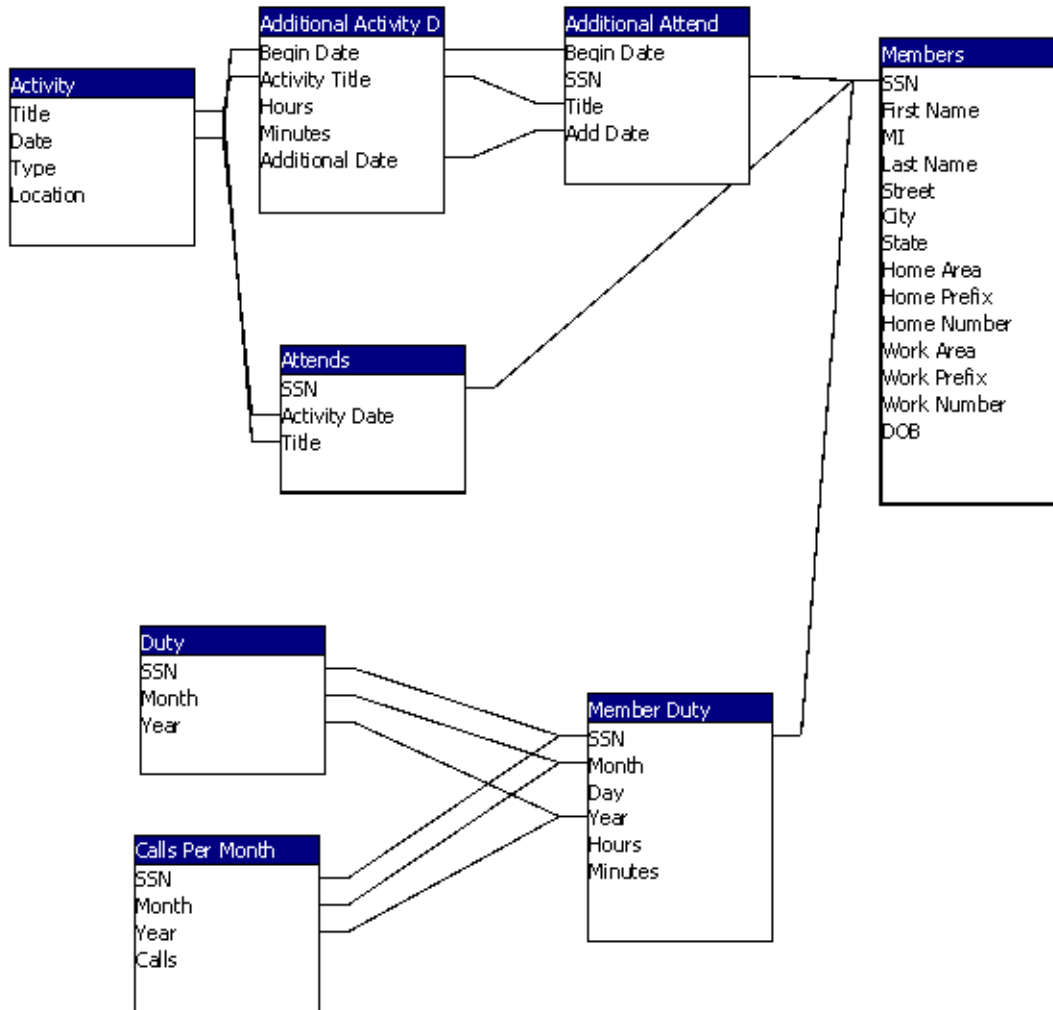
**Additional Attend Table:** This table is used to link each member to the additional activity dates that they attended.

**Duty Table:** This table is used to link each member to their tour-of-duty information along with the calls they attend per month.

**Member Duty Table:** This table is used to store the tour-of-duty information for each member. This information is the dates and duration of their duty.

**Calls per Month:** This table is used to store the number of calls a member responds to on a monthly basis.

## Logical Data Structures



## Functional Descriptions

- Allow for a user to track the activities and tours of duty, in which EMS members have participated in throughout the course of a year.
- The system must have an authentication process that secures the software from entry by unauthorized users.
- The system must allow the user to add, remove, edit or view a specific members' personal information.
- The activity log includes one of the six predefined activities, the location of the activity, the date on which the activity occurred, and the duration of the activity.
- The duty logs consist of the dates and duration that a specific member was on duty. It will also keep track of the calls a member responded to per month.
- Allow the user to compose various reports based upon the activities and duty log information.
- Allow the user to archive the current database to a specified storage device. Also, retrieve archived data that is requested by the user to generate a report on information within that data.
- Authorized users can easily access the system.
- The response time of the system is dependant upon Microsoft Access' ability to retrieve and update information in the database, along with the amount of data to be compiled and calculated for the generation of reports.
- Screen Interface should be no smaller than 1024 x 768 pixels.

### Section 3: Testing Requirements

Testing of the software package can be considered one of the most important phases of the development process. Once the project has passed the design stage, it is important to thoroughly test the system in order to correct any design, development, or programming flaws that were previously overlooked. The testing provisions of this system were established during the requirement specification portion of development, and will be further elaborated upon in the next phase of the project, the Detailed Design.

#### Requirements Inventory

**Requirement:** The SAP system must provide an authentication process to secure the system from unwanted users.

**Test:** FNA will test this requirement through entry of both valid and invalid information into the logon screen.

**Requirement:** The system must allow the user to add, remove, edit, or view, a specific members' personal information.

**Test:** FNA will test this requirement by creating a set of sample data and running it through all of the steps of the system.

**Requirement:** System should allow the user to archive the current database to a specified storage device.

**Test:** FNA will test this requirement by archiving test data onto various disk drives.

**Requirement:** Upon request, the system should be able to retrieve data that is archived on a specified storage device, in order to generate reports.

**Test:** FNA will test this requirement by retrieving the archived test data and then generating all possible reports for that data set.

**Requirement:** System should allow the user to compose reports based upon the various activities and duty log information.

**Test:** Sample data will be inputted into the system, and generated reports will be compared with expected results.

**Requirement:** The activity logs must include the six predefined activities, the location of the activity, the date on which the activity occurred, the duration of the activity, the title of the activity, and any comments the user would like to associate with the activity.

**Test:** FNA will test this requirement through viewing the fields of the activity form upon completion.

**Requirement:** The duty logs must consist of the dates and durations that a specific member was on duty for. Along with, keeping track of the calls a member responded to per month

**Test:** FNA will test this requirement through viewing the fields of the duty form upon completion.



**Requirement:** The system should be able to calculate points towards retirement benefits based on the calculation guidelines specified by the NYS Comptroller.

**Test:** Sample data will be inputted into the system, and generated reports will be compared with expected results.

**Requirement:** The system should be able to generate reports in the following fields: detailed/summarized individual report, detailed/summarized squad report, and an annual reports for submission to the NYS Comptroller

**Test:** Sample data will be inputted into the system, and generated reports will be compared with expected results.

### Design Inventory

**Design Goal:** The system should be user-friendly.

**Test:** FNA will test this design goal through the use of specified test users.

**Design Goal:** The system should allow quick and easy data entry.

**Test:** FNA will test this design goal through external consulting.

**Design Goal:** The system will support multiple menus, created to broaden the user-friendly aspects of the software.

**Test:** FNA will test this design goal through critique from various potential users of the system.

### Testing Plan

Test One: This procedure verifies the log-in function of the software. It tests the authentication process to make sure that the user enters a valid password along with their initials.

Procedure	Measure	Pass/Fail (Rec. Number)
1. Enter BR into user name and wrong_pass into password and click 'OK'.	Error is received, not a valid password.	P F
2. Enter BR into user name, enter test_pass for the password	System logs you on.	P F

Test Two: This procedure tests the ability to add a new member to the database accurately.

Procedure	Measure	Pass/Fail (Rec. Number)	
1. Log-in as BRock.			
2. From the main menu, select Members.	Members Menu appears.	P	F
3. Select Add from the Members Menu.	Member information form appears.	P	F
4. Enter Jillian for first name, Vaughn for last name. Enter 490 Boston Post Rd for the address. Enter Loudonville for the city, NY for State and 12211 for the zip code. Enter the DOB as 7/6/1981. Select associative member for type and active as status along with dates for both. Enter BR for initials. Leave SSN blank. Click 'OK'.	Verify that the age was calculated correctly  Error received. Must enter SSN.	P	F
5. Enter 046722468 for SSN and change Member status to be blank. Click 'OK'.	Error Received. Must enter Member Status	P	F
6. Select active for Member Status and change Member Type to be blank. Click 'OK'.	Error Received. Must enter Member Type.	P	F
7. Select associative member for Member Type and change the address field to be blank. Click 'OK'.	Error Received. Must enter address	P	F
8. Refill the address fields and leave the first name blank. Click 'OK'.	Error Received. Must enter first name.	P	F
9. Refill Jillian for the first name and delete the last name. Click 'OK'.	Error Received. Must enter a last name	P	F
10. Enter Vaughn for the last name. Enter Work Phone as 518-782-5510 and home phone as 518-782-5565. Click 'OK'.	No errors received, verify that all data is stored in correct fields in database.	P	F

Test Three: This procedure tests the ability to view a member's information.

Procedure	Measure	Pass/Fail (Rec. Number)	
1. Log-in			
2. From the main menu, select Members.	Members Menu appears.	P	F
3. Select View from the Members Menu.	A list of all the members appears	P	F
4. Select a member's name from the list and click 'OK.'	The member's information is displayed.	P	F
5. Verify that the information displayed is what is entered in the database.	All information in the database matches the displayed information.	P	F

Test Four: This procedure tests the ability to edit a member's information to the database accurately.

Procedure	Measure	Pass/Fail (Rec. Number)	
1. Log-in.			
2. From the main menu, select Members.	Members Menu appears.	P	F
3. Select Edit from the Members Menu.	A list of all the members appears	P	F
4. Select a name from the list and click 'OK.'	All the previously entered information are displayed in a form	P	F
5. Change the first name and click 'OK'	Return to the member menu.	P	F
6. Select View from the Member Menu and select the member name.	Member information is displayed. Verify that the change from #5 is being displayed	P	F
7. Repeat steps 5-6 with all fields.		P	F

Test Five: This procedure tests the ability to remove a member and all their information from the database.

Procedure	Measure	Pass/Fail (Rec. Number)	
1. Log-in.			
2. From the main menu, select Members.	Members Menu appears.	P	F
3. Select Remove from the Members Menu.	A list of all the members appears	P	F
4. Select a name from the list and click 'OK.'	Information for that member is displayed.	<b>P</b>	<b>F</b>
5. Click 'Remove.'	A warning screen is displayed asking the user if they are sure they want to delete a member.	<b>P</b>	<b>F</b>
6. Click 'Ok'.	Verify that the information in the database has been deleted.	<b>P</b>	<b>F</b>

Test Six: This procedure tests the ability to add new activity information accurately.

Procedure	Measure	Pass/Fail (Rec. Number)	
1. Log-in.			
2. Click the Activity button on the Main Menu.			
3. Click the Add button.	An activity form will appear.	P	F
4. Select Fundraiser as the activity type.	Fundraiser appears as the selected activity type.	P	F
5. Click 'OK.'	Error. Must enter more information.	P	F
6. Enter Barbeque as the activity title			
7. Click 'OK.'	Error. Must enter more information.	P	F
8. Enter the location of the activity			
9. Click 'OK.'	Error. Must enter more information.	P	F

10. Make sure Single date is selected and enter 7/06/02 for the date. Set the duration to 2 hours and 30 minutes.			
11. Click 'OK'.	Error. Must enter attendees.	P	F
12. Click Select All	Members Alexandra Susen, Jillian Vaughn, Sarah Levasseur, Elizabeth Virga and Meg McElroy should be highlighted.	P	F
13. Click Clear All	No members should be highlighted.	P	F
14. Click All Active	Members Alexandra Susen, Jillian Vaughn and Elizabeth Virga should be highlighted	P	F
15. Click Clear All	No members should be highlighted.	P	F
16. Click on the names Sarah Levasseur, Jillian Vaughn and Meg McElroy.	Sarah Levasseur, Jillian Vaughn and Meg McElroy should be highlighted.	P	F
17. Click view attendees.	Sarah Levasseur, Jillian Vaughn and Meg McElroy should be highlighted.	P	F
18. Enter in Comments, "Testing comments".			
19. Click 'Ok.'	Return to Activity main page; verify in database that all info is in correct fields.	P	F

Test Seven: This procedure tests the ability to remove an activity from the database.

Procedure	Measure	Pass/Fail (Rec. Number)	
1. Log-in.			
2. Click the Activity button on the Main Menu.			
3. Select the Month and Year.	The activities for that month are displayed.	P	F
4. Click the Remove button.	A list of all the activities is displayed.	P	F
5. Select the Activity to be removed and click 'OK.'	The information for that activity is displayed.	P	F
6. Click Remove.	A warning is displayed.	P	F
8. Click 'OK.'	Verify that the activity has been deleted.	P	F

Test Eight: This procedure tests the ability to edit activity information.

Procedure	Measure	Pass/Fail (Rec. Number)	
1. Log-in.			
2. Click the Activity button on the Main Menu.			
3. Select the Month and Year.	Activities occurring in that particular month/year are displayed.	P	F
4. Click an activity.	All the entered information for the activity is displayed.	P	F
5. Click the Edit button.	An list of activities is displayed	P	F
6. Edit the activity title and click 'OK'.			
7. Verify in the database that the change has been stored accurately.	The change is stored in the database accurately.	P	F
8. Repeat steps 5 and 6 for all fields.	The changes are stored in the database accurately.	P	F

Test Nine: This procedure tests the ability to generate a report.

Procedure	Measure	Pass/Fail (Rec. Number)
1. Log-in.		
2. Click the Reports button on the Main Menu.	Create Report Screen comes up	P F
3. Click the 'individual' check box	Time period and Individual selection area are enabled.	
4. Select 'Year to Date'.		
5. Select member, Elizabeth Virga.	Elizabeth Virga is highlighted	P F
6. Click Generate.	A year to date report is displayed for Elizabeth Virga. Verify that all information is correct.	P F P F
7. Return to the Create Report screen.		
8. Select the Individual checkbox again.		
9. Select 'Prior Year' for the time period and select the year 2001.		
10. Select Elizabeth Virga for the member.		
11. Click Generate.	Report for Elizabeth Virga for 2001 should be displayed Verify that the data is correct.	P F
12. Return to the Create Report screen.		
13. Select the Squad checkbox.	The time period and squad report sections are enabled.	P F
14. Select Year-to-Date		
15. Select All Members in the Squad Report Section and click Generate.	Report for members Alexandra Susen, Jillian Vaughn, Sarah Levasseur, Elizabeth Virga and Meg McElroy should be displayed Verify that the data is correct.	P F
16. Return to the Create Report screen.		
17. Select the Squad checkbox.		

18. Select Prior Year and select the year 2001.			
19. Select All Members in the Squad Report Section and click Generate.	Report for members Alexandra Susen, Jillian Vaughn, Sarah Levasseur, Elizabeth Virga and Meg McElroy for the year 2001 should be displayed Verify that the data is correct.	P	F
20. Return to the Create Report screen.			
21. Select the Squad checkbox.			
22. Select Year-to-Date			
23. Select All Active Members and click Generate.	Year to date information for members Alexandra Susen, Jillian Vaughn and Elizabeth Virga should be displayed. Verify that all information is correct.	P	F
24. Return to the Create Report screen.			
25. Select the Squad checkbox.			
26. Select Year to Date.			
27. Select All Members who Earned Retirement Credits and select Generate.	<u>Any members who have earned credit should be displayed</u> verify that this information is correct.	P	F
28. Return to the Create Report screen.			
29. Select the Squad checkbox.			
30. Select Prior Year and select the year 2001.			
31. Select All Members who Earned Retirement Credits and select Generate.	<u>Any members who have earned credit should be displayed</u> verify that this information is correct.	P	F
32. Return to the Create Report screen.			
33. Select Comptroller's Annual Report; Select the year and Click Generate.	The comptroller's report is displayed. Verify that all the information is correct and in the right format.	P	F



Test Ten: This procedure tests the ability to enter a tour-of-duty.

Procedure	Measure	Pass/Fail (Rec. Number)	
1. Log-in.			
2. From the main menu, select Duties	Duties Menu appears.	P	F
3. Highlight Jillian Vaughn from the Name pull-down menu	Member name is selected	P	F
4. Highlight March from Month Menu	March should be selected	P	F
5. Highlight 2001 from the Year Menu	2001 should be selected from year	P	F
	The correct number of calls per month should appear in the 'Calls per month' box	P	F
	The dates and durations of the duties for the selected month, year and member should appear in the right columns	P	F
6. Highlight 31 from the Day pull-down menu under Duty Entry	The number 31 should be selected	P	F
7. Highlight February from the Month pull-down menu	February should be selected	P	F
	Duties should change for the month of February	P	F
	Day under Duty Entry should not be 31	P	F
	Maximum day selectable should be 28	P	F
	Calls per month should change for February	P	F
8. Highlight 1996 under Year	1996 should be selected	P	F
9. Highlight number 29 from the Day pull-down under Duty Entry	29 should be selected	P	F
10. Type 3 in the hrs. box and 30 in the mins. Box, and click the Add button	Correct Date and Duration should appear on the right	P	F
11. Change mins. to 70	Correct Date and '4 hrs. 10 mins. should appear on the right	P	F

12. Select February 29, and 4hrs 10 mins from the right side, and click remove	Date and time should disappear from the list	P	F
13. Erase Initials and click update	Should give error: Initials required	P	F
14. Enter initials and click update	Confirmation should be given	P	F
15. Click Activity	Should return to Activity Menu	P	F

Test Eleven: This procedure tests the ability to archive the database.

Procedure	Measure	Pass/Fail (Rec. Number)	
1. Log-in.			
2. From the main menu, select Archive	Archiving Menu appears.	P	F
3. Click Browse and select a non-write CD-ROM drive and click OK	Error is reported	P	F
4. Highlight C:\ and click OK	Confirmation should be sent, and archiving should take place	P	F

## Section IV: Detailed Design Specification

### Subprogram interface specifications and pseudo-code for each routine

GetActivity Breakdown (Activity Selection)

```
{  
Give variable names for each field  
Process which/what activity is being given  
Declare all Calc variables  
Calculatepoints(calcVariables)  
Return activity to database  
}
```

Calculatepoints (calcvariables, duration)

```
{  
Calculate points using calc variables + duration  
Return points to database  
}
```

—

Selectform (Req-Arch-info, reportquery)

```
{  
Process which report/request  
Return display report  
}
```

DisplayReport (CalculationResults, queryResults, Archivedata, displayreport,)

```
{  
Process report type  
Calculaterep(dataforcalculations)  
Query info from DB  
Display info to user  
}
```

Calculatingforreports(all variables for member/squad)

```
{  
Take all data use formulas  
Return result  
}
```

—

SelectDataSource(Displayreport)

```
{  
Retrieve info from DB  
Save to source user selects  
}
```

Compilerreport(Calc-results, report-data)

```
{  
Merge calculated data with report data  
Return report to user  
}
```

Separatedata(Query-results, Archive-Data)

```
{  
Take query-results send to Compilerreport  
Send all data for calculations to calc reports  
}
```

SeperateData(dataforcalc)

```
{  
send position to calculate position  
send number responses to calculate response  
send hours to calculate sleep/standby  
}  
Calculateposition(elected or appointed position)  
{  
Process which position  
Send position-points to return results  
}
```

calculateResponse (numberresponses)

```
{  
send responsePoints to Return Results  
}
```

Calculate Sleep/Stand-by( sleep/stand-by hours)

```
{  
calculate the points for hours  
send sleep stand-by points to return results  
}
```

returnResults(Positionpoints,Responsepoints,sleep/standbypoints)

```
{  
compile all points to one variable  
send sum of all points to Calculation Results  
}
```

Add Activity:

```
ChooseLocation (Location-Selection)
{
    Send (Location) to database interface
}
```

```
Database Interface (Location)
{
    Send (Activity-Update) to Database
    Return Update-Confirmation
}
```

```
EnterTitle (Title)
{
    Send Title to database interface
}
```

```
Database Interface (Title)
{
    Send (Activity-Update) to Database
    Return Update-Confirmation
}
```

```
SelectActivity (Selected-Activity)
{
    Send Activity to database interface
}
```

```
Database Interface (Selected-Activity)
{
    Send (Activity-Update) to Database
    Return Update-Confirmation
}
```

```
EnterDateandDuration (Entered-Date-and-Duration)
{
    Send Duration to database interface
}
```

```

Database Interface (Duration)
{
    Send (Activity-Update) to Database
    Return Update-Confirmation
}

SelectMembers (Member-Selection)
{
    Send Member-Data to database interface
}

Database Interface (Location)
{
    Send (Activity-Update) to Database
    Return Update-Confirmation
}

ChooseLocation ( )
{
    call database interface ( )
    send Location to screen interface
}

EnterTitle ( )
{
    call database interface ( )
    send Selected-Title to the screen interface
}

SelectActivity ( )
{
    call database interface ( )
    send Activities to the screen interface
}

EnterDateandDuration ( )
{
    call database interface ( )
    send Date-and-Duration to the screen interface
}

SelectMembers ( )
{
    call database interface ( )
    send Member-Display to the screen interface
}

```

```
Database Interface ( )
{
  Calls Database for required information
  Returns Information to Module
}
```

Remove Activity:

```
SelectActivity (Selected-Activity)
{
  Send Activity to database interface
}
```

```
Database Interface (Activity)
{
  Sends Activity to Database
  Returns Update-Confirmation
}
```

Manage Profiles:

Add Member:

```
Add/Edit (Member-Data)
{
  Send Query-Data to Relay Info (Query-Data)
}
```

```
Database Interface ( Request-Data )
{
  Send Request-Data to Database
  Return Data
}
```

Edit Member:

```
Add/Edit (Member-Data)
{
  Send Query-Data to Relay Info
}
```

```
RelayInfo (Query-Data)
{
  Send Request Data to Database Interface
}
```

Database Interface (Request-Data)

```
{  
  Send Request-Data to Database  
  Return Data  
}
```

View Member:

Relay Info ( )

```
{  
  call Database Interface ()  
}
```

Database Interface ( )

```
{  
  Request Data from Database  
  Send Return-Data to Relay Info  
}
```

Relay Info (Return-Data)

```
{  
  Send Return-Data to Screen Interface  
}
```

Remove Member:

Remove (Remove-Request)

```
{  
  Send Query-Members to RelayInfo  
}
```

RelayInfo (Query-Members)

```
{  
  Send Request-Data to Database Interface  
}
```

Database Interface (Updated-Profile-Data)

```
{  
  Send Update-Profile-Data to Database  
  Return Update-Confirmation  
}
```



## Documentation Prologue

Each function will have a header in the format shown below. This will tell what the function name is, the company that created it, the date the function was created, the original programmer of the function, and a brief description of what the function is supposed to accomplish. There will also be modification log to keep track of when the function was modified and who modified it.

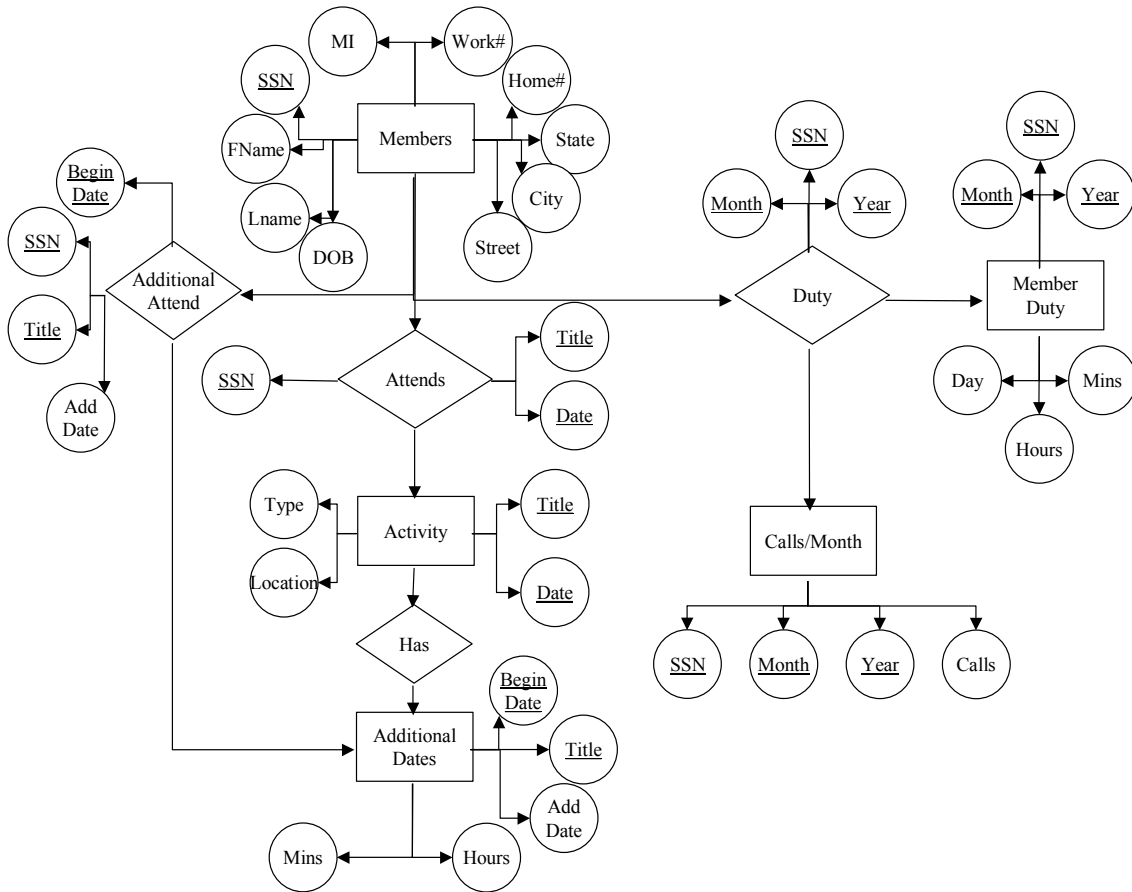
```
*****
' Function Name:   Sample_Function
' Company Info:   FNA Technologies
' File created:   2/26/03
' Programmer:     Courtney Murphy
' Description:    The purpose of this file is to provide a sample of
'                 the documentation style for this project.
'
' Modification Log:
' Programmer:
' Begin Date:
' End Date:
' Description:
*****
```

The following table lists the object naming conventions and includes an example of each.

<b>Object</b>	<b>Prefix</b>	<b>Example</b>
Combo box	cbo	cboEnglish
Check box	chk	chkReadOnly
Command button	cmd	cmdCancel
Common dialog	dlg	dlgOpen
Data	dat	datBiblio
Data-bound combo box	dbc	dbcEnglish
Data-bound list box	dbl	dblPolicyCode
Directory list box	dir	dirSource
Drive list box	drv	drvTarget
File list box	fil	filSource
Frame	fra	fraLanguage
Form	frm	frmPrintForm
Horizontal scroll bar	hsb	hsbVolume
Image	img	imgEmptyBarrel
Label	lbl	lblInstructions
Line	lin	linUnderline
List box	lst	lstPeripherals
Menu	mnu	mnuFileOpen
OLE	ole	oleObject1
Option button	opt	optFrench
Picture box	pic	picSmokeCloud

Shape	shp	shpWireScreen
Text	txt	txtGenName
Timer	tmr	tmrRunAnimation
Vertical scroll bar	vsb	vsbTemperature

## Physical Data Structures



## **Packaging Specifications**

The software will come packaged with a simple step-by-step instruction booklet, which will be written in very basic terms making the installation simple for anyone at almost any level of computer skill. After inserting the packaged CD-ROM, the user will be forced to make very few decisions, because there is no need for a custom installation since the program only has one set configuration. The only option that a user will need to select is where the program will be installed to, and a default location will be selected. The packaging will also contain a more in depth trouble shooting guide that will help the user by providing step-by-step instructions on any given task.

## Glossary

Microsoft Visual Basic 6.0: A development tool used to easily create applications that work in a Windows environment.

Pixels: Short for picture element. A pixel is the smallest logical unit of visual information that can be used to build an image. Pixels are the little squares that can be seen when a graphics image is enlarged.

SAP: (Service Awards Program) Software package that tracks credits towards benefits for volunteer EMS members.

SQL: (Structured Query Language) a language used to create, maintain, and query relational databases. SQL uses regular English words for many of its commands, which makes it easy to use. It is often embedded within other programming languages.

Windows: A Microsoft product that provides a platform on which to run software and interact with peripheral hardware on personal computers.