

# Preliminary Design

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## International Online Survey (IOS)

### Bad Robot Enterprises

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# International Online Survey Preliminary Design

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## Section 1: Product Overview and Summary

A great deal of information on certain topics can be gained through the use of surveys. The International Online Survey (IOS) system will provide users with the ability to create and take surveys through a web-based program. Teachers will be able to create surveys and give them to their students and students will be able to take these surveys quickly and easily. Both types of users will be able to view survey results to gain the data they need or desire. Administrators will oversee this program and maintain functionality of the IOS.

## External Design Specifications

### Section 2: User displays, report formats, and user command summary

#### 2.1: Login Page

This is the page that all users will see when first locating the website. This page is where all users will enter their username and password. If a user has not already created an account, they can click on the appropriate "Register Now" link that will take them to the account creation page.

The screenshot shows the IOS login and registration interface. At the top left, the text "IOS" is displayed in a large, white font on a dark blue background. Below this, there are two main sections: "LOG IN NOW" and "REGISTER".

The "LOG IN NOW" section contains a form with the following elements:

- E-mail address: [text input field]
- Password: [text input field]
- [Forgot your password?](#)
- 
- Three radio button options for saving login information:
  - Save my e-mail address and password
  - Save my e-mail address
  - Always ask for my e-mail address and password

The "REGISTER" section contains two buttons:

- As a Teacher
- As a Student

## 2.2: Teacher Account Creation Page

This page is reached when the user has selected from the login page to register as a teacher. They are required to provide a user name and password.

**IOS** **Create Your Account (Teacher)**

Username :

**Create your password**

Password:   
The password must contain at least six characters and is case sensitive.

Password strength:

Retype password:

---

**Create your password reset options**

Question:

Secret answer:   
Five character minimum; not case sensitive

Alternate e-mail address:   
Optional

## 2.3: Student Account Creation Page

This page is reached when the user has selected from the login page to register as a student. They are required to provide a user name and password as well as some of their personal information.

# IOS Create Your Account (Student)

**Username :**

**Create your password**

**Password:**   
The password must contain at least six characters and is case sensitive.

**Password strength:**  Weak  Medium  Strong

**Retype password:**

---

**Create your password reset options**

**Question:**

**Secret answer:**   
Five character minimum, not case sensitive

**Alternate e-mail address:**   
Optional

---

**Enter your account information**

**First name:**

**Last name:**

**Gender:**  Male  Female

**Birth date:**

**State:**

**ZIP code:**

**Time zone:**

I own or work with a small business

## 2.4: Administrator Welcome Page

The user is directed to this page when they have signed in as an administrator. They will see features available to only administrators in the top menu bar. They will also have access to information such as website survey statistics, user login information, and surveys.

**IOS Administrator**

Manage Account | Create Accounts | List Current Users |  search

Welcome Paul Borchers

### Current Stats

Total Users : 500  
Current Users Logged In: 68  
Total Surveys Created: 1500  
Total Surveys Published: 1100

### Current Users Logged In

Name	Account Type	Delete
<u>Borchers, Paul</u>	Student	<input type="checkbox"/>
<u>User1</u>	Student	<input type="checkbox"/>
<u>User2</u>	Teacher	<input type="checkbox"/>
<u>User3</u>	Student	<input type="checkbox"/>

### Quality Control

#### Messages from Users

Message	Date
Can my account be .....	12/5/2007
What should I do if .....	12/8/2007

#### Survey Word Alerts

Survey name	# Alerts	Date	Teacher	Ban
Bob's Survey	15	11/6/07	Barker, Bob	<input type="checkbox"/>
Paul	10	11/8/07	Borchers, Paul	<input type="checkbox"/>

### Surveys

Name	Topic	Date	Delete
Test Survey 1	CSIS	11/2/07	<input type="checkbox"/>
Test Survey 2	Math	11/7/07	<input type="checkbox"/>
Test Survey 3	Poly	11/8/07	<input type="checkbox"/>
Test Survey 4	Physics	11/9/07	<input type="checkbox"/>



## 2.5: Teacher Welcome Page

The user is directed to this page when they have signed in as a teacher. They will see features available to only teachers in the top menu bar as well as their history of surveys, and active and unpublished surveys.

The screenshot shows the 'IOS Teacher' interface. At the top, there is a dark blue header with 'IOS' on the left and 'Teacher' in the center. Below the header is a navigation bar with 'Manage Account' and 'Create a Survey' links, a search box, and a 'search' button. A welcome message 'Welcome Paul Borchers' is displayed below the navigation bar. The main content area is divided into two columns. The left column is titled 'History' and contains a sub-section 'Completed Surveys' with a table of four surveys. The right column is titled 'Active and Unpublished Surveys' and contains two sub-sections: 'Active Surveys' with a table of two surveys and 'Unpublished Surveys' with a table of one survey.

History				
— Completed Surveys				
Name	Topic	Date	Delete	Download
Test Survey 1	CSIS	11/2/07	<input type="checkbox"/>	<input type="button" value=".txt"/>
Test Survey 2	Math	11/7/07	<input type="checkbox"/>	<input type="button" value=".txt"/>
Test Survey 3	Poly	11/8/07	<input type="checkbox"/>	<input type="button" value=".txt"/>
Test Survey 4	Physics	11/9/07	<input type="checkbox"/>	<input type="button" value=".txt"/>

Active and Unpublished Surveys				
— Active Surveys				
Name	Topic	End Date	Delete	Stop
Active Survey1	History	11/15/07	<input type="checkbox"/>	<input type="checkbox"/>
Active Survey2	Software	11/16/07	<input type="checkbox"/>	<input type="checkbox"/>

— Unpublished Surveys				
Name	Topic	Date	Activate	Delete
Paul Survey	Astronomy	11/18/07	<input type="checkbox"/>	<input type="checkbox"/>

## 2.6: Student Welcome Page

The user is directed to this page when they have signed in as a student. They will see features available to only students in the top menu bar as well as their history of completed surveys and non – completed surveys.

**IOS Student**

Manage Account | Take A Survey |  search

Welcome Paul Borchers

History		
Name	Topic	Date
Test Survey 1	CSIS	11/2/07
Test Survey 2	Math	11/7/07
Test Survey 3	Poly	11/8/07
Test Survey 4	Physics	11/9/07

Non-Completed Surveys		
Name	Topic	Date
Excel	Excel Test	11/19/07
Novell	Novell Test	11/20/07

## 2.7.1: Administrator Account Management Page

This page allows an administrator to modify their account password.

The screenshot displays a web interface for managing an administrator account. At the top, a dark blue header contains the text "IOS" on the left and "Manage Your Account (Admin)" in the center. Below the header, the form is organized into several sections:

- New Username :** A text input field.
- Change Password**
  - Password:** A text input field with a note below it: "The password must contain at least six characters and is case sensitive."
  - Password strength:** A horizontal bar with three segments labeled "Weak", "Medium", and "Strong".
  - Retype password:** A text input field.
- Question:** A text input field.
- Secret answer:** A text input field.
- Submit**: A button located at the bottom right of the form area.

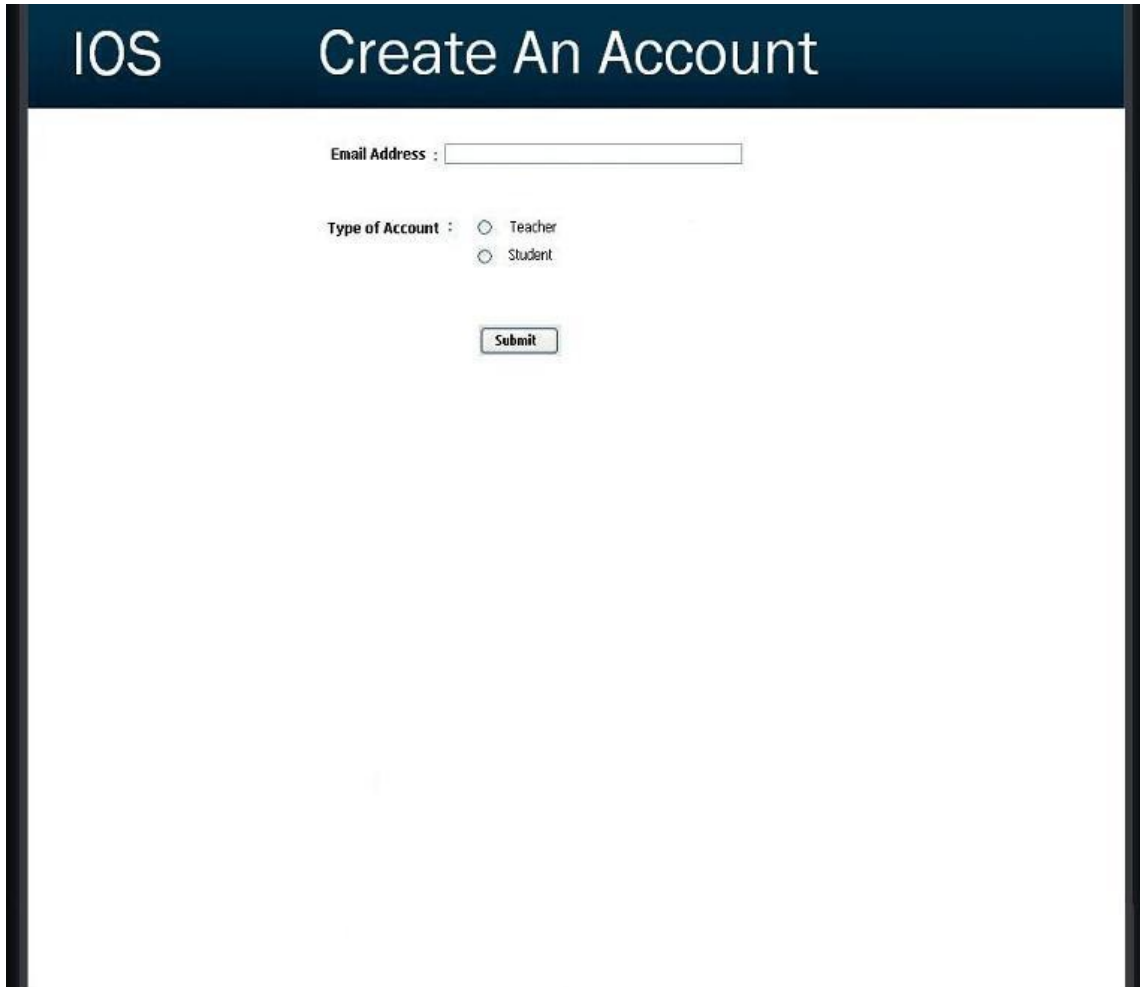
## 2.7.2: Teacher Account Management Page

This page allows a teacher to modify their account password.

The screenshot shows a web interface for managing a teacher's account. At the top, there is a dark blue header with the text "IOS" on the left and "Manage Your Account (Teacher)" on the right. Below the header, the form is divided into two main sections. The first section is for changing the password, starting with a "New Username" label and an input field. Below that is the "Change Password" section, which includes a "Password:" label and an input field. A small note below the password field states: "The password must contain at least six characters and is case sensitive." Underneath is a "Password strength:" label followed by three radio buttons labeled "Weak", "Medium", and "Strong". Below the strength indicators is a "Retype password:" label and an input field. A horizontal line separates this section from the second section, which is for setting a security question. It includes a "Question:" label and an input field, followed by a "Secret answer:" label and another input field. At the bottom right of the form area, there is a "Submit" button.

## 2.8: Administrator Account Creation Page

This page allows the Administrator to manage the creation of student and teacher accounts.



IOS Create An Account

Email Address :

Type of Account :  Teacher  
 Student

## 2.9: User Page (Teacher)

This page is reached by clicking a teacher's name in the Administrator welcome page. The page displays a unique teacher's account information and statistics.

**IOS** **Borchers, Paul**

Teacher Profile

**Name: Paul Borchers**

**Active Surveys**

Name	Topic	Date
Now	Catholicism	11/18/07
Phone	Contacts	11/19/07

**Published Surveys**

Name	Topic	Date
Soda	Types	11/18/07
NetMeeting	Remote	11/19/07

**Unpublished Surveys**

Name	Topic	Date
Chairs	Siena Hall	11/18/07
Monitors	Flat/CRT	11/19/07

## 2.10: User Page (Student)

This page is reached by clicking a student's name in the Administrator welcome page. The page displays a unique student's personal information as well as their survey taking statistics.

The screenshot shows a user interface for a student profile. At the top, there is a dark blue header with the text 'IOS' on the left and 'Wiggin, Ender' in the center. Below the header, the page is divided into sections. The first section is titled 'Student Profile' and lists the following information: Name: Wiggin, Ender; Age: 21; Gender: Male; Zip Code: 12211; State: New York; Birth Date: March 15, 1986; Education: under-graduate; Major: Computer Science. The second section is titled 'Surveys Taken' and contains a table with three columns: Name, Topic, and Date. The table has one row: Test Survey 1, CSIS, 11/7/07. The third section is titled 'Surveys Not Taken' and contains a table with three columns: Name, Topic, and Date. The table has one row: Test Survey 4, Physics, 11/1/07. The page is framed by a dark border.

**IOS** **Wiggin, Ender**

**Student Profile**

**Name:** Wiggin, Ender  
**Age:** 21  
**Gender:** Male  
**Zip Code:** 12211  
**State:** New York  
**Birth Date:** March 15, 1986  
**Education:** under-graduate  
**Major:** Computer Science

**Surveys Taken**

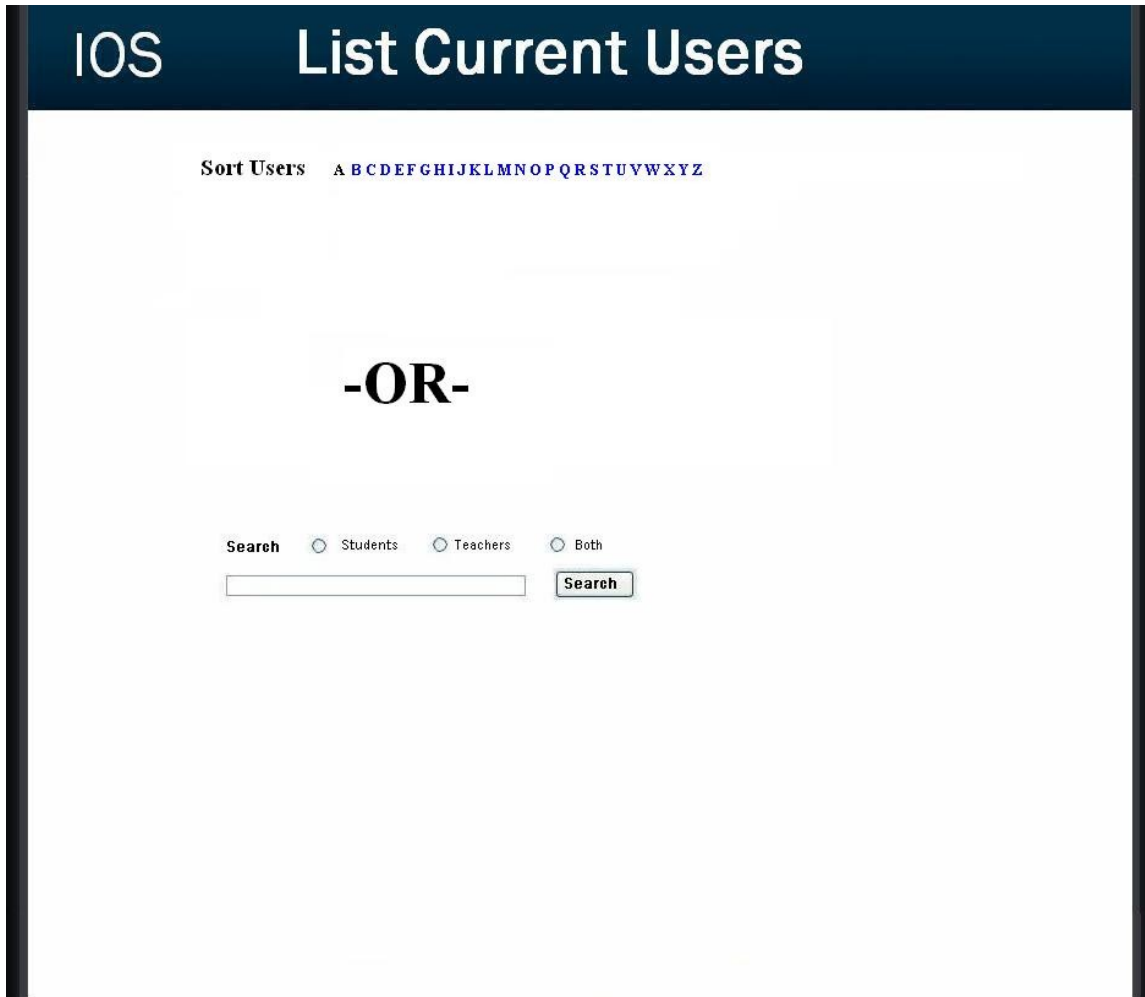
Name	Topic	Date
Test Survey 1	CSIS	11/7/07

**Surveys Not Taken**

Name	Topic	Date
Test Survey 4	Physics	11/1/07

## 2.11: List Current Users Page

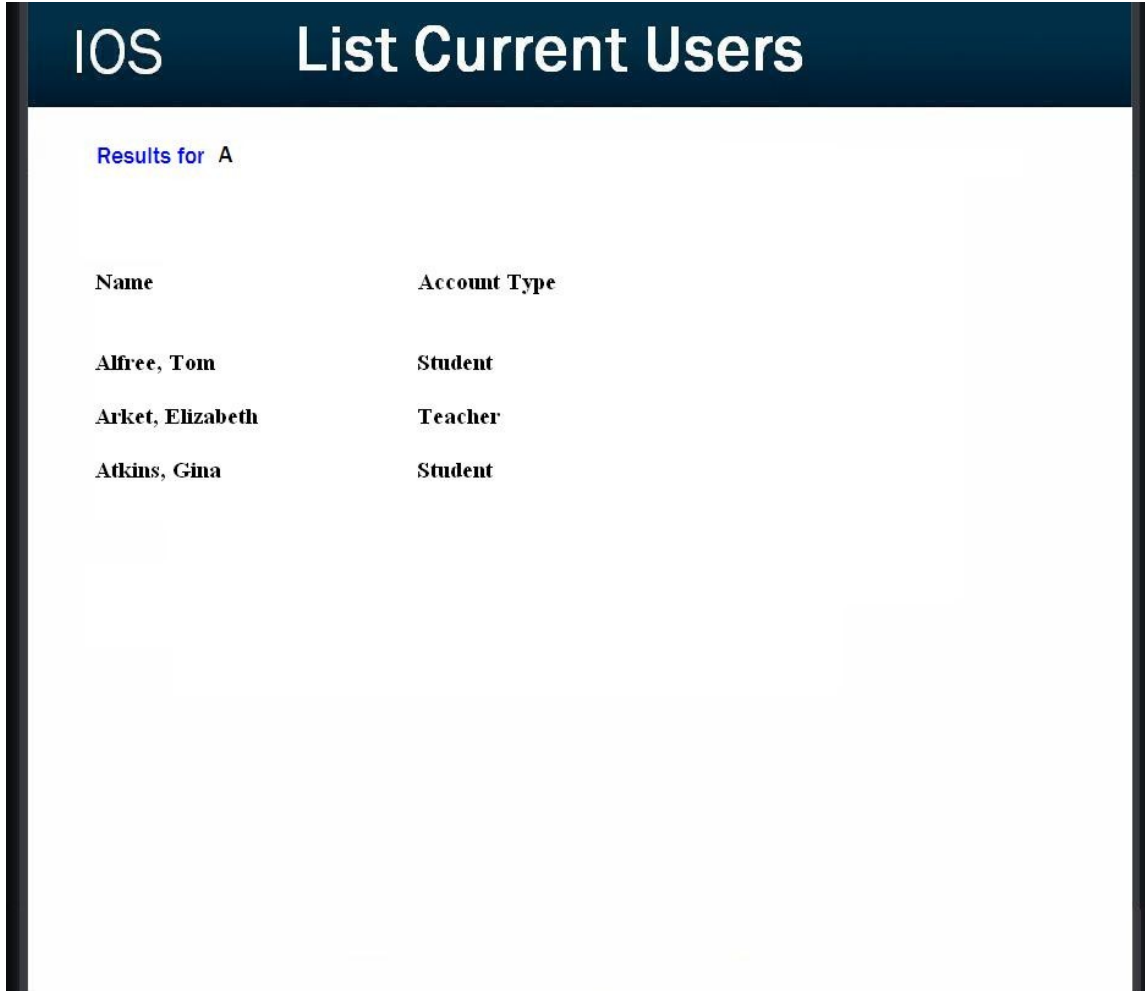
This page allows the administrator to browse all accounts.





## 2.12: List Current Users Results Page

This page is reached by clicking search or a sort letter on the list current users page. The users are displayed according to the client's search preference.



Name	Account Type
Alfree, Tom	Student
Arket, Elizabeth	Teacher
Atkins, Gina	Student

## 2.13: Teacher Initial Survey Creation Page

This page is reached from the create a survey link which can be seen by teacher accounts. The page is the first page a teacher will see before going on to adding questions to their survey. The page requires the teacher to enter a survey name and topic as well as making their survey anonymous or protected.

IOS Create A Survey

Manage Account Create a Survey search

Enter Your Survey's Topic

Enter Your Survey's Name

Make Your Questions:

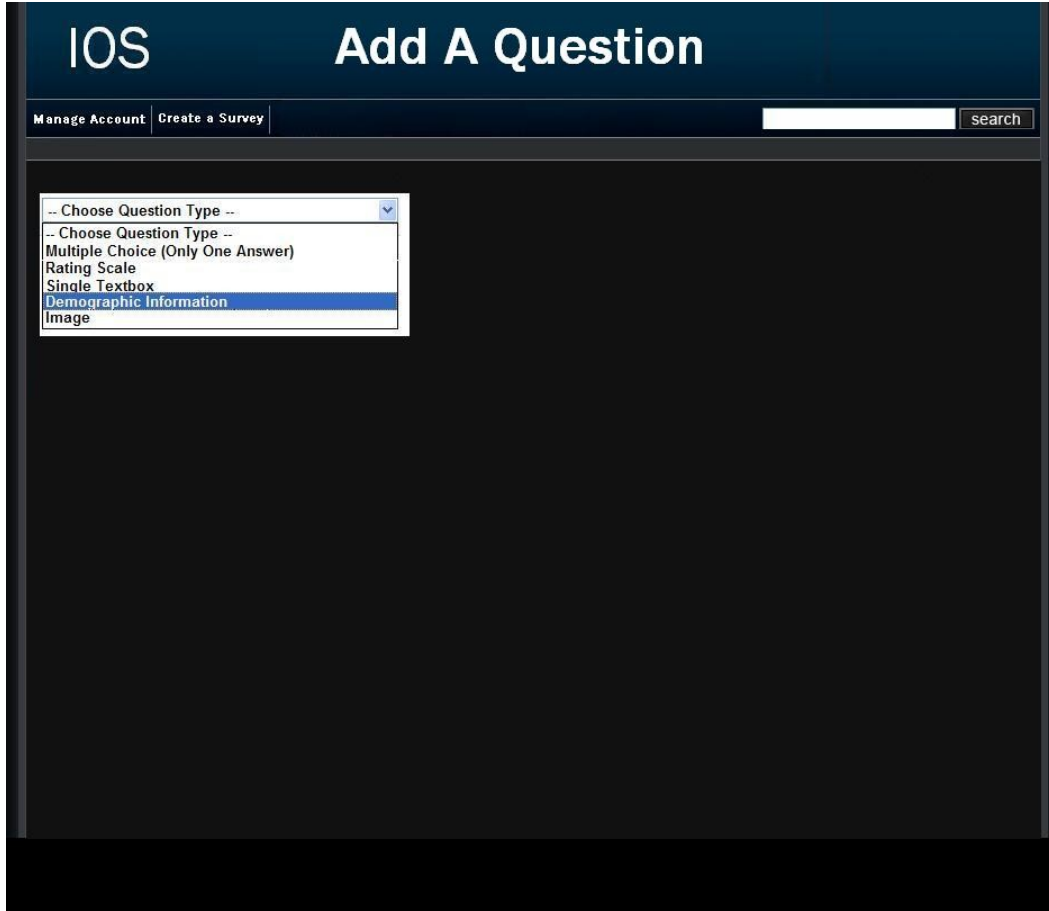
Anonymous

Protected

Submit

## 2.14.0: Teacher Add a Question Page (Blank)

This page is reached either through the blank edit survey page or after adding a question. This page only consists of a drop down of question types.



## 2.14.1: Demographic

These pages allows for a teacher to create a survey. They are provided with different questions to chose from including demographic, multiple choice, textbox, rating scale, and image related questions.

**IOS Add A Demographic Question**

Manage Account | Create a Survey |  search

-- Choose Question Type --  
-- Choose Question Type --  
Multiple Choice (Only One Answer)  
Rating Scale  
Single Textbox  
**Demographic Information**  
Image

**Contact Information**

Name:	<input type="text" value="Ryan May"/>	<input checked="" type="checkbox"/> Visible	<input checked="" type="checkbox"/> Answer Required
Company:	<input type="text" value="Area 51"/>	<input checked="" type="checkbox"/> Visible	<input checked="" type="checkbox"/> Answer Required
Address 1:	<input type="text" value="Classified"/>	<input checked="" type="checkbox"/> Visible	<input checked="" type="checkbox"/> Answer Required
Address 2:	<input type="text" value="Classified"/>	<input checked="" type="checkbox"/> Visible	<input checked="" type="checkbox"/> Answer Required
City/Town:	<input type="text" value="Classified"/>	<input checked="" type="checkbox"/> Visible	<input checked="" type="checkbox"/> Answer Required
State/Province:	<input type="text" value="Classified"/>	<input checked="" type="checkbox"/> Visible	<input type="checkbox"/> Answer Required
ZIP/Postal Code:	<input type="text" value="Classified"/>	<input checked="" type="checkbox"/> Visible	<input checked="" type="checkbox"/> Answer Required
Country:	<input type="text" value="United States"/>	<input checked="" type="checkbox"/> Visible	<input checked="" type="checkbox"/> Answer Required

## 2.14.2: Scale

These pages allows for a teacher to create a survey. They are provided with different questions to chose from including demographic, multiple choice, textbox, rating scale, and image related questions.

The screenshot shows a web interface for adding a rating scale question. The header includes the 'IOS' logo and the title 'Add a Rating Scale Question'. Below the header is a navigation bar with 'Manage Account' and 'Create a Survey' links, and a search box. The main content area is divided into several sections:

- Question Type Selection:** A dropdown menu with options: '-- Choose Question Type --', '-- Choose Question Type --', 'Multiple Choice (Only One Answer)', 'Rating Scale' (highlighted), 'Single Textbox', 'Demographic Information', and 'Image'.
- Question Text:** A large text input field for entering the question text.
- Row Choices (each choice on separate lines):** A text input field for entering row-based choices.
- Column Choices:** A section for selecting the number of ratings (currently set to 4) and defining labels and weights for each rating level. The weights are 1, 2, 3, and 4.
- Submit:** A button at the bottom right to save the question.

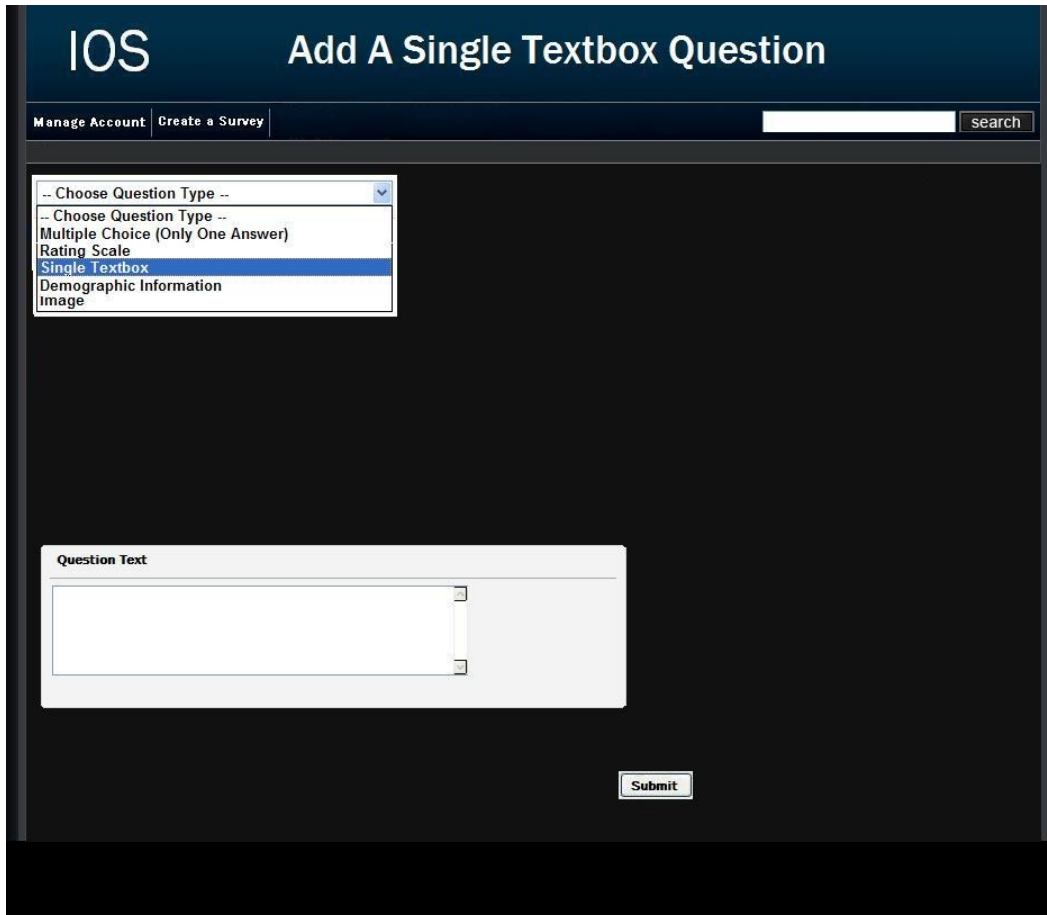
### 2.14.3: Multiple Choice

These pages allows for a teacher to create a survey. They are provided with different questions to chose from including demographic, multiple choice, textbox, rating scale, and image related questions.

The screenshot shows a web interface for creating a survey question. At the top, the header reads "IOS Add A Multiple Choice Question". Below the header is a navigation bar with "Manage Account" and "Create a Survey" links, and a search box. The main content area features a dropdown menu for selecting a question type, with "Multiple Choice (Only One Answer)" selected. Below the dropdown are two text input fields: "Answer Choices (each choice on separate lines)" and "Question Text". A "Submit" button is located at the bottom right of the form.

## 2.14.4: Text Box

These pages allows for a teacher to create a survey. They are provided with different questions to chose from including demographic, multiple choice, textbox, rating scale, and image related questions.



The screenshot shows a web interface for creating a survey question. At the top, the header reads "IOS Add A Single Textbox Question". Below the header, there are navigation links for "Manage Account" and "Create a Survey", and a search bar with a "search" button. A dropdown menu is open, showing the following options: "-- Choose Question Type --", "-- Choose Question Type --", "Multiple Choice (Only One Answer)", "Rating Scale", "Single Textbox" (which is highlighted), "Demographic Information", and "Image". Below the dropdown menu, there is a "Question Text" label and a large text input area. At the bottom right of the form, there is a "Submit" button.

## 2.14.5: Image

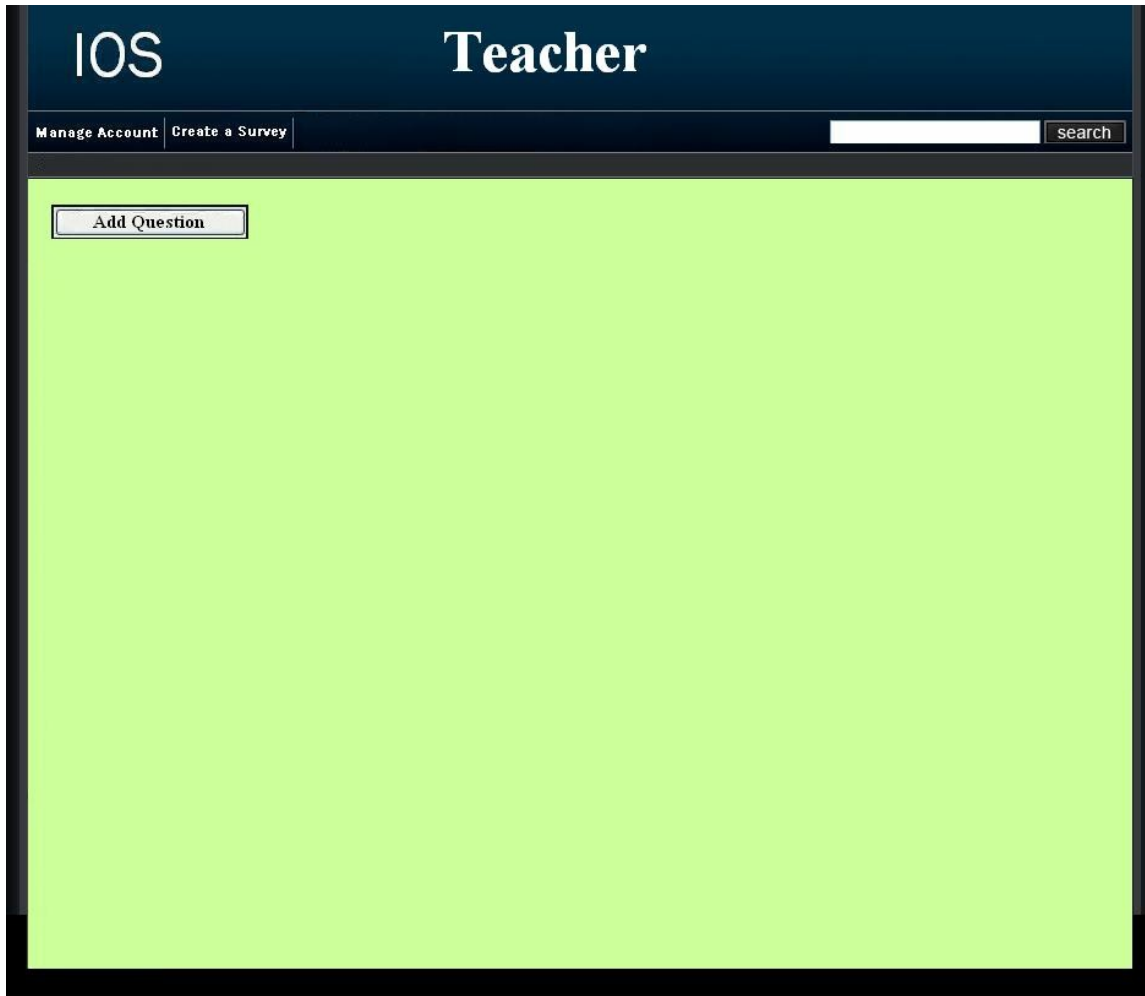
These pages allows for a teacher to create a survey. They are provided with different questions to chose from including demographic, multiple choice, textbox, rating scale, and image related questions.

The screenshot shows a web interface for adding an image question. At the top, the header reads "IOS" and "Add An Image Question". Below the header, there are navigation links for "Manage Account" and "Create a Survey", along with a search bar. A dropdown menu is open, showing options for question types: "-- Choose Question Type --", "-- Choose Question Type --", "Multiple Choice (Only One Answer)", "Rating Scale", "Single Textbox", "Demographic Information", and "Image". The "Image" option is selected. Below the dropdown, there is a text area labeled "Image Description". Underneath that, there is a section titled "Choose New Image" with two radio button options: "Upload an Image from your Computer" and "Type in a URL". The "Upload an Image from your Computer" option is selected, and it includes a "Browse" button. A "Submit" button is located at the bottom right of the form.



## 2.15.1: Teacher Edit Survey Page (Blank)

This page is reached after submitting the required information on the create a survey page. Clicking the "add a question button" will bring the teacher to a page where they can finally start to choose between questions to add to their survey.



## 2.15.2: Teacher Edit Survey Page

**IOS** **Teacher**

Manage Account Create a Survey  search

**Add Question**

**Move this question**  
↑ ↓  
**Delete**

1. What is Software Engineering?  
sample answer  
sample answer  
sample answer  
sample answer

**Move this question**  
↑ ↓  
**Delete**

2. How much do you like doing Software Engineering:  
documents little little more neutral  
tests  
presentations

**Move this question**  
↑ ↓  
**Delete**

3. What do you do in Software Engineering?  
[Redacted]

**Move this question**  
↑ ↓  
**Delete**

4. What are 4 different definitions of Software Engineering  
ACM [Redacted]  
IEEE [Redacted]  
Preseman [Redacted]  
Bauer [Redacted]

[Privacy Statement](#) [Terms of Use](#) [Code of Conduct](#) [Contact Us](#)

## 2.16: Student Account Management Page

This page allows a student to edit their account information such as their username, password, and personal information.

**IOS Manage Your Account**

**New Username :**

**Change Password**

Password:   
The password must contain at least six characters and is case sensitive.

Password strength:  Weak  Medium  Strong

Retype password:

---

Question:

Secret answer:

---

**Edit Your Account Information**

First name:

Last name:

Gender:  Male  Female

Birth date: Month  Day

State:

ZIP code:

Time zone:

I own or work with a small business

## 2.17.1: Student Survey Page

This page allows the student to answer questions of a survey that they have been given permission to take.

**IOS Take A Survey**

Manage Account | Take A Survey |  search

**1. What is Software Engineering?**

sample answer  
 sample answer  
 sample answer  
 sample answer

**2. How much do you like doing Software Engineering:**

	little	little more	neutral	love it
documents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
tests	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
presentations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**3. What do you do in Software Engineering?**

**4. What are 4 different definitions of Software Engineering**

ACM   
IEEE   
Pressman   
Bauer

## 2.17.2: Teacher Preview of Survey Page

This page allows a teacher to look at what their survey would look like at their current progress.

**IOS Preview**

Manage Account Take A Survey  search

**1. What is Software Engineering?**

sample answer  
 sample answer  
 sample answer  
 sample answer

**2. How much do you like doing Software Engineering:**

	little	little more	neutral	love it
documents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
tests	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
presentations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

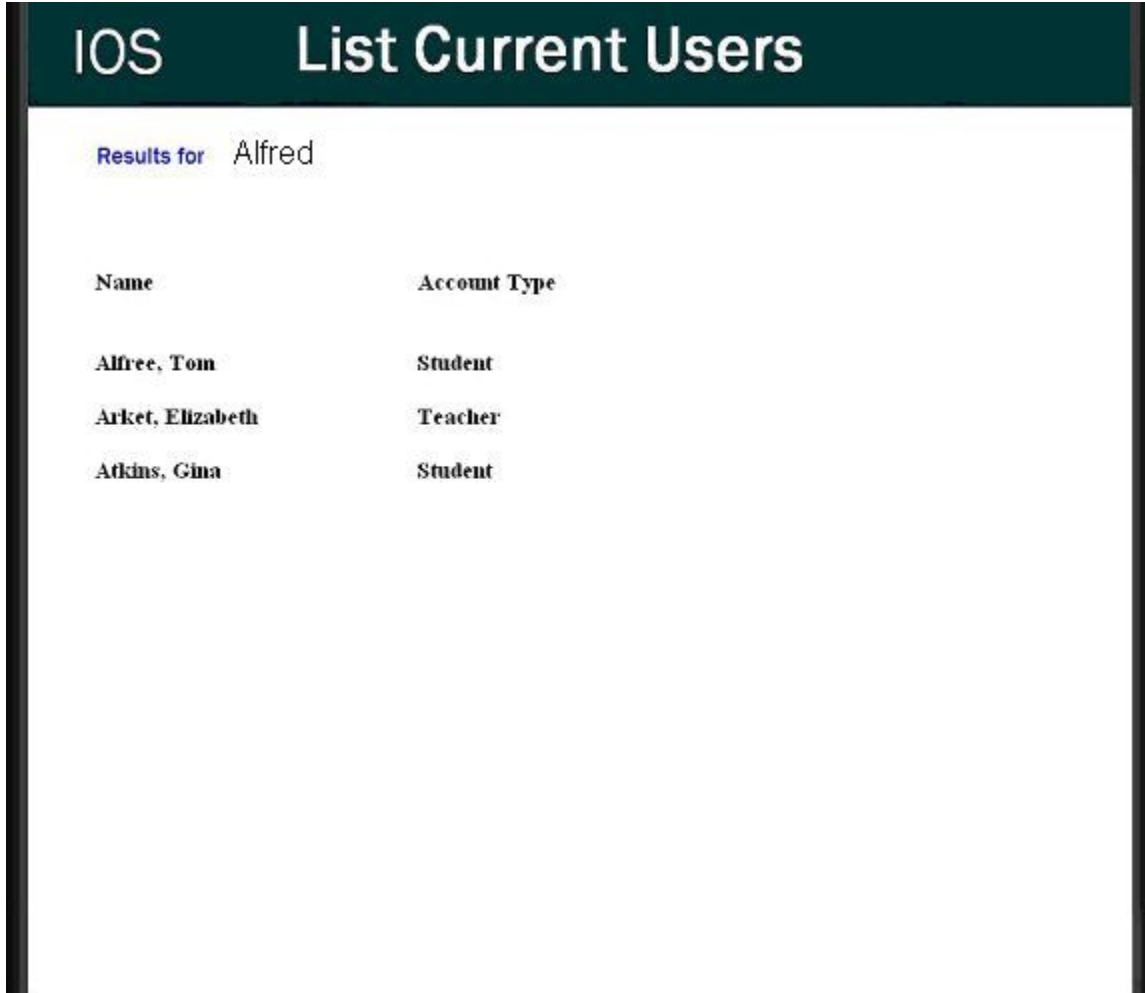
**3. What do you do in Software Engineering?**

**4. What are 4 different definitions of Software Engineering**

ACM   
 IEEE   
 Pressman   
 Eauer

## 2.18: Search Results Page

This page is reached by clicking search or a sort letter on the list current users page. The users are displayed according to the client's search preference.



Name	Account Type
Alfree, Tom	Student
Arket, Elizabeth	Teacher
Atkins, Gina	Student

## 2.19: Lost Password Recovery Page

This page is reached by clicking the "forgot your password?" link on the login page. The user is required to fill in information to have their password emailed to them.

**IOS Password Recovery**

**\*Please enter your secret answer and your email address. Your password will be emailed.**

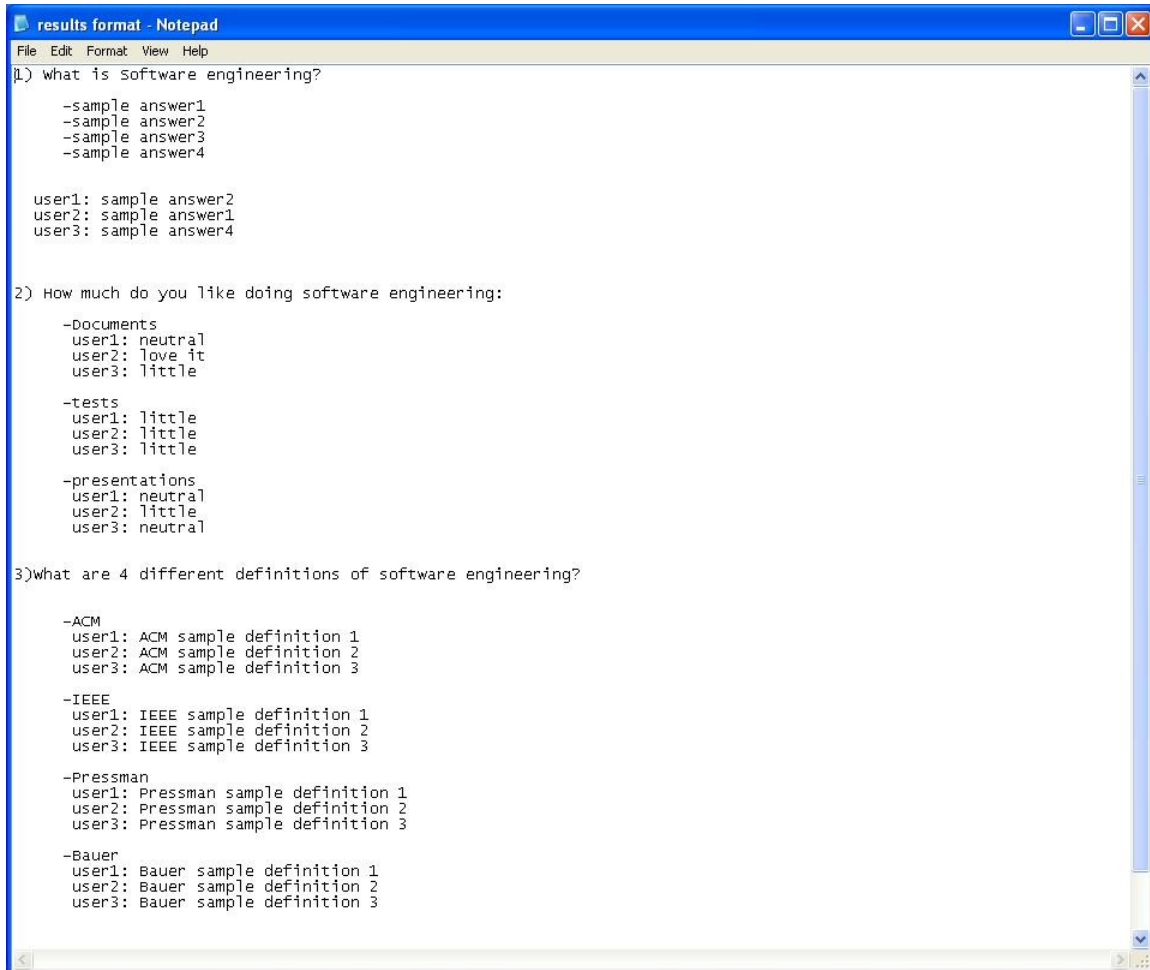
Question:

Secret answer:

e-mail address:

## 2.20 Format of results downloads

This is the format of the file that is downloaded when a teacher clicks on the download txt file button next to the survey name on the Teacher Welcome Page.



```
results format - Notepad
File Edit Format View Help
1) what is Software engineering?
    -sample answer1
    -sample answer2
    -sample answer3
    -sample answer4

user1: sample answer2
user2: sample answer1
user3: sample answer4

2) How much do you like doing software engineering:
    -Documents
      user1: neutral
      user2: love it
      user3: little
    -tests
      user1: little
      user2: little
      user3: little
    -presentations
      user1: neutral
      user2: little
      user3: neutral

3)what are 4 different definitions of software engineering?
    -ACM
      user1: ACM sample definition 1
      user2: ACM sample definition 2
      user3: ACM sample definition 3
    -IEEE
      user1: IEEE sample definition 1
      user2: IEEE sample definition 2
      user3: IEEE sample definition 3
    -Pressman
      user1: Pressman sample definition 1
      user2: Pressman sample definition 2
      user3: Pressman sample definition 3
    -Bauer
      user1: Bauer sample definition 1
      user2: Bauer sample definition 2
      user3: Bauer sample definition 3
```



### Section 3: Logical data stores

The following information presents a preliminary description of the data stored in the International Online Survey database. The data is presented in a layout of the table structure. Primary Keys are underlined.

#### Table: Administrator/Teacher

Fields:

E-mail: VARCHAR(25)  
-User's e-mail address

Password: VARCHAR(12)  
-User's password

Question: VARCHAR(50)  
-User's secret question

Answer: VARCHAR(50)  
-User's answer to the secret question

User\_type: VARCHAR(15)  
-The type of user

#### Table: Student

Fields:

Lname: VARCHAR(20)  
-User's last name

Fname: VARCHAR(20)  
-User's first name

E-mail: VARCHAR(25)  
-User's e-mail address

Password: VARCHAR(12)  
-User's password

Question: VARCHAR(50)  
-User's secret question

Answer: VARCHAR(50)  
-User's answer to the secret question

Gender: VARCHAR(6)  
- User's gender

Bdate: VARCHAR(8)  
-User's birth date

State: VARCHAR(20)  
-State that user lives in

Tzone: VARCHAR(25)  
-Time zone that user lives in

Zcode: VARCHAR(10)  
-User's zip code

Alt\_e-mail: VARCHAR(25)  
-User's alternate e-mail address

User\_type: VARCHAR(15)  
-The type of user

**Table: Survey**

Fields:

ID: NUMBER  
-Survey's identification number

Name: VARCHAR(50)  
-Survey's name

Creators: VARCHAR(50)  
-Survey's creator

Password: VARCHAR(12)  
-Survey's password if protected

Qtype: VARCHAR(20)  
-Survey question type

Answer: VARCHAR(50)  
-Answer to survey question

Stype: VARCHAR(15)  
-Type of survey

Sdate: VARCHAR(8)  
-Survey date

Slocation: VARCHAR(20)  
-Location of survey

User\_type: VARCHAR(15)  
-The type of user

## Section 4: Logical data dictionary

### Administrator Homepage

Data Flow

*Description:* Main page for Administrator.

*Location:* 0,1

**Source:** Database

**Destination:** Administrator

### Administrator Login Information

Data Flow

*Description:* Administrators information to log in.

*Location:* 0

**Source:** Administrator

**Destination:** Maintain Website

### Registration Request

Data Flow

*Description:* Request for accounts from Student or Teacher.

*Location:* 0

**Source:** Teacher/Student

**Destination:** Administrator

### Teacher Registration E-mail

Data Flow

*Description:* E-mail to Teacher confirming account creation.

*Location:* 0

**Source:** Administrator

**Destination:** Teacher

## **Student Registration E-mail**

Data Flow

*Description:* E-mail to Student confirming account creation with or without password.

*Location:* 0

**Source:** Administrator

**Destination:** Student

## **Maintain Website**

Process

*Description:* General Action described for the Administrator general duties.

*Location:* 0

**Source:** Database

**Destination:** Administrator

## **Administrator Login Verification**

Data Flow

*Description:* Administrators login information checked against database entry.

*Location:* 0

**Source:** Maintain Website

**Destination:** Database

## **Survey Diagnostics**

Data Flow

*Description:* Information about Surveys size, dates, names, etc.

*Location:* 0

**Source:** Administrator

**Destination:** Database

## **Administrative Maintenance**

Data Flow

*Description:* Edited information about Teachers, Students, Surveys.

*Location:* 0

**Source:** Database

**Destination:** Maintain Website

## **Account Request**

Data Flow

*Description:* General account information request to edit/create/delete.

*Location:* 0, 1

**Source:** Administrator

**Destination:** Database

## **Account Information**

Data Flow

*Description:* Teacher and Student account information.

*Location:* 0, 1

**Source:** Database

**Destination:** Maintain Website

## **Teacher Homepage**

Data Flow

*Description:* Main page for general access to Teachers account.

*Location:* 0, 1

**Source:** Database

**Destination:** Teacher

## **Teacher Login Information**

Data Flow

*Description:* Teacher information to log in.

*Location:* 0, 1

**Source:** Teacher

**Destination:** Manage Teacher Request

## **Teacher Registration Request**

Data Flow

*Description:* Request sent to the Administrator for an account.

*Location:* 0, 1

**Source:** Teacher

**Destination:** Administrator

## **Teacher Registration E-mail**

Data Flow

*Description:* E-mail sent to Teacher from the Administrator to confirm account creation.

*Location:* 0, 1

**Source:** Administrator

**Destination:** Teacher

## **Teacher Login Verification**

Data Flow

*Description:* Message sent to program confirming correct Teacher Login.

*Location:* 0, 1

**Source:** Database

**Destination:** Manage Teacher Request

## **Survey Data**

Data Flow

*Description:* Information directly used in the creation of a survey.

*Location:* 0, 1

**Source:** Manage Teacher Request

**Destination:** Database

## **Survey Results Request**

Data Flow

*Description:* Teacher/Students request for survey results.

*Location:* 0, 1

**Source:** Manage Teacher Request/Manage Student Request

**Destination:** Database

## **Survey Results**

Data Flow

*Description:* Statistical Data compiled for analysis.

*Location:* 0, 1, 1

**Source:** Database

**Destination:** Manage Teacher Request/Manage Student Request

## **Student Homepage**

Data Flow

*Description:* Main page for general access to Student account.

*Location:* 0

**Source:** Database

**Destination:** Student

## **Manage Teacher Request**

Process

*Description:* General Action described for the Teacher general duties.

*Location:* 0

**Source:** Database

**Destination:** Teacher

## **Manage Student Request**

Process

*Description:* General Action described for the Student general duties.

*Location:* 0

**Source:** Database  
**Destination:** Student

## **Student Login Information**

Data Flow

*Description:* Student information to log in.

*Location:* 0, 1

**Source:** Student  
**Destination:** Manage Student Request

## **Student Registration Request**

Data Flow

*Description:* Request sent to Administrator for account activation.

*Location:* 0, 1

**Source:** Student  
**Destination:** Administrator

## **Student Registration E-mail**

Data Flow

*Description:* E-mail sent to student confirming account creation.

*Location:* 0, 1

**Source:** Administrator  
**Destination:** Student

## **Survey Request**

Data Flow

*Description:* Request for given survey so that it can be taken.



*Location:* 0, 1

**Source:** Manage Student Request  
**Destination:** Database

## **Survey**

Data Flow

*Description:* Actual survey to be taken.

*Location:* 0

**Source:** Database  
**Destination:** Manage Student Request

## **Login Information**

Data Flow

*Description:* Administrators login information.

*Location:* 1

**Source:** Administrator  
**Destination:** Verify Administrator Login

## **Verify Administrator Login**

Process

*Description:* Source that takes in Administrator's login information.

*Location:* 1

**Source:** Database  
**Destination:** Administrator

## **User Verification**

Data Flow

*Description:* Verification of Administrator's login information.

*Location:* 1

**Source:** Verify Administrator Login  
**Destination:** Database

## **Control Panel**

Data Flow

*Description:* Tools used by Administrator to edit surveys/accounts.

*Location:* 1

**Source:** Retrieve Administrator Website

**Destination:** Administrator

## **Retrieve Administrator Website**

Process

*Description:* Creation of Administrators website from database information.

*Location:* 1

**Source:** Database

**Destination:** Administrator

## **Account Page**

Data Flow

*Description:* Specific webpage that shows the accounts for the Administrator to edit.

*Location:* 1

**Source:** Manage User Accounts

**Destination:** Administrator

## **Manage User Accounts**

Process

*Description:* Administrators utility for editing other user accounts.

*Location:* 1

**Source:** Database

**Destination:** Administrator

## **Manage User Account Data**

Data Flow

*Description:* Data that has been manipulated to change entries in the database.

*Location:* 1

**Source:** Manage User Accounts

**Destination:** Database

## **Survey Page Request**

Data Flow

*Description:* Administrator request to survey edit page.

*Location:* 1

**Source:** Administrator

**Destination:** Manage Surveys

## **Manage Surveys**

Process

*Description:* Administrators ability to edit surveys.

*Location:* 1

**Source:** Database

**Destination:** Administrator

## **Manage Survey Data**

Data Flow

*Description:* Actual changes in survey data.

*Location:* 1

**Source:** Manage Surveys

**Destination:** Database

## **All Active Surveys**

Data Flow

*Description:* List of all surveys currently in progress and completed.

*Location: 1*

**Source:** Database  
**Destination:** Manage Surveys

## **Feedback**

Data Flow

*Description:* User feedback to Administrator.

*Location: 1*

**Source:** Database  
**Destination:** Manage Surveys

## **Survey Page**

Data Flow

*Description:* Administrators webpage for editing surveys.

*Location: 1*

**Source:** Manage Surveys  
**Destination:** Administrator

## **Verify Teacher Login**

Process

*Description:* Ability of our program to check login for Teacher.

*Location: 1*

**Source:** Database  
**Destination:** Teacher

## **Register Teacher Account**

Process

*Description:* Our programs ability to set up an account creation for a Teacher.

*Location: 1*

**Source:** Database  
**Destination:** Teacher

## **Create Survey**

Process

*Description:* The program that allows Teachers to create surveys.

*Location:* 1

**Source:** Database  
**Destination:** Teacher

## **Verify Student Login**

Process

*Description:* Ability of our program to check login for Student.

*Location:* 1

**Source:** Database  
**Destination:** Student

## **Register Student Account**

Process

*Description:* Our programs ability to set up an account creation for a Student.

*Location:* 1

**Source:** Database  
**Destination:** Student

## **Fill Out Survey**

Process

*Description:* Ability of Student to take a survey.

*Location:* 1

**Source:** Database  
**Destination:** Student

## **Profile Change Conformation**

Data Flow

*Description:* Message sent to Administrator showing Change in Administrator Account Information.

*Location:* 2

**Source:** Change Administrator Account Information

**Destination:** Administrator

## **Administrator Information**

Data Flow

*Description:* Personal information the Administrator may need for logging in purposes.

*Location:* 2

**Source:** Administrator

**Destination:** Change Administrator Account Information

## **Change Administrator Account Information**

Process

*Description:* A process taken by the Administrator within our program.

*Location:* 2

**Source:** Database

**Destination:** Administrator

## **Add Teacher Request**

Data Flow

*Description:* The data needed to create a Teacher account.

*Location:* 3

**Source:** Administrator

**Destination:** Add Teacher Account

## **Create Teacher Request**

Data Flow

*Description:* Request to the database creating a Teacher account.

*Location:* 3

**Source:** Add Teacher Account

**Destination:** Database

## **Teacher Account Information**

Data Flow

*Description:* Teacher account personal information.

*Location:* 3

**Source:** Database

**Destination:** Add Teacher Account

## **Add Teacher Account**

Process

*Description:* Ability of creating a new Teacher account with information from the database.

*Location:* 3

**Source:** Database

**Destination:** Administrator

## **Delete Teacher Request**

Data Flow

*Description:* Administrators request to delete a Teacher Account.

*Location:* 3

**Source:** Administrator

**Destination:** Delete Teacher Account

## **Delete Teacher Account**

Process

*Description:* Programs ability to delete a Teacher Account.

*Location: 3*

**Source:** Database  
**Destination:** Administrator

### **Add Student Request**

Data Flow

*Description:* Request to create a Student Account.

*Location: 3*

**Source:** Administrator  
**Destination:** Add Student Account

### **Add Student Account**

Process

*Description:* Ability of program to Create a Student Account.

*Location: 3*

**Source:** Database  
**Destination:** Administrator

### **Create Student Request**

Data Flow

*Description:* Data sent to Database to create a Student Account.

*Location: 3*

**Source:** Add Student Account  
**Destination:** Database

### **Delete Student Account**

Process

*Description:* Programs ability to send data to Database to delete a Student Account.

*Location: 3*

**Source:** Database



**Destination:** Administrator

## **Delete Student Request**

Data Flow

*Description:* Data sent to Database to delete a Student Account.

*Location:* 3

**Source:** Delete Student Account

**Destination:** Database

## **Student Account Information**

Data Flow

*Description:* Specific information about the Student Account

*Location:* 3

**Source:** Database

**Destination:** Delete Student Account

## **Student Account Information**

Data Flow

*Description:*

*Location:*

**Source:**

**Destination:**

## **Survey Password**

Data Flow

*Description:* Anonymous survey takers password for specific survey to take.

*Location:* 0

**Source:** Anonymous

**Destination:** Manage Student/Anonymous Request

## **Anonymous Survey**

Data Flow

*Description:* Survey that an Anonymous Survey taker, takes.

*Location:* 0

**Source:** Manage Student/Anonymous Request

**Destination:** Anonymous

## **Download Results**

Process

*Description:* The action our program takes when a request for the survey data is made.

*Location:*

**Source:**

**Destination:**

## **Add Survey**

Process

*Description:* Process of adding a survey to the database.

*Location:* 2

**Source:** Database

**Destination:** Teacher

## **Add Survey Request**

Data Flow

*Description:* Request to the Database to add a survey

*Location:* 2

**Source:** Add Survey

**Destination:** Database

## **Add Survey Conformation**

Data Flow

*Description:* Data sent to Teacher when a survey is successfully added.

*Location:* 2

**Source:** Database

**Destination:** Teacher, Add Survey

## **Delete Survey**

Process

*Description:* Programs ability to delete a survey from the database.

*Location:* 2

**Source:** Database

**Destination:** Teacher

## **Delete Survey Request**

Data Flow

*Description:* Teachers request to delete a survey from the Database.

*Location:* 2

**Source:** Teacher

**Destination:** Delete Survey

## **Delete Survey Conformation**

Data Flow

*Description:* Conformation sent to the Teacher that a survey delete was a success.

*Location:* 2

**Source:** Database

**Destination:** Delete Survey, Teacher

## **Edit Survey**

Process

*Description:* Process in which the Teacher edits a survey.

*Location:* 2

**Source:** Database

**Destination:** Teacher

## **Edit Survey Conformation**

Data Flow

*Description:* Database conformation sent to the Teacher to confirm an edit succeeded.

*Location:* 2

**Source:** Database, Edit Survey

**Destination:** Teacher, Edit Survey

## **Results Gathering**

Process

*Description:* Programs ability to gather the information from the taken surveys so a teacher can see the results.

*Location:* 2

**Source:** Database

**Destination:** Teacher

## **Download Results**

Process

*Description:* The ability of the program to download survey results in many forms that the Teacher/Student may need for data collection.

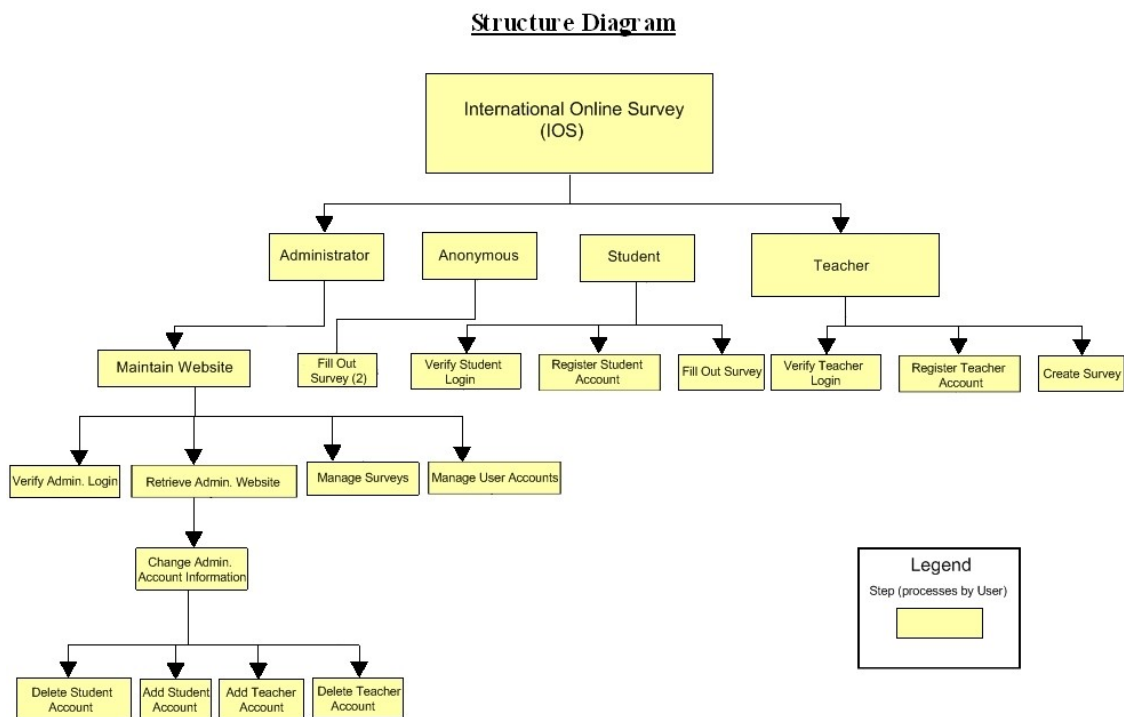
*Location:* 3

Source: Database  
Destination: Teacher, Student

## Architectural Design Specification

### Section 5: Structure diagram

Structure Diagram - The Structure Diagram is used to provide a road map of how the application is built by using the data flow diagram as a template.



### Section 6: Data Flow Diagrams

See attached Data Flow Diagram Document.

## Testing Requirements

### Section 7: Functional Requirements Inventory

The following list outlines the required functionality to be included in the final solution. The requirements are listed according to user case and then by screens the user will view.

**General:**

- The International Online Survey is web-based.

**Administrator:**

- The Administrator user will have an account.
- The Administrator user will have a username and password.
- The Administrator will establish usernames and passwords for other users.

**Login Screen:**

- The Administrator will log in with correct username and password.
- An incorrect login will provide an appropriate error message.

**Welcome Screen:**

- The Administrator will have access to a control panel on the welcome screen.
- The Administrator will be able to view all surveys.
- The Administrator will be able to see site statistics, such as the number of members and surveys.
- The Administrator user will be able to search the database for illegal surveys.
- The Administrator will be able to choose an illegal survey and delete it.
- The Administrator will be able to remove or warn the user who created the illegal survey.
- The Administrator will submit the changes.
- A message will appear indicating that a change has been accepted.
- The Administrator will have a message box, displaying all messages from users.
- The Administrator will have a link to create new accounts upon request.
- The Administrator will have a link to manage their account.
- The Administrator will have a link to list all of the current users.
- The Administrator will have access to a search bar, which searches the entire site.
- The Administrator will be able to logout from the welcome screen by clicking the "Logout" link.

**Manage Account Screen:**

- The Administrator will be able to change their account name and password.
- In order for the changes to take place, the secret question must be answered correctly.
- The Administrator will be able to exit the manage account screen.

### **Change User Password Screen:**

- The Administrator user will be able to choose a user for which the password is to be changed.
- The Administrator will enter a new password for the chosen user.
- The Administrator will submit changes.
- A message will appear indicating that a change has been accepted.
- The Administrator user will be able to exit the change user password screen.

### **Create An Account Screen:**

- The Administrator will be able to email the account name and password to the user requesting an account.
- The Administrator will be able to check if the account name already exists.
- The Administrator will be able to check if the email address already has an account registered.
- The Administrator will choose to give out a student account or teacher account based on the registration information.
- The Administrator user will be able to exit the create an account screen.

### **List Current Users Screen:**

- The Administrator will be able to sort users alphabetically by selecting a letter.
- The Administrator will be able to search the users by account type.
- The Administrator will be able to search the users by typing in an account name in the search bar.
- The Administrator will be sent to the list current users results page after the search.
- The Administrator user will be able to exit the list current users screen.

### **List Current Users Results Screen:**

- The Administrator will view search results alphabetically.
- The Administrator will be able see account names and account types of the search results.
- The Administrator will be able to click on the accounts to view information about them.
- The Administrator user will be able to exit the list current users results screen.

### **Teacher:**

- The Teacher user will have an account established by the Administrator.
- The Teacher user will have a username and password.

### **Login Screen:**

- The user will log in with correct username and password.
- An incorrect login will provide an appropriate error message.

### **Welcome Screen:**

- The Teacher will have a link to manage their account.
- The Teacher will have a link to create a survey.
- The Teacher will be able to view all surveys they have created.
- The Teacher will be able to select a specific survey and view those results.
- The Teacher will have access to a search bar, which searches the entire site.
- The Teacher will be able to logout from the welcome screen by clicking the "Logout" link.

### **Manage Account Screen:**

- The Teacher will be able to change their account name and password.
- In order for the changes to take place, the secret question must be answered correctly.
- The Teacher will be able to exit the manage account screen.

### **User Screen:**

- The Teacher will be able to see their personal profile (name).
- The Teacher will be able to view all the active surveys they created.
- The Teacher will be able to view every survey they published.
- The Teacher will be able to view all surveys they created that they have not published.
- The Teacher will be able to click on any of these surveys and view the survey and results.
- The Teacher will be able to exit the user screen.

### **Create a Survey Screen:**

- The Teacher will be able add a title to the survey and information about it.
- The Teacher will be able to add a new question or edit an existing question.
- The Teacher will be able to choose from a number of question formats (multiple choice, T/F, short answer, etc.).
- The Teacher will be asked if the survey will be password protected and if it will be,
- The Teacher will create a password.
- The Teacher will confirm this password.
- The Teacher will be able to save the survey.
- The Teacher will receive a confirmation when the survey is saved.



- The Teacher will be able to print out the survey.
- The Teacher will be able to edit that survey.
- The Teacher will be able to exit the create a survey screen.

### **View Results Screen:**

- The Teacher will be able to view all surveys they have created.
- The Teacher will be able to select a specific survey and view those results.
- The Teacher will be able to send the results to other Teachers, an email will be sent to the other Teacher contain a link to the survey results.
- The Teacher will be able to print out the survey results.
- The Teacher will be able to allow Students to view the results or deny the Students.
- The Teacher will be able to exit the view results screen.

### **Student:**

- The Student user will have an account established by the Administrator.
- The Student user will have a username and password.

### **Login Screen:**

- The user will log in with correct username and password.
- An incorrect login will provide an appropriate error message.

### **Welcome Screen:**

- The Student will have a link to manage their account.
- The Student will have a link to take a survey.
- The Student will be able to view survey invitations.
- The Student will be asked for a password to all locked surveys.
- The Student will be given a confirmation if the password was correct or an error if it was incorrect.
- The Student will be able to see a description of the survey.
- The Student will be able to click on a survey and will be directed to the complete survey screen.
- The Student will be able to see the date they were invited to take the survey.
- The Student will be able to see who invited them to take the survey.
- The Student will be able to view completed and incomplete surveys.
- The Student will be able to view survey results if granted permission.
- The Student will have access to a search bar, which searches the entire site.
- The Student will be able to logout from the welcome screen by clicking the "Logout" link.

### **Manage Account Screen:**

- The Student will be able to edit or add any of their personal information.
- The Student will be able to change their account name and password.
- In order for the changes to take place, the secret question must be answered correctly.
- The Student will be able to exit the manage account screen.

### **User Screen:**

- The Student will be able to see their personal profile (name, age, gender, etc.).
- The Student will be able to view all the surveys they have taken.
- The Student will be able to view all surveys they have not taken that have been assigned.
- The Student will be able to click on any of these surveys and view the survey and results, if they are public.
- The Student will be able to exit the user screen.

### **Take a Survey Screen:**

- The Student will be able to view all general surveys open to the public.
- The Student will be able to view up to date results of the general surveys.
- The Student will be able to complete any of the general surveys.
- The Student will be able to see the most popular general surveys.
- The Student will be able to view a protected survey they successfully unlocked.
- The Student will be able to complete the survey.
- The Student will be able to save their answers and submit them.
- The Student will be notified if any questions were left blank.
- The Student will be notified that their survey was submitted successfully.
- The Student will be able to exit the take a survey screen.

### **Teacher/Student:**

#### **Search Results Screen:**

- The user will view search results alphabetically.
- The user will be able see account names and account types or survey names.
- The user will be able to click on the accounts or surveys to view information about them.

#### **Password Recovery Screen:**

- The user must answer their secret question and submit their email address.

- The user will be sent an email containing their account password.
- The user will be shown a message if the secret question was answered wrong or if the email address entered was not found.

### **7.1: Non-Functional Requirements Inventory**

- The system should be quick and smooth, using fast servers and databases.
- The system should also be aesthetically pleasing.

## **Section 8: Acceptance Test**

See attached Test Plan Document.

## **Section 9: Unit Tests**

See attached Test Plan Document.

## **Section 10: Appendix**

### **10.1 Glossary of Terms**

CSS – Cascading Style Sheets – These are used to describe a specific style for a web page or set of pages, a website.

Database - A collection of data arranged for ease and speed of search and retrieval.

Data Flow Diagram – A representation of the functional decomposition of a system.

Gantt Chart - A chart that depicts progress of jobs in relation to time. It is often used in planning and tracking a project.

Hypertext Markup Language (HTML) – Predominant markup language used for the creation of web pages.

Internet - A vast computer network linking smaller computer networks worldwide. The Internet includes commercial, educational, governmental, and other networks, all of which use the same set of communications protocols.

Internet Explorer(IE) – Microsoft based program used for browsing the Internet.

Linear Sequential Model / Classic Waterfall Model – A systematic, sequential approach to software development that begins at the system level and progresses through analysis, design, coding, testing, and support.

MySQL – A Multithreaded, multi-user Relational Database Management System.

OS X - The latest operating system for Macintosh computers, based on the Linux kernel but with a more user-friendly graphic interface. It includes networking capabilities.

PHP – PHP Hypertext Preprocessor – An open source (free) programming language that is used for dynamic pages and is a high-level scripting language.

Profiles – User created accounts that will be customizable according to each specific person.

XHTML – Extensible HyperText Markup Language – has same capabilities of HTML but is more restricted to allow for conformity among multiple platforms.

## 10.2 Timeline (Gantt chart)

