



Maker Tech

C.S.-A.C.T.I.O.N.S.

Preliminary Design

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1. Product Overview and Summary

The clients, Dr. Breimer and Professor Matthews, need an easy to use application that keeps track of Computer Science alumni. C.S-A.C.T.I.O.N.S will be a web application with a collection of alumni profiles that will be accessible by other alumni, current Siena Computer Science majors, and high school students. The goal of C.S-A.C.T.I.O.N.S is to also allow current Siena Computer Science or prospective students a chance to see what career paths Siena Computer Science graduates have taken and allow them to reach out to a specific alumnus. C.S-A.C.T.I.O.N.S will also keep Siena College Computer Science alumni connected to each other.

2. Use Case Narratives

2.1 User (Student)

The user will navigate to the webpage. Once the user is on the webpage, the user is able to interact with the map. The user can click on pins and view the information available to the public on any of the Alumni profiles. If the user is interested in contacting an alumnus, they have the option to send the alumnus a request for contact using the user's own email address. The user will have to enter in contact information and a note indicating why the user wishes to contact the alumnus. The email entered in the contact information will indicate whether the user is a current Siena student or not.

2.2 Alumni

The Alumnus will navigate to the webpage. The alumnus will go to the login screen where the options to register, log on or change password will be offered. To register the alumnus will provide information and answer a survey to fill in the information on the profile. This information will not be shown to the public until the administrator approves the alum. To log on the alumnus will enter a unique username and password that was provided to the alumnus by email to log into C.S.-A.C.T.I.O.N.S. Once logged in, the alumnus has the ability to edit the alumni profile and the ability to change the password. The alumnus is able to disable certain content from being shown on the webpage such as contact information. As well, the alumnus may hide their profile all together from the map. The alumnus has the option to receive a new auto generated password if the alumnus forgets their password. The alumnus also has the ability to view the map and click on pins to view any other Alumni profiles. Alumni are able to send other alums a request for contact by sending the other alum contact information and a note indicating the reason for contact.

2.3 Administrator

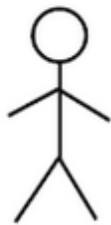
The administrator is in charge of all alumni profiles. The administrator is able to log into C.S.-A.C.T.I.O.N.S with the username and password. Once the administrator has logged in, the administrator has the ability view all of the content generated from the alumni survey. The administrator has the ability to approve or deny pending alumni profiles. The administrator is also able to delete, create, or edit the content on any of the alumni profiles. The administrator can also delete inappropriate content. If the administrator wishes to contact the alumni, they have the option to send a message to all alumni with an account on the system. The administrator can also interact with the map in the same way as the alumni and users.

3. UML Use Case Diagram

3.1 UML Use Case Legend



An activity or action - Actors outside the system will interact with activities.



Actors - External entity that interacts with the activities.



Participation Line – Lines that connect actors with uses showing their participation.

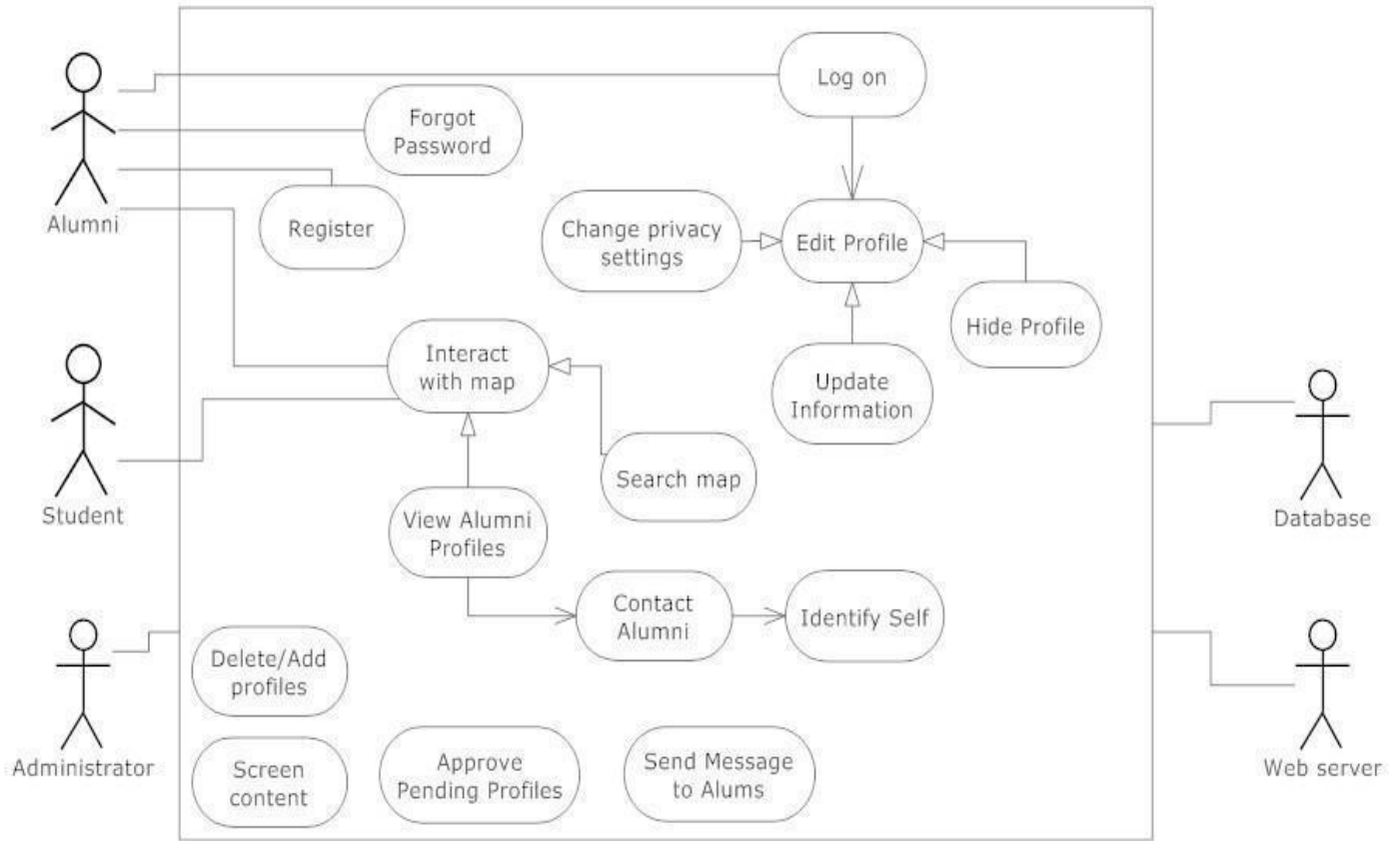


Extends Arrow – Shows sub uses that may not necessarily be accessed when their parent use is accessed.



Includes Arrow – Shows items that are included in a use.

3.2 UML Use Case Diagram



4. Deployment Diagram

4.1 Deployment Diagram Legend

<HTTP>

HTTP: Hypertext Transfer Protocol defines the formatting and transmission of messages, and the actions servers and browsers should execute in response to commands.

<SCP>

SCP: Secure Copy Protocol is a way for hosts to securely transfer files.

<ODBC>

ODBC: Open Database Connectivity is the standard for accessing a database.

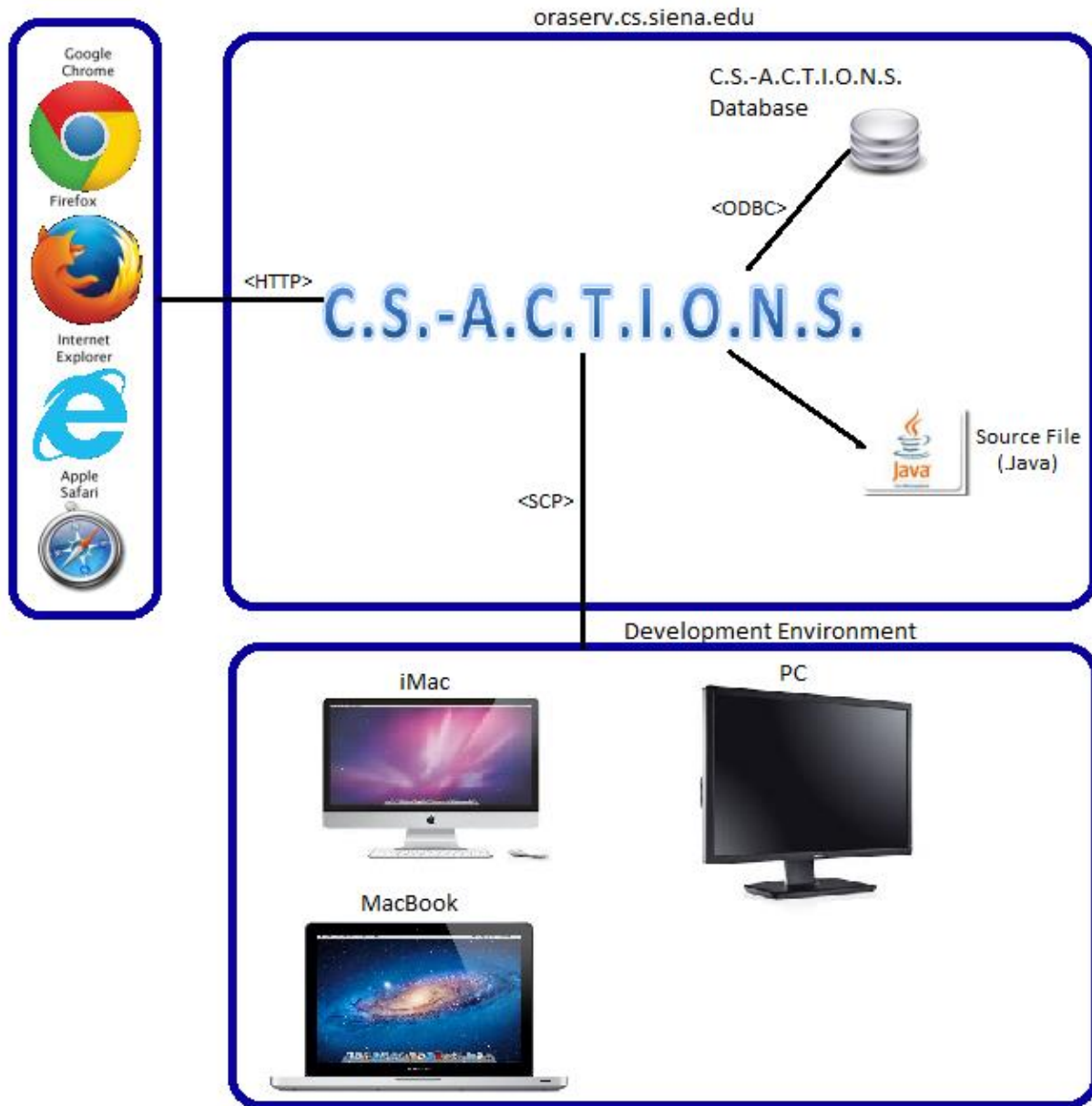


System Boundary: Items within this boundary are considered to be of the same system.



Connection: Displays relationships between boundaries.

4.2 Deployment Diagram



5. Activity Diagrams

5.1 Activity Diagram Legend



Initial Node - The first node, where the process begins.



Final Node - The final node in the process.
Process is over when activity reaches this node.



Activity Node - Describes the activity or step that takes place at this position in the activity.



Data Object - Data used as input or output for the process



Decision Node - Used to branch in the activity. Usually branch in answer to a question. Flow must follow one of the arrows branching from this node.

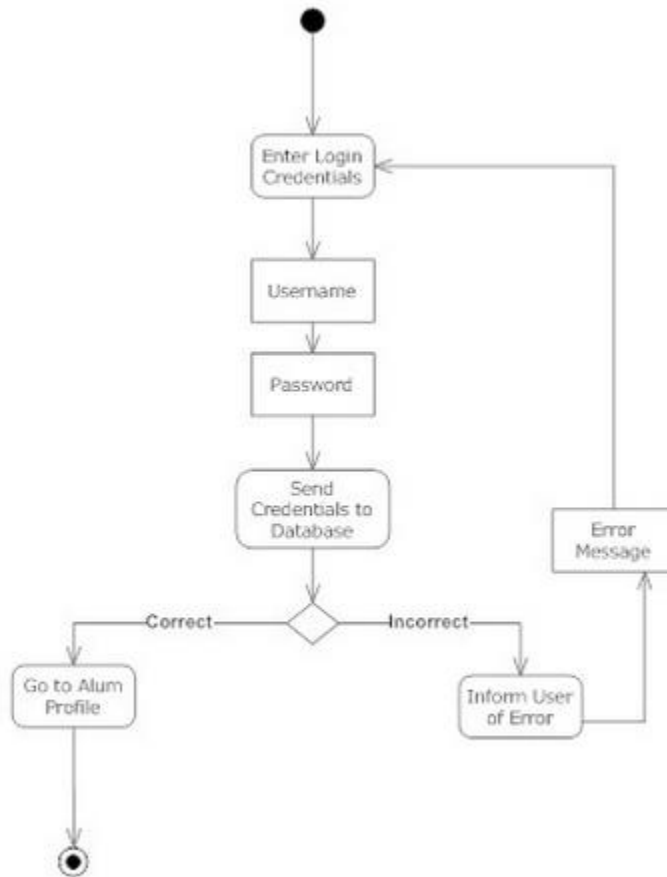


Split/Join - Either splits or joins two activities that are run simultaneously.

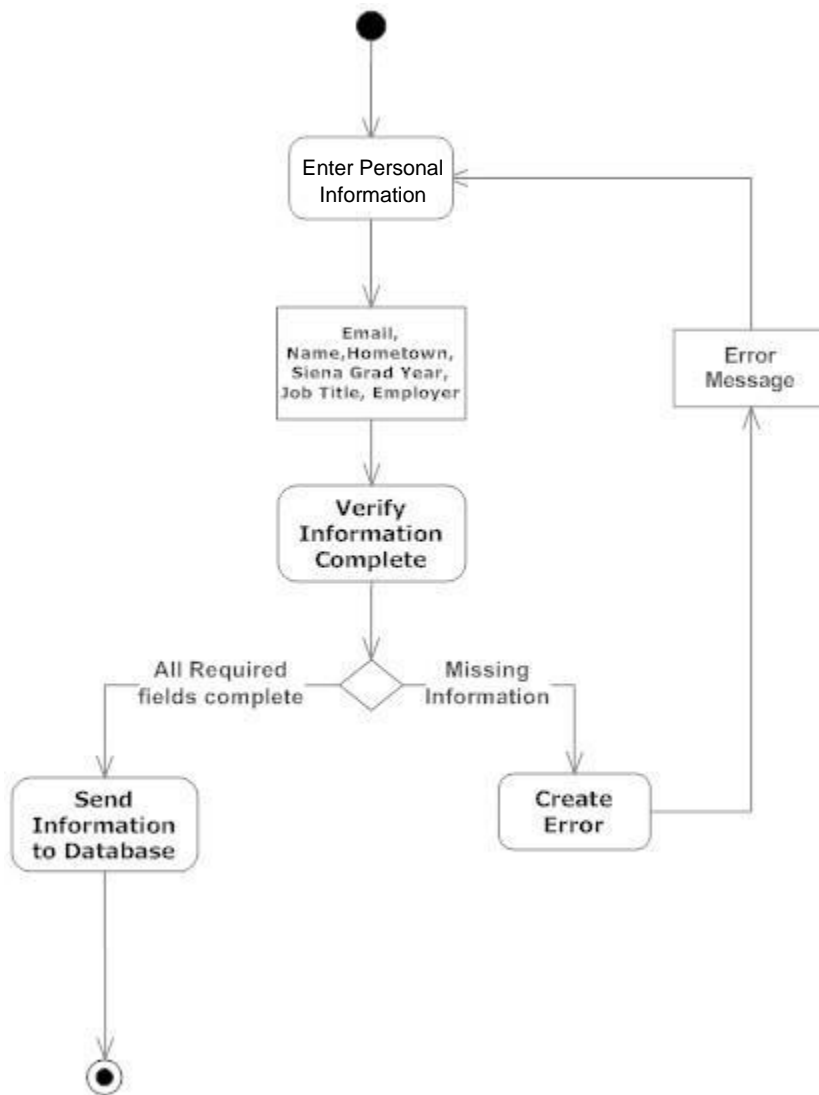


Flow - Shows movement of data from one node to another.

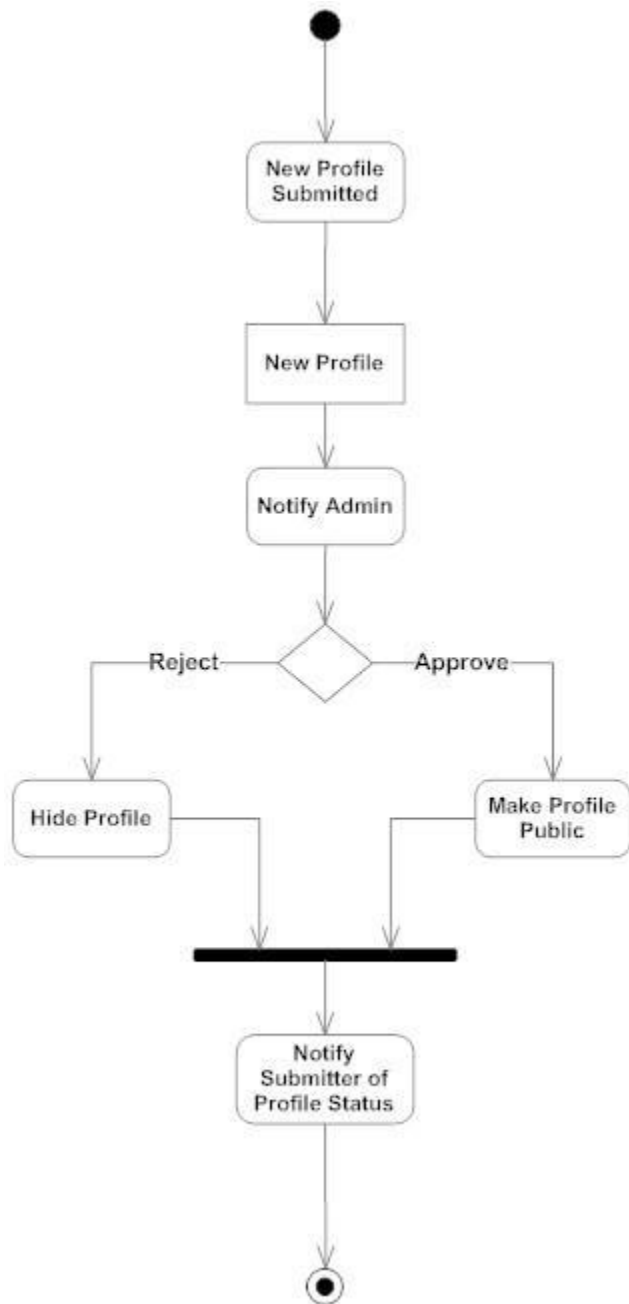
5.2 Activity Diagram: Login



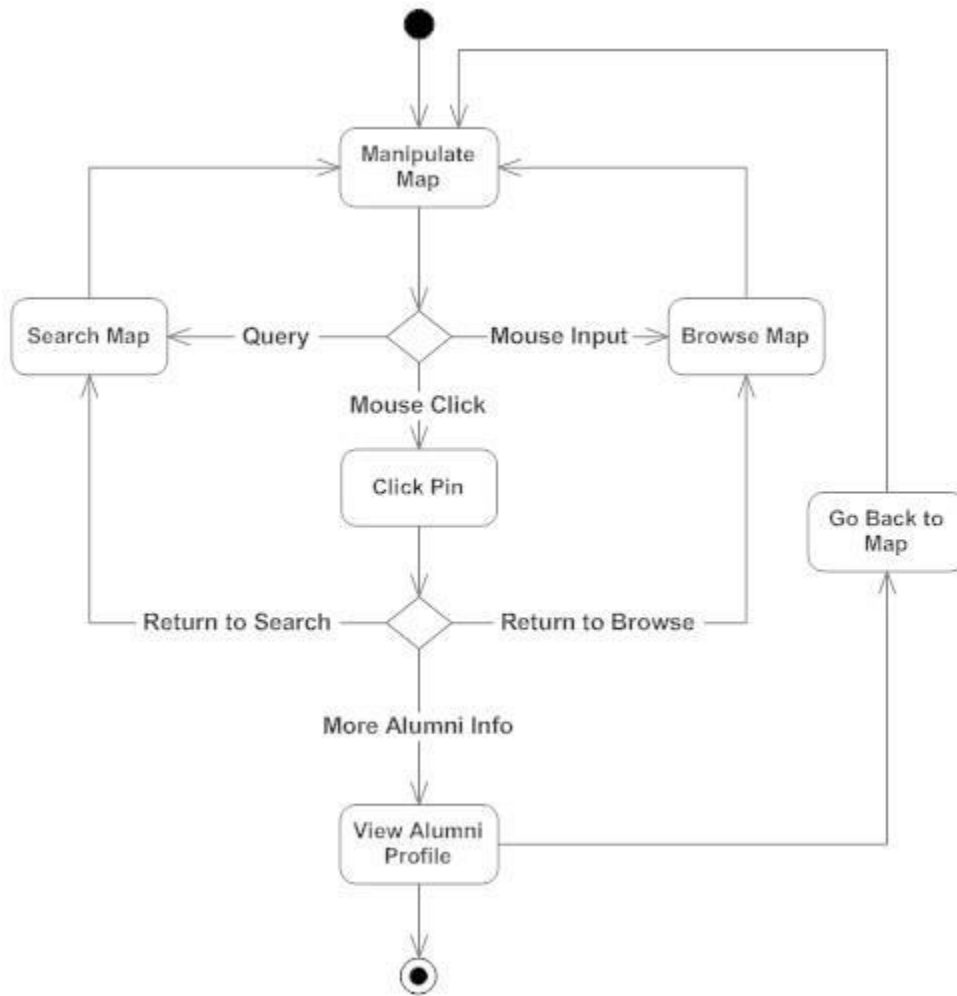
5.3 Activity Diagram: Register



5.4 Activity Diagram: Approve Pending Profiles



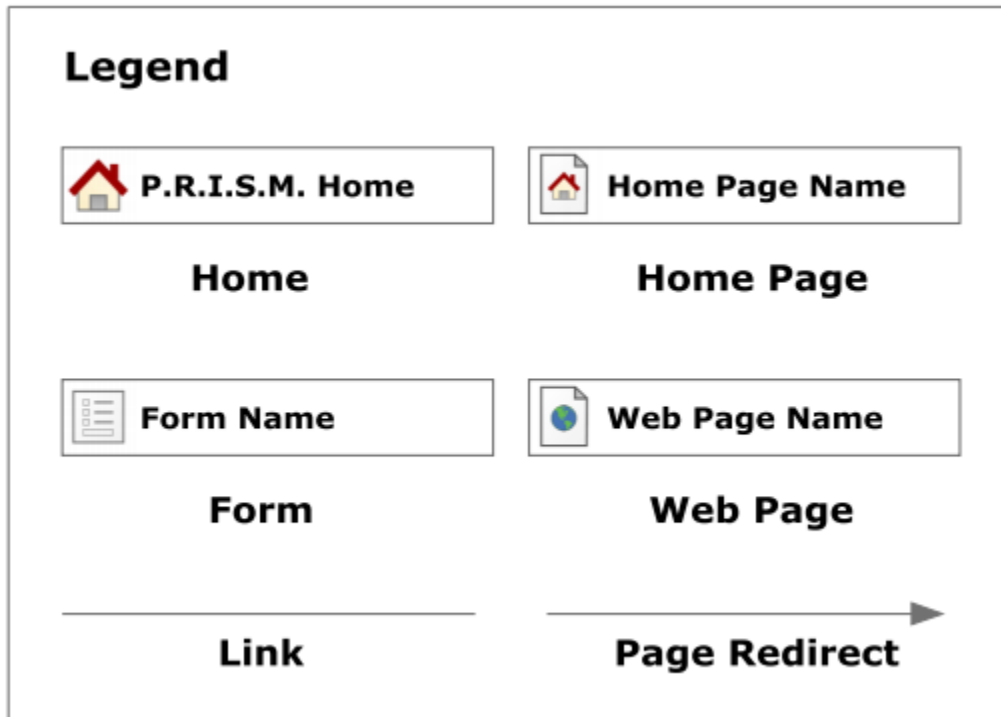
5.5 Activity Diagram: Interact With Map



6. Website Map

The web site map shows the structure of our C.S. ACTIONS application. The map indicates how the various web pages interact with each other and how to navigate through every part of our application. Below are the various symbols that help visual represent the planned structure of our application.

6.1 Website Map Legend



Home - This represents the main page of C.S. ACTIONS to a user..

Home Page - Represents the user's main page when they initially login to their account.

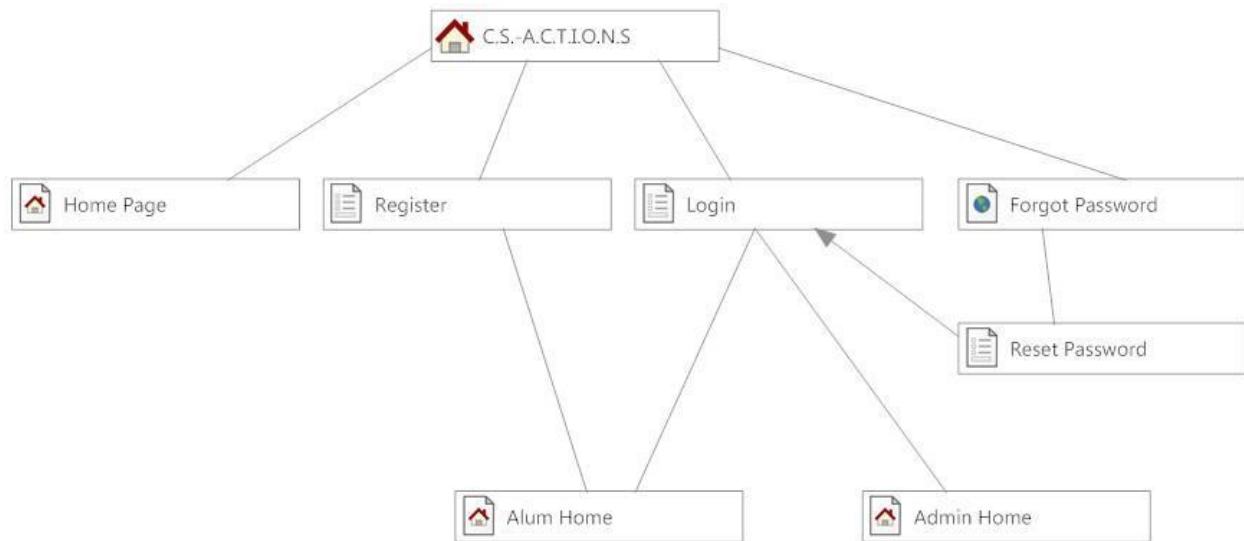
Form - Represents data fields which require user input.

Web Page - Represents a web page within our system.

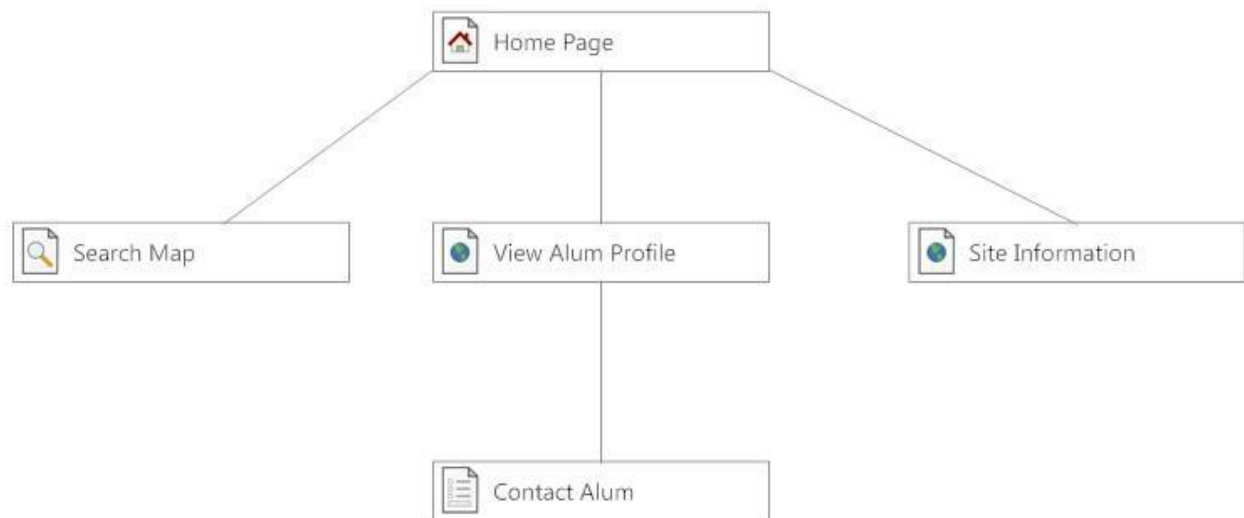
Link - Represents a page being accessible from another page.

Page Redirect - Indicates a forced reroute to a new page depending on the user's action.

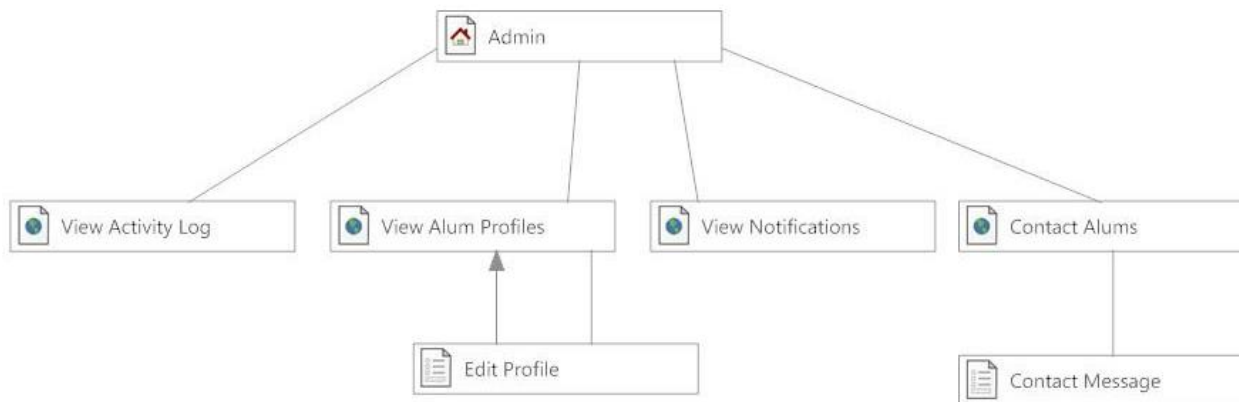
6.2 Website Map: Main Page



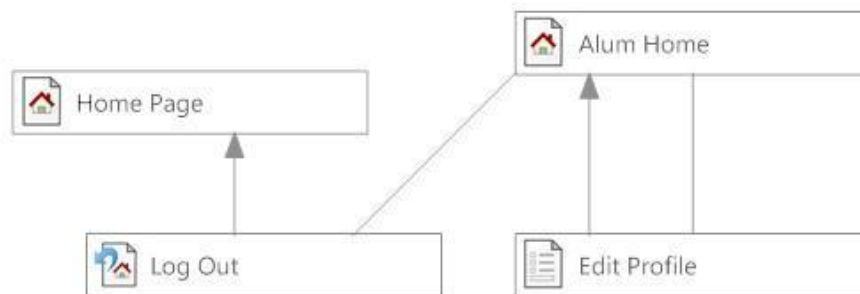
6.3 Website Map: Home Page



6.4 Website Map: Admin Home



6.5 Website Map: Alum Home



7. Data Flow Diagrams

7.1 Data Flow Legend

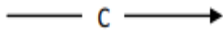
Data Flow Diagrams (DFD) show the movement of data as it flows through the system as well as data flows from outside entities. It is a means to document where data will be retrieved and stored through different processes. Each level of DFD's represent different levels of detail within the system.



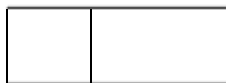
External Entity: Outside source that contributes and/or receives information.



Process: Manipulates data



Data Flow: Shows flow of data between processes and/or entities. C is the data being transferred.

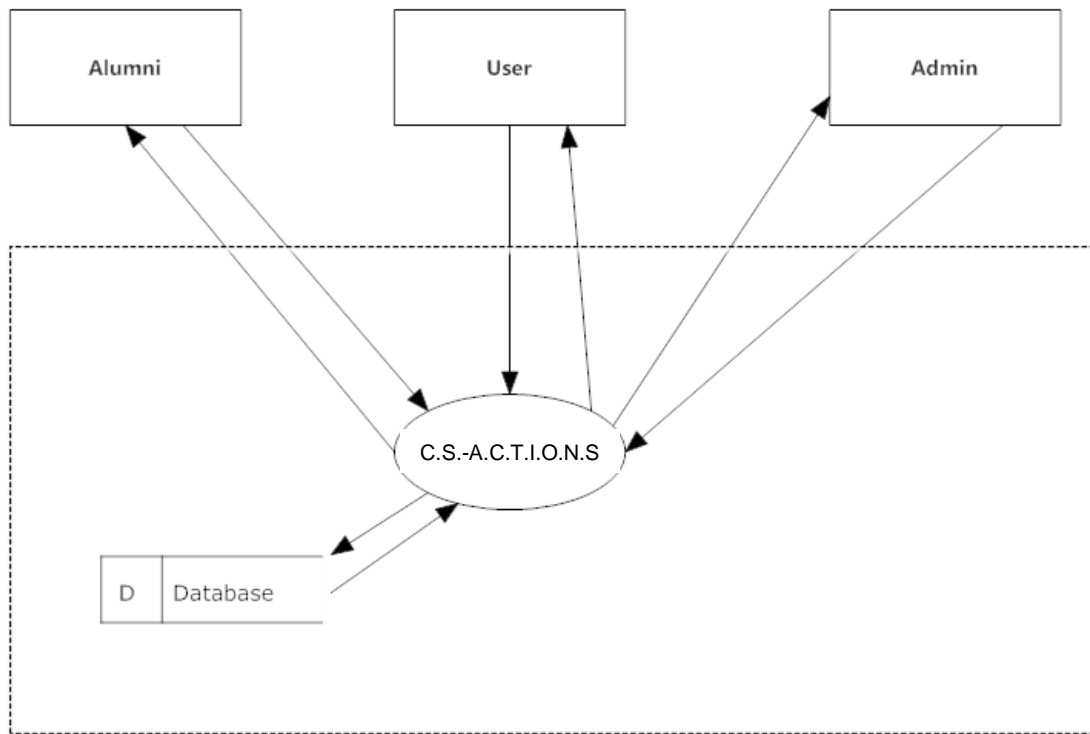


Data Store: Where data are held temporarily or permanently.

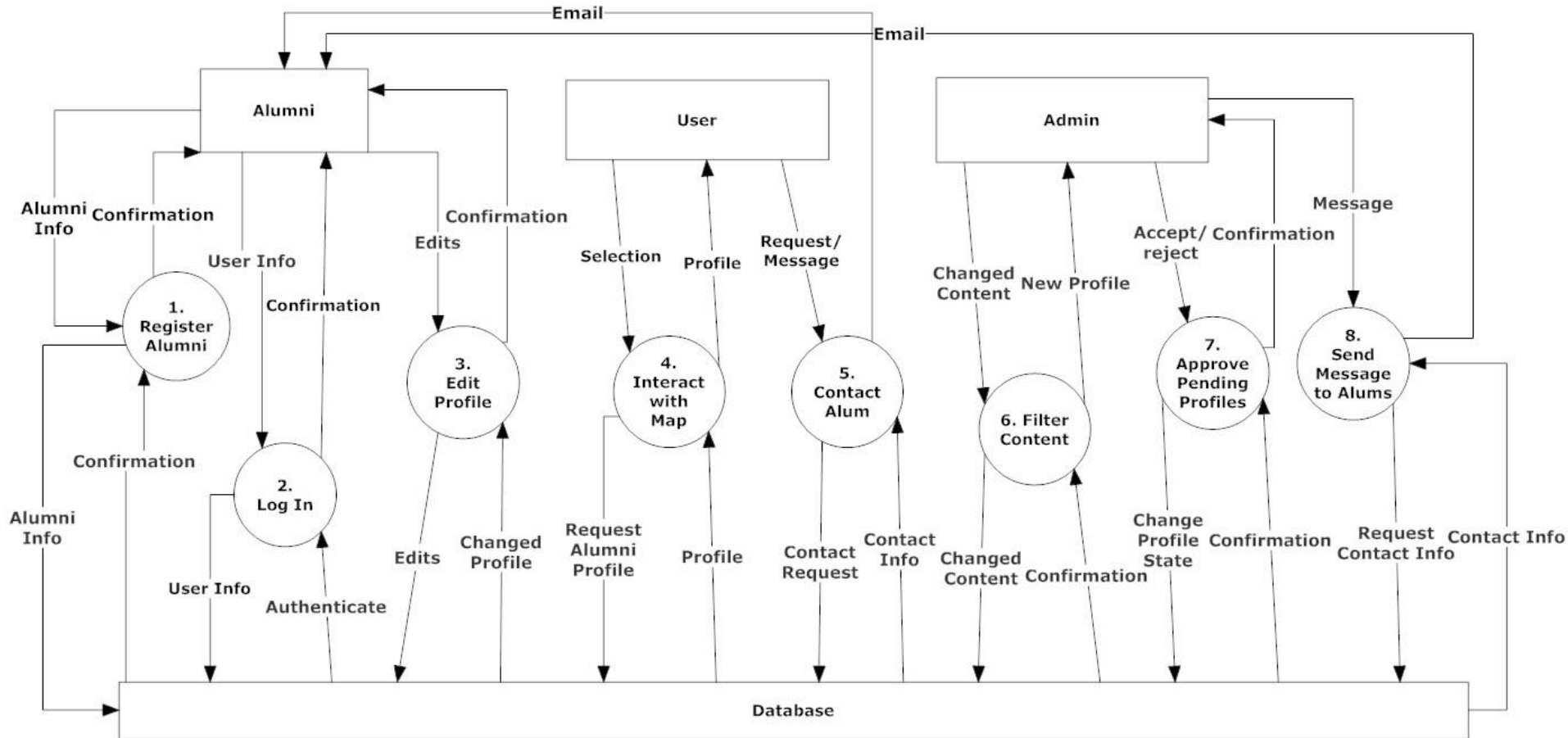


System Boundary: Anything within these bounds is considered part of the system. Anything outside is considered external to the system.

7.2 Context Diagram



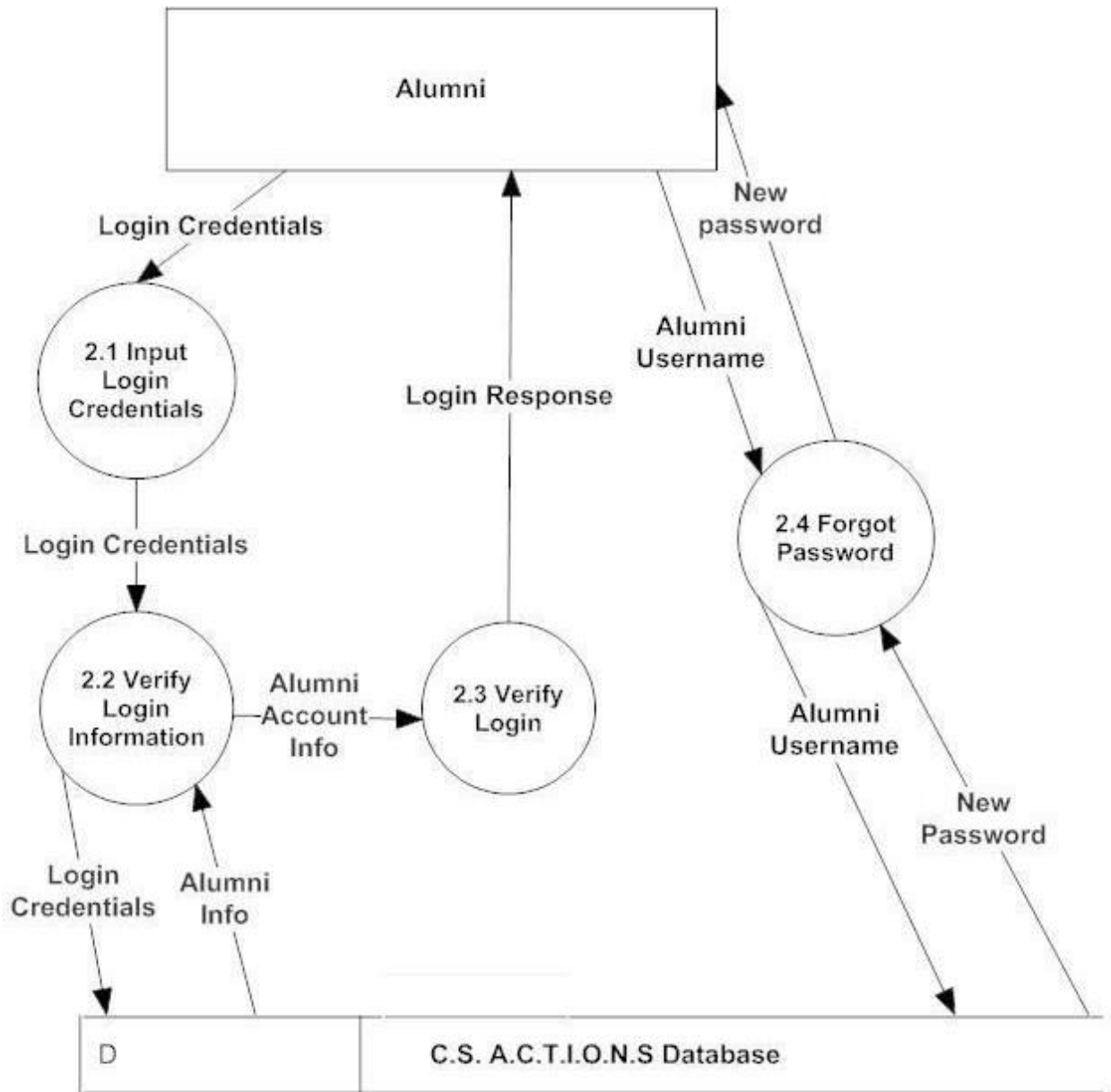
7.3 Level 0 Diagram¹



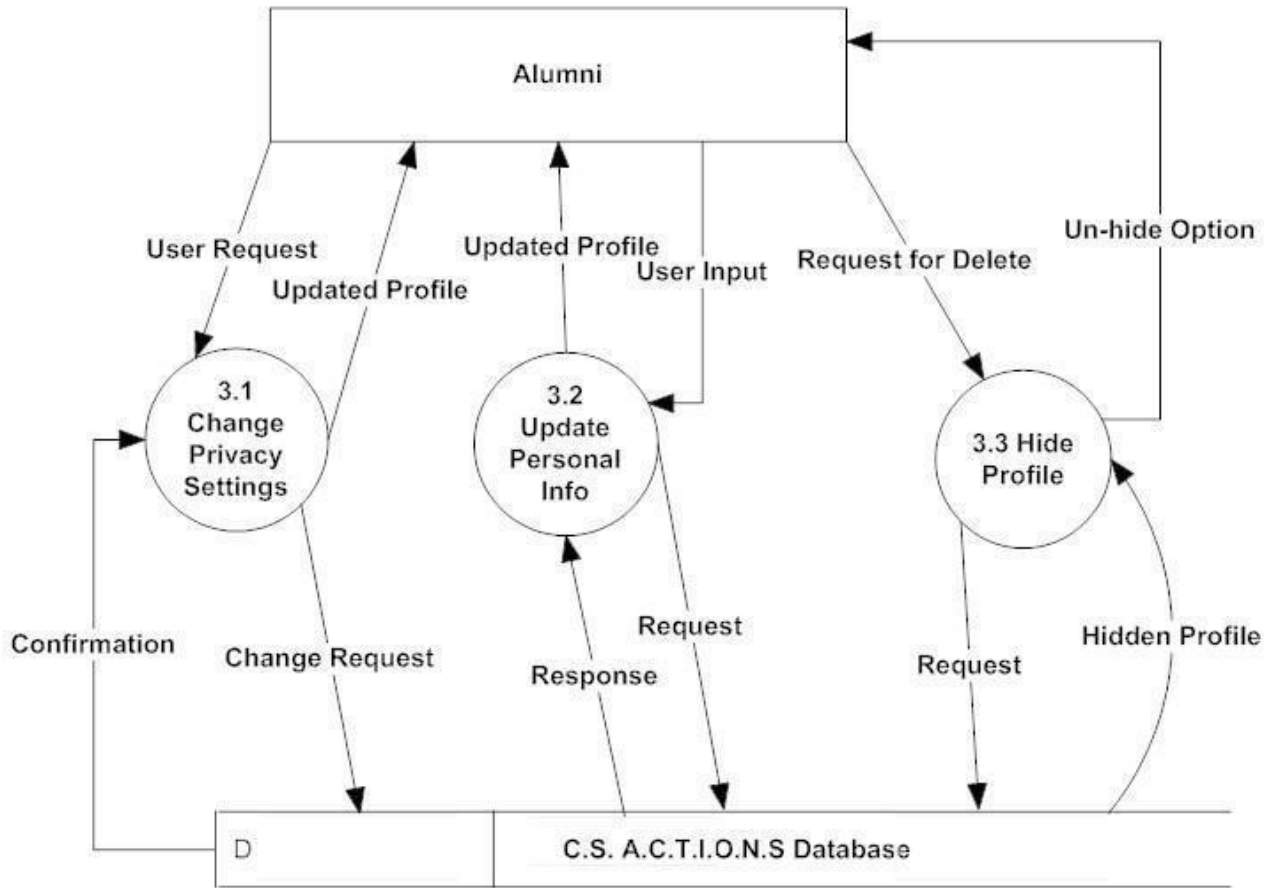
¹ An Admin has all the capabilities of an Alumni and the Alumni has all those of a User.

7.4 Level 1 Diagrams

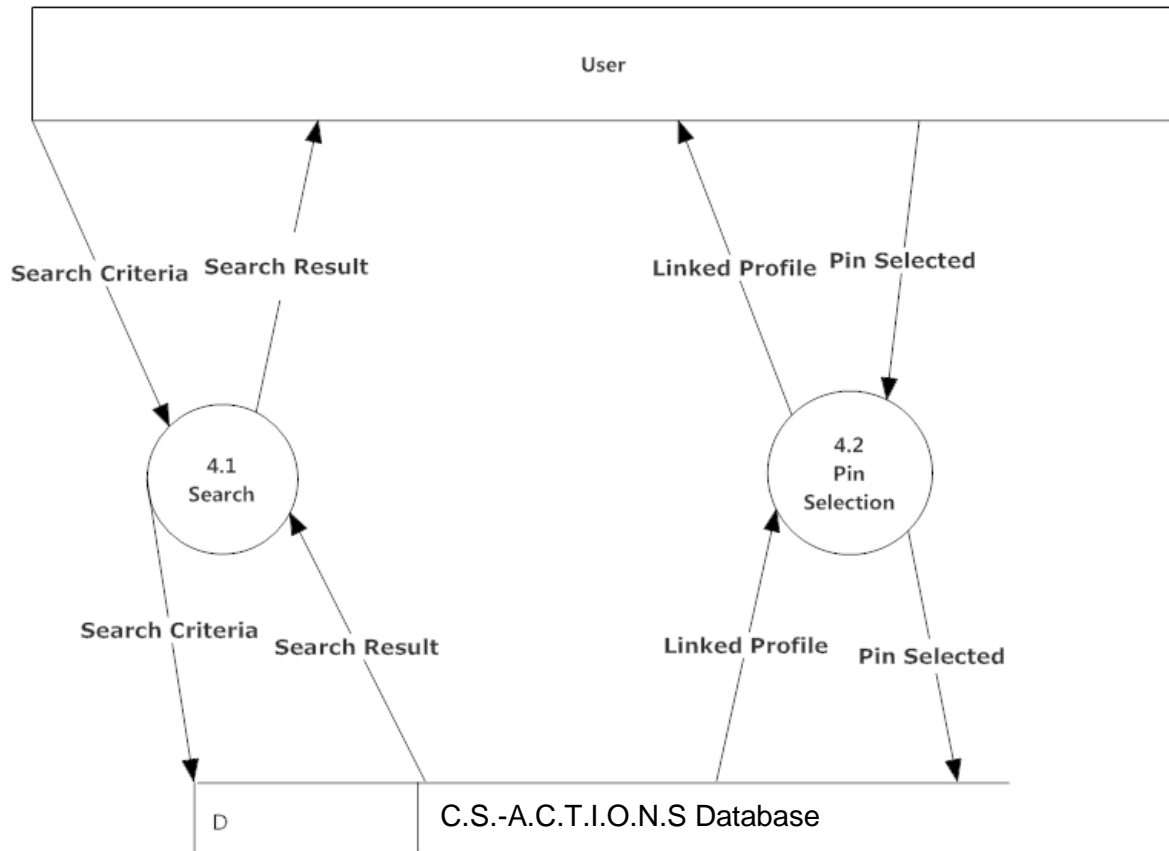
7.4.1 Log on



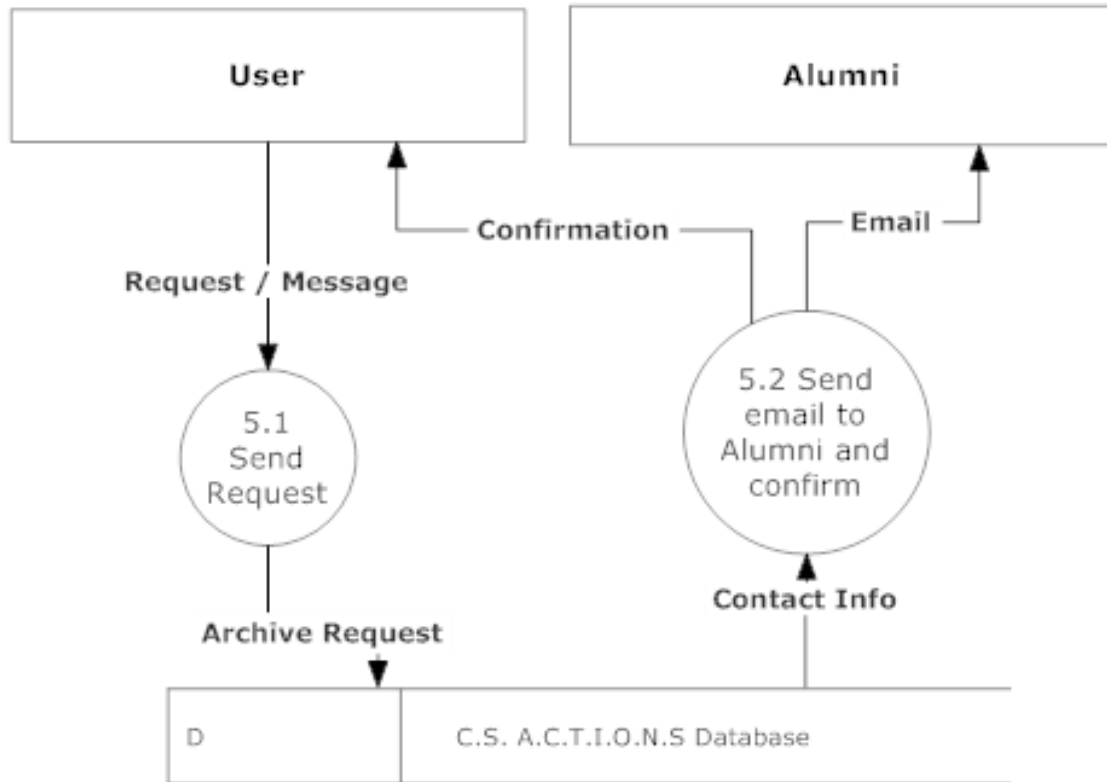
7.4.2 Edit Profile



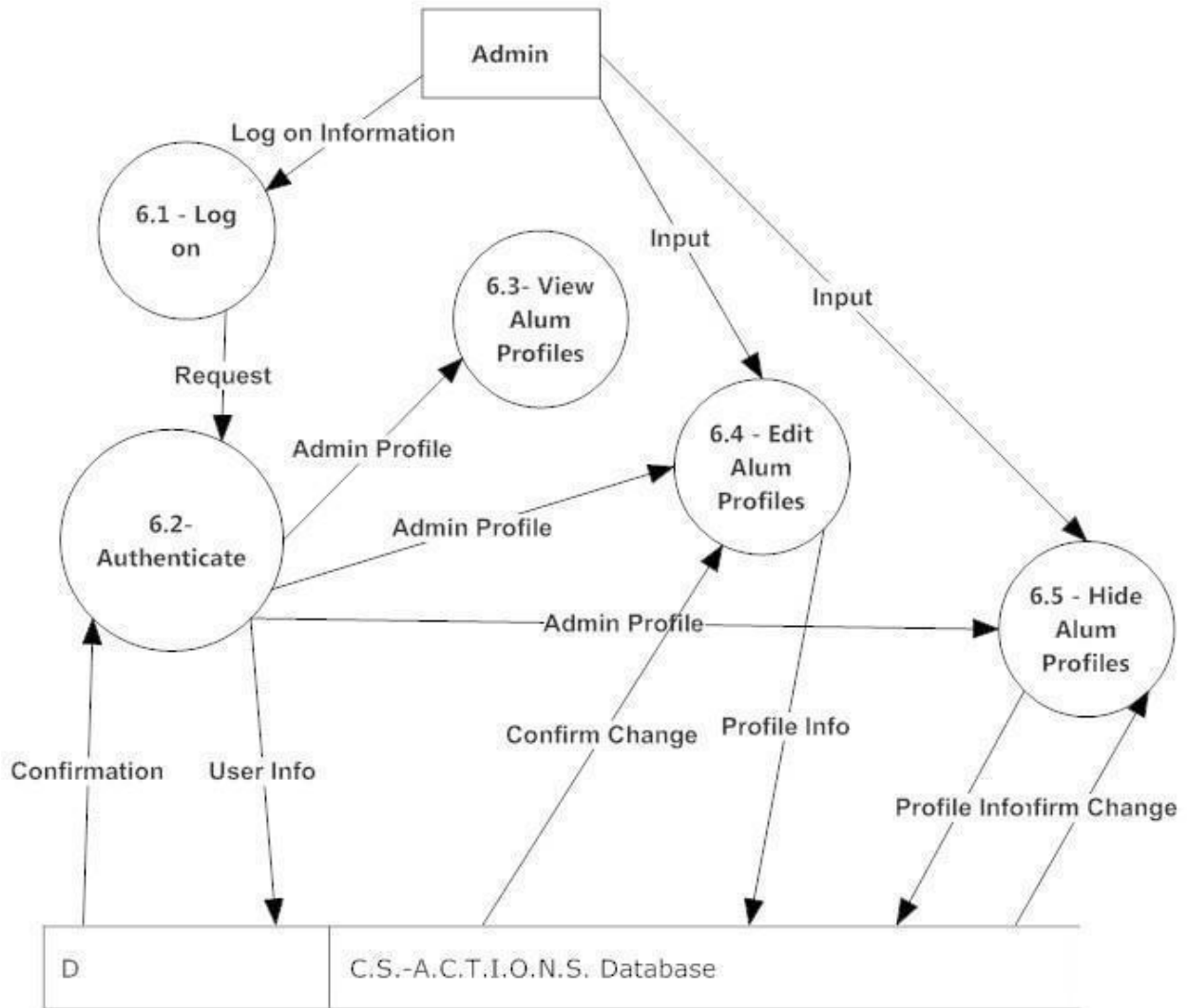
7.4.3 Interact with map



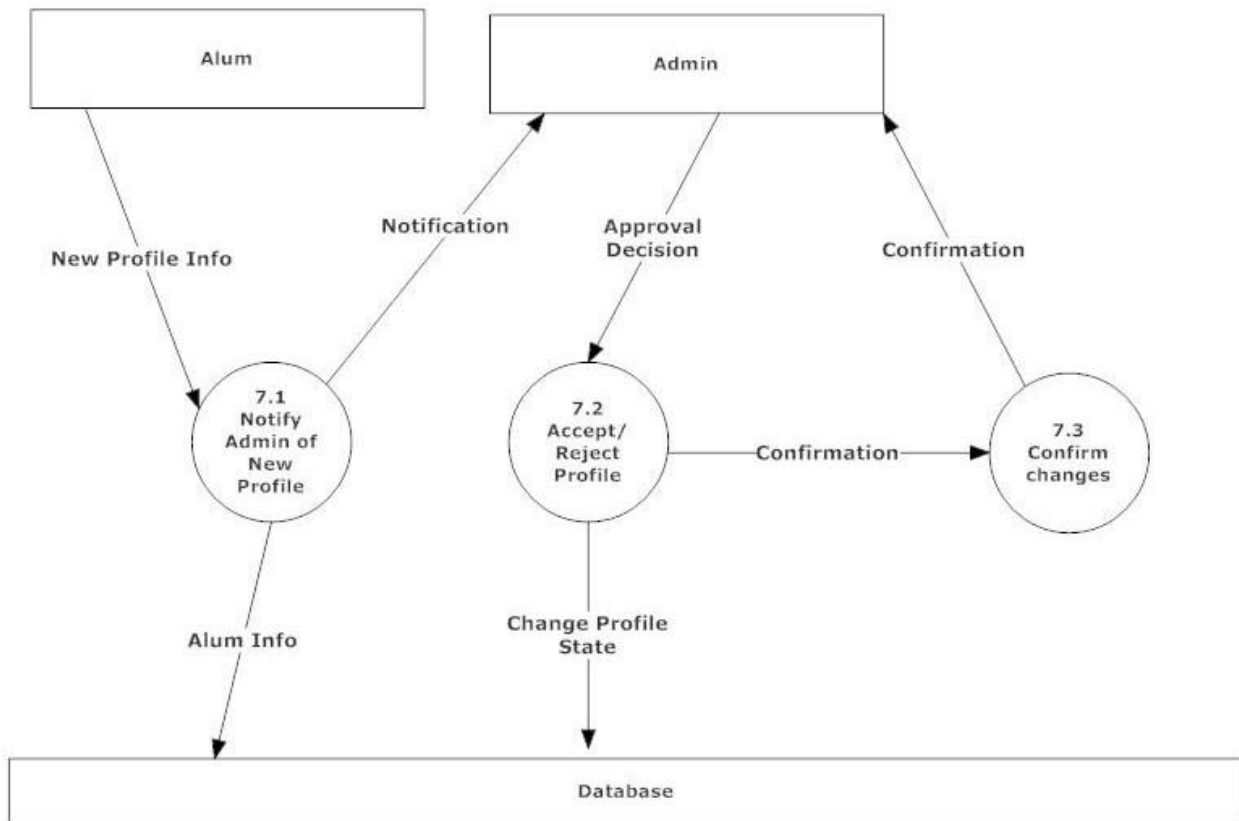
7.4.4 Contact Alumni

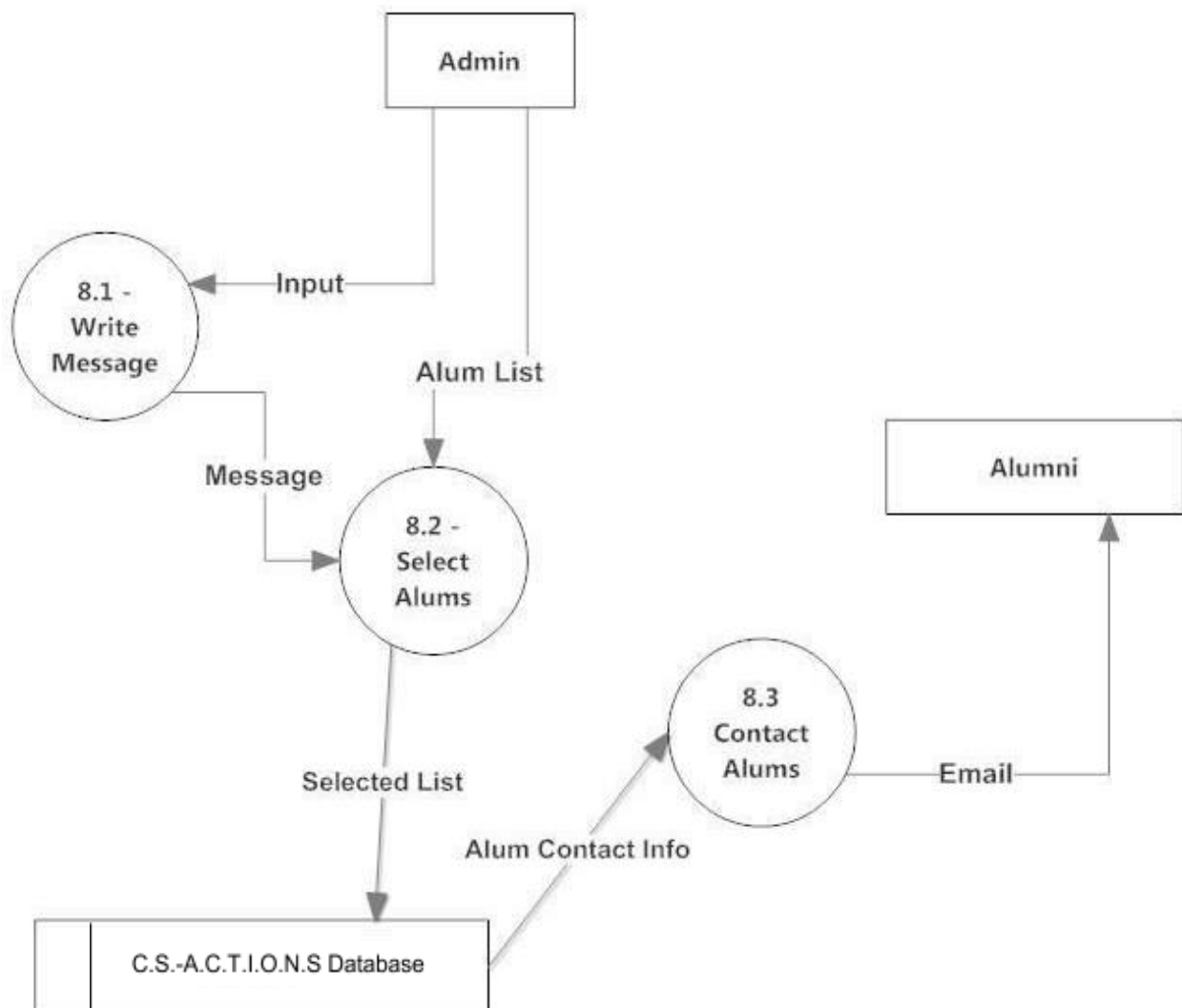


7.4.5 Screen Content



7.4.6 Approve pending profiles



7.4.7. Send message to Alumni

8. Functional Requirements Inventory

8.1 Alumni:

- Will be able to set up an account on C.S.-A.C.T.I.O.N.S.
- Will be able to log into C.S.-A.C.T.I.O.N.S.
- Will be able to change password
- Will interact with map using pins representing locations of alumni
- Will be able to view other Alumni profiles
- Will be able to edit/make changes to own profile
- Will be able to change privacy settings
- Will be able to log out of C.S.-A.C.T.I.O.N.S.

8.2 User:

- Will interact with map using pins representing hometowns of alumni
- Will be able to view Alumni profiles
- Will be able to contact Alumni

8.3 Administrator:

- Will be able to log into C.S.-A.C.T.I.O.N.S.
- Will interact with map using pins representing hometowns of alumni
- Will be able to view Alumni profiles
- Will be able to send message to all Alumni
- Will be able to edit/make changes to any information in an alumni profile
- Will be able to approve/deny pending profiles
- Will be able to log out of C.S.-A.C.T.I.O.N.S.

9. Non-Functional Requirements

The following is a list of non-functional system requirements that specify how the system is intended to work.

- C.S.-A.C.T.I.O.N.S will be user friendly
- C.S.-A.C.T.I.O.N.S will run efficiently
- C.S.-A.C.T.I.O.N.S will be easy to access
- C.S.-A.C.T.I.O.N.S will be fully functional on multiple browsers
- C.S.-A.C.T.I.O.N.S will be stable

10. Data Dictionary

| Data Name | Applicable To | Data Type | Data Size | Description | Acceptable Input | Good Example | Bad Example | Notes |
|-----------------|---|-----------|-------------------|---|----------------------------|---------------------|-----------------|---|
| userName | Add user to system | varchar | 6 - 30 characters | email to be used to log in to the system | email address | admin@siena.edu | username | Username must be unique |
| password | Add user to system | varchar | 6 - 30 characters | password to be used to log in to the system | Ascii characters 65 to 122 | KBC715r | password | Must include on capital letter and one number |
| firstName | Add user to system | varchar | 1 - 30 characters | name to show on profile | A-z, a-z, - | Mark | M@rKy M@Rkk | |
| lastName | Add user to system | varchar | 1 - 50 characters | name to show on profile | A-z, a-z, - | White | WH!t3 | |
| sessionTime | alum/admin | date | Date | Date of log in | Date format | 9:09 11/10/2014 | 0:00:00 | |
| picture | Add user to system | varchar | 0-64 characters | filename to profile picture | path of picture file | picture of alum | picture of bear | |
| alumnHometown | Edit profile, All users who view profiles | varchar | 0-50 characters | hometown alum is from | Ascii characters 65 to 122 | Brunswick | B-wick | |
| highschoolName | Edit profile, All users who view profiles | varchar | 0-50 characters | high school alum graduated from | Ascii characters 65 to 122 | Tamarac High School | T-rac | |
| highschoolState | Edit profile, All users who view profiles | varchar | 2 characters | state high school is located in | A-Z | NY | 11th state | |

| | | | | | | | | |
|-------------------------------|--|---------|----------------------|---|----------------------------------|---|---|--|
| sienaGradYear | Edit profile, All users who view profiles | number | 4 digits | year graduated from siena | 0-9 | 2015 | 15 | |
| jobTitle | Edit profile, All users who view profiles | varchar | 0-128 characters | job position | Ascii characters 32 to 122 | Software Engineer | I do important stuff | |
| jobResponsibilities | Edit profile, All users who view profiles | varchar | 0-1024 characters | description of/responsibilites at job | Ascii characters 32 to 122 | Write code, write test scripts to test code | Make that C@\$H M0n3y \$\$\$\$ | |
| employer | Edit profile, All users who view profiles | varchar | 0-64 characters | name of company employed at | Ascii characters 32 to 122 | Pitney Bowes | P!tn3y B0w3\$ | |
| aboutMe | Alum Profile View | varchar | 0-2048 characters | Brief description about alum | Ascii characters 32 to 122 | I like computers | I am ^&^%\$ | |
| pastJobTitles | Alum Profile View | varchar | 0-512 characters | List of past job titles | Ascii characters 32 to 122 | Software Engineer | Homeless | |
| pastEmployers | Alum Profile View | varchar | 0-512 characters | List of past employers | Ascii characters 32 to 122 | EMC | <> | |
| mostImportantClass | Alum Profile View | varchar | 0-64 characters | most useful class at siena | A-Z, a-z | Software Engineering | Philosophy | Will be asked on entry survey |
| mostImportantClassDescription | Alum Profile View | varchar | 0-2048 characters | Description of most useful class | Ascii characters 32 to 122 | A paragraph describing why that course was important | An off topic answer | Will be asked on entry survey |
| professionalAdvice | Alum Profile View | varchar | 0-2048 characters | Personal professional advice | Ascii characters 32 to 122 | Professional Advice | An off topic answer | Will be asked on entry survey |

| | | | | | | | | |
|---------------------------|---------------------------------|---------|-------------------|--|----------------------------|---|--------------------------------------|--------------------------|
| prospectiveAdvice | Alum Profile View, Edit Profile | varchar | 0-2048 characters | Advice to give to perspective students | Ascii characters 32 to 123 | Advice for prospective student | An off topic answer | |
| sienaDecision | Alum Profile View, Edit Profile | varchar | 0-2048 characters | Why the alum decided to come to Siena | Ascii characters 32 to 124 | "I decided to attend Siena because they have the best Computer Science department in the world" | An off topic answer | |
| sienaRecommendation | Alum Profile View, Edit Profile | varchar | 0-2048 characters | Would they recommend Siena and why they answered in that way | Ascii characters 32 to 125 | I would/wouldn't recommend Siena because... | (*#&@ | |
| sienaBest | Alum Profile View, Edit Profile | varchar | 0-2048 characters | The best part of coming to siena | Ascii characters 32 to 126 | "My best Siena experience was..." | An off topic answer | |
| sienaWorst | Alum Profile View, Edit Profile | varchar | 0-2048 characters | The worst part of coming to Siena | Ascii characters 32 to 127 | "My worst Siena experience was..." | An off topic answer | |
| sienaInternshipExperience | Alum Profile View, Edit Profile | varchar | 0-2048 characters | description of internships taken in college | Ascii characters 32 to 128 | Pitney Bowes | Pl!tn3y B0w3\$ | |
| sienaResearchExperience | Alum Profile View, Edit Profile | varchar | 0-2048 characters | descriprion of research done at Siena | Ascii characters 32 to 122 | "My research at Siena included.." | Research done elsewhere or off topic | |
| userActivity | Interact with map, logon | varchar | 0-128 characters | a log of profile updates | Ascii characters 32 to 122 | <username> <fields updated> <time> | Someone changed something | name/field updated/ time |
| profileState | Approve pending profiles | number | 2 bits | privacy state of profile 0: hidden 1: pending 2:public | 0-2 | 0 | 10000 | |
| companyCity | Map | varchar | 0-64 characters | city job is located in | Ascii characters 32-122 | 1 | Hogwarts | |

| | | | | | | | | |
|---------------|-------------------|-------|---------------|---|----------|------------|----------|--|
| resetPassword | Reset password | char | 10 characters | auto generated password used when password is reset | A-Z, 0-9 | a7s4vb9ds7 | password | |
| employerLat | Interact with map | float | 6 digits | Employer latitude coordinate | 0-9, - | -42.6674 | infinity | |
| employerLng | Interact with map | float | 6 digits | Employer longitude coordinate | 0-9, - | 42.6677 | infinity | |
| highschoolLat | Interact with map | float | 6 digits | High school latitude coordinate | 0-9, - | 81.6677 | infinity | |
| highschoolLng | Interact with map | float | 6 digits | High school longitude coordinate | 0-9, - | 45.5657 | infinity | |

11. Prototypes for Discovery

11.1 Home Page

[Log On](#) [Register](#)

Siena C.S. Actions

Find Siena CS Alums!

Red Pins indicate Siena CS alum place of employment & Blue Pins for Siena alum high school. Click on a pin to learn more about each Siena Alum!

My maps

Getting around

Show: Traffic - Bicycling - Terrain

Directions

CS Alum Spotlight

Kathleen O'Hara
Class of 2014
Software engineer at Vanguard
(Charlotte, North Carolina)

[Search CS Actions](#)

[About CS Actions](#)

11.2 - Log in Form

The screenshot shows a login form for 'Siena C.S. Actions'. At the top left is a 'Go Back' button. The header is green with the title 'Siena C.S. Actions' and a 'Maker Tech' logo on the right. The main content area is light yellow and says 'Welcome Back'. Below this are two input fields: 'Username' (with 'Email' as a placeholder) and 'Password' (with 'Password' as a placeholder). There is a 'Remember me' checkbox below the password field. A 'Log in' button is centered below the inputs. At the bottom of the form, there is a footer with the text 'Siena College | Software Engineering 2014 | CS Department | School of Science', the 'SIENA' logo on the left, and '© MAKER Technologies 2014' on the right.

11.3 - Register Screen (1 of 2)

The screenshot shows a registration form for 'Siena C.S. Actions'. At the top left is a 'Go Back' button. The header is green with the title 'Siena C.S. Actions' and a 'Maker Tech' logo on the right. The main content area is light yellow and says 'Welcome to C.S. ACTIONS'. Below the title is a paragraph: 'Fill in our quick register form to add your profile to our system & help showcase Siena Computer Siena Alum accomplishments'. A second paragraph follows: 'The first section is **required** information in order to have a profile on the Siena CS Action system. Pins will be placed on the map indicating your place of employment & your high school alma matter'. Below this is a bolded instruction: 'Only Siena College Computer Science Alum's can register for this web application !!'. The form consists of eight input fields, each with a label to its left: 'First Name' (placeholder: 'First name'), 'Last Name' (placeholder: 'Last name'), 'High School' (placeholder: 'High School'), 'High School Town' (placeholder: 'High School Town'), 'Siena Graduation Year' (placeholder: 'Siena Graduation Year'), 'Current Job Title' (placeholder: 'Job title'), 'Current Employer' (placeholder: 'Company name'), and 'Company City' (placeholder: 'Company City').

Register Screen(2 of 2)

Company City

Please Answer a few of the following questions to help guide prospective students & Bolster your CS Actions Profile!

Job Responsibilities

Most Important CS Class taken at Siena

Why?

Why did you choose Siena?

Advice to Prospective Siena CS Freshman

Advice to Siena CS Seniors

Internship Experience at Siena

Research Experience at Siena

Your Favorite Part of Siena

Your Least Favorite Part of Siena

Words of Recommendation for Siena

Remember me

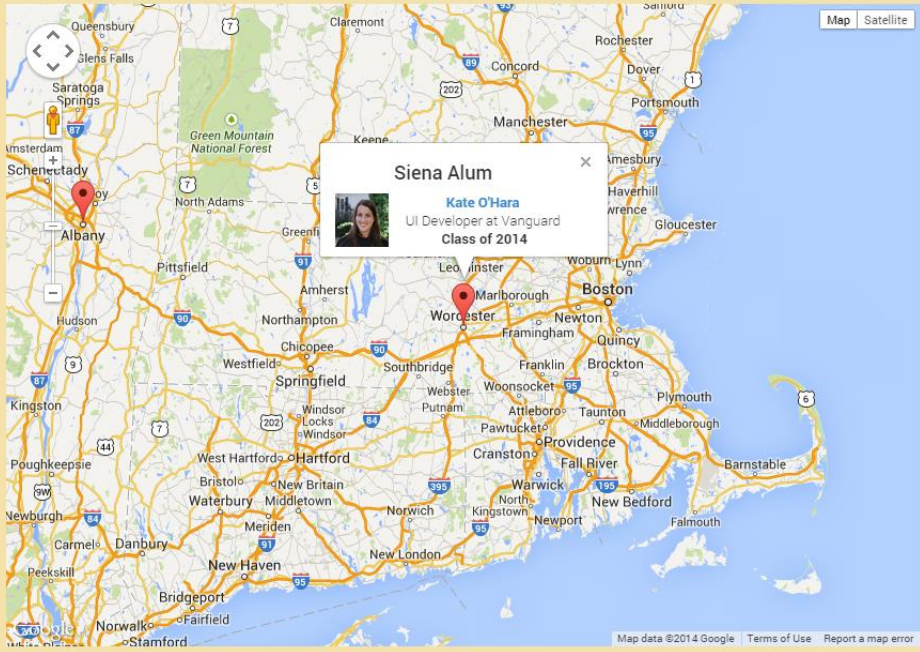
Siena College | Software Engineering 2014 | CS Department | School of Science

© MAKER Technologies 2014


11.4 - Display Pin

Find Siena CS Alums!

Red Pins indicate Siena CS alum place of employment & Blue Pins for Siena alum high school. Click on a pin to learn more about each Siena Alum!



CS Alum Spotlight



Kate O'hara
UI Developer at Vanguard
Class of 2014

[Go to Profile](#)

[Search CS Actions](#)

[About](#)

Map data ©2014 Google Terms of Use Report a map error

12. Testing Plan

12.1 Overview and Strategy

C.S.-A.C.T.I.O.N.S. is a web application; therefore, it will be tested to make sure it functions properly on each major web browser. The web browsers to be tested on are Google Chrome, Internet Explorer, Mozilla Firefox, and Apple Safari. A number of unit tests were created using the functional requirements and will be used to test C.S.-A.C.T.I.O.N.S. In addition, all non-functional requirements will be evaluated to ensure that all of them are met. The testing plan will be elaborated on more thoroughly in the detailed design stage of the waterfall model.

12.2 Acceptance Test

Once the unit tests have been completed, an acceptance test will be executed to ensure that all of the functional requirements have been met. Once the acceptance test is completed, MAKER Technologies and the clients, Dr. Eric Breimer and Professor Jim Matthews, will decide whether or not all of the requirements have been sufficiently met. MAKER Technologies will design the acceptance test plan using the functional requirements gathered in previous stages.

12.3 Unit Tests

The unit tests are specific tests that will be run to ensure that the system is running properly. The unit tests have directions in the each case to direct the tester on what to input and what to look for when a test is run.

12.3.2 Test Cases

The test cases for the C.S.-A.C.T.I.O.N.S system were outlined by the team members of MAKER Technologies using the functional and non-functional requirements gathered thus far. The test cases will be used to determine whether the system meets the needs of the clients, Dr. Eric Breimer and Professor Jim Matthews, and also to ensure that the system functions properly.

12.3.1 Directory

| Pass/Fail Status | Unit Number | Unit Test Name | Date Last Tested | Comments or brief description | Integrated with these units |
|------------------|-------------|---------------------------|------------------|--|-----------------------------|
| | | | | | |
| | 1 | Login | | <i>Allows access to profiles</i> | |
| | 2 | Alumni Edit Profile | | <i>Change content on an Alumni profile</i> | 1 |
| | 3 | Admin Pending Profiles | | <i>Approve/Reject newly created Alumni profiles</i> | 1 |
| | 4 | Register | | <i>Allows alum's to register an account on C.S Actions</i> | 1 |
| | 5 | Map Interact | | <i>Allows users to interact with embedded Google Map</i> | |
| | 6 | Screen Content | | <i>Allows admin to screen content on accounts</i> | |
| | 7 | Contact Alum from Profile | | <i>Allows users to contact alum's with accounts</i> | |
| | 8 | Admin Contact Alum | | <i>Allows admin to reach out to alum's with accounts</i> | |
| | 9 | Place Alum on Map | | <i>Places a pin on Google Map in correct location for alum</i> | |
| | 10 | Linked-In API Connection | | <i>Allow the person to sign in with Linked-In and send an automated message to fellow Siena CS Alums inviting them to CS Actions</i> | |
| | 11 | Reset Password | | <i>Allows user to reset password</i> | 1 |

12.3.2 Unit 1: Login Process

| Test Cases | | | | | | | | | | |
|------------------|-----------------------|-------------------------------|--------------------------------|--|--------------------------|--|----------------------------|----------|-----------|-----------|
| Pass/Fail Status | Test Number | Description | Action to perform test (input) | Steps to be Executed | State Before Test | Expected result | Observed result | Comments | Tested By | Test Date |
| | | | | | | | | | | |
| | 1.001 | No Username, No Password | No input | Press Login | Empty Login Form | Error Message | | | | |
| | 1.002 | Correct Username, No Password | Username | Enter Username, Press Login | Login form with Username | Error Message | | | | |
| | 1.003 | No Username, Correct Password | Password | Enter Password, Press Login | Login form with Password | Error Message | | | | |
| | 1.004 | Incorrect Credentials | Wrong Username and password | Enter Username and Password, Press Login | Login form completed | Error Message indicating incorrect credentials | | | | |
| | 1.005 | Correct Credentials Alumni | Correct Username and Password | Enter Username and Password, Press Login | Login form completed | Display Alumni Homepage | | | | |
| | 1.006 | Correct Credentials Admin | Correct Username and Password | Enter Username and Password, Press Login | Login form completed | Display Admin Homepage | | | | |
| F | = Unit Summary | | 0% | passing | 0 | passed | Date of last test = | | | |
| | 6 | tests | | | 0 | failed | | | | |

12.3.2 Unit 2: Alumni Edit Profile Process

| Test Cases | | | | | | | | | | |
|------------------|-------------|-------------------------------|--------------------------------------|---|--|---|-----------------|----------|-----------|-----------|
| Pass/Fail Status | Test Number | Description | Action to perform test (input) | Steps to be Executed | State Before Test | Expected result | Observed result | Comments | Tested By | Test Date |
| | | | | | | | | | | |
| | 2.001 | Put profile in editable state | Edit Button Clicked | Click Edit Button | Alum Profile in Normal State | Alum Profile in editable state | | | | |
| | 2.002 | Change Picture | Select change picture | Click Change Picture | Alum Profile in Editable State | Form shown allows uploading of picture file | | | | |
| | 2.003 | Upload New Picture | Input picture file | Select picture file on computer; Press submit | Form shown allowing picture to be uploaded | Alum Profile has new picture; Profile still in editable state | | | | |
| | 2.004 | Change Employer | Click new employer button | Click new employer button; enter in new employer name | Form asking for new employer | New employer inputted is saved and shown on profile | | | | |
| | 2.005 | Change Profile Text Fields | Edit text fields of alum information | Edit text fields; press save changes | Alum Profile in Editable State | Alum inputted changes are saved and shown on profile | | | | |

| | | | | | | | | | | |
|----------|-----------------------|--------------------------------|---|--|--------------------------------|--|----------------------------|--|--|--|
| | 2.006 | Change Job Title | Click new job title | Click new job title; Enter in new job title | Form asking for new job title | New job title inputted is saved and shown on profile | | | | |
| | 2.007 | Change Privacy Setting | Click change privacy setting; Select new setting | Click change privacy setting; Select new setting; Press save | Alum Profile in Editable State | Profile is now in specified privacy setting | | | | |
| | 2.008 | Relocate Employment Pin on Map | Input new job location | Input new job location; Press save | Alum Profile in Editable State | Show user where new pin is located; Prompt for yes/no to keep change; If yes, relocate pin permanantly | | | | |
| F | = Unit Summary | | 0% passing | | 0 passed | | Date of last test = | | | |
| | 8 tests | | | | 0 failed | | | | | |

12.3.3 Unit 3: Administrator approve pending profiles

| Test Cases | | | | | | | | | | |
|------------------|-----------------------|----------------------|--------------------------------|----------------------|-------------------------------|------------------------------|----------------------------|----------|-----------|-----------|
| Pass/Fail Status | Test Number | Description | Action to perform test (input) | Steps to be Executed | State Before Test | Expected result | Observed result | Comments | Tested By | Test Date |
| | | | | | | | | | | |
| | 3.001 | Admin accept profile | Accept button clicked | Click accept button | Alum profile in pending state | Alum profile in public state | | | | |
| | 3.002 | Admin reject profile | Reject button clicked | Click reject button | Alum profile in pending state | Alum profile in hidden state | | | | |
| F | = Unit Summary | | 0% | passing | 0 | passed | Date of last test = | | | |
| | 2 | tests | | | 0 | failed | | | | |

12.3.4 Unit 4: Register

| Test Cases | | | | | | | | | | |
|------------------|-------------|---|---|---|---|---|-----------------|----------|-----------|-----------|
| Pass/Fail Status | Test Number | Description | Action to perform test (input) | Steps to be Executed | State Before Test | Expected result | Observed result | Comments | Tested By | Test Date |
| | 4.001 | No first name | No input | Press "Join" button | Empty first name field | Error Message indicating empty first name field | | | | |
| | 4.002 | No last name | No input | Press "Join" button | Empty last name field | Error Message indicating empty last name field | | | | |
| | 4.003 | No email | No input | Press "Join" button | Empty email field | Error Message indicating empty email field | | | | |
| | 4.004 | No password | No input | Press "Join" button | Empty password field | Error Message indicating empty password field | | | | |
| | 4.005 | Enter first name, last name, email, password, and click join button | First name, last name, email, password, button action | Enter first name, last name, email, password, and click join button | First name, last name, email and password entered into appropriate fields | Message confirming successful registration | | | | |
| | 4.006 | Enter required fields (City and | City, State, Graduation | Press "Create My | | Message confirming | | | | |

| | | | | | | | | | | |
|----------|-----------------------|---|---------------------------|-----------------|-----------------|--------------------------------|----------------------------|--|--|--|
| | | state, Graduation year, Job title, Company) | year, Job, Title, Company | Profile" button | | successful creation of profile | | | | |
| F | = Unit Summary | | 0% passing | | 0 passed | | Date of last test = | | | |
| | 6 tests | | | | 0 failed | | | | | |

12.3.5 Unit 5: Interacting with Map

| Test Cases | | | | | | | | | | |
|------------------|-----------------------|--------------------------|--------------------------------------|----------------------------|---|-----------------------------------|----------------------------|----------|-----------|-----------|
| Pass/Fail Status | Test Number | Description | Action to perform test (input) | Steps to be Executed | State Before Test | Expected result | Observed result | Comments | Tested By | Test Date |
| | 5.001 | Search Map | Search criteria, locations, employer | Enter search criteria | All pins | filtered and correct pin results | | | | |
| | 5.002 | Info Maps to correct Pin | Accurate: Info/Location | Check info shown with pins | Plain map with pins, no info displayed on map | Correct Info displayed | | | | |
| | 5.003 | Map Functionality | Zoom/drag | Zoom and drag map | Plain map | Proper reactions to interactions | | | | |
| | 5.004 | Select Pin | Click on pin | Click on pin | Nothing selected | Proper profile displayed with pin | | | | |
| F | = Unit Summary | | 0% passing | | 0 passed | | Date of last test = | | | |
| | 4 tests | | | | 0 failed | | | | | |

12.3.7 Unit 7: Contact Alumni from Profile

| Test Cases | | | | | | | | | | |
|------------------|-----------------------|--|--|------------------------------|-------------------------------------|---|----------------------------|----------|-----------|-----------|
| Pass/Fail Status | Test Number | Description | Action to perform test (input) | Steps to be Executed | State Before Test | Expected result | Observed result | Comments | Tested By | Test Date |
| | 7.001 | Contact Button shown | Locate contact button | Look for contact button | Contact button shown | Contact button leads to form | | | | |
| | 7.002 | Fill out Form | Fill out form and hit submit to see completed form | Fill out form; Press done | Empty form | Complete form with fields filled out | | | | |
| | 7.003 | Contact Alum | Press Send; Alum should receive an email | Press send | Completed form | Alum gets email message with form message in it | | | | |
| | 7.004 | Contact Button not shown for certain alums | No contact button available to be clicked | Nothing | Alum profile with no contact button | No contact button will be shown for this alum | | | | |
| | 7.005 | Email correct Alum | Send email to alum | Send contact message to alum | Completed form | Correct alum receives correct message | | | | |
| F | = Unit Summary | | 0% passing | | 0 passed | | Date of last test = | | | |
| | 5 tests | | | | 0 failed | | | | | |

12.3.7 Unit 8: Administrator Contact Alumnus

| Test Cases | | | | | | | | | | |
|------------------|-----------------------|---------------|--------------------------------|--------------------------|---------------------------|-----------------------------------|----------------------------|----------|-----------|-----------|
| Pass/Fail Status | Test Number | Description | Action to perform test (input) | Steps to be Executed | State Before Test | Expected result | Observed result | Comments | Tested By | Test Date |
| | 8.001 | No message | No input | Press send | Empty message alumni form | Error message | | | | |
| | 8.002 | Input Message | Message in message field | Type message, press send | Complete message form | Send message to all alumni emails | | | | |
| F | = Unit Summary | | 0% passing | | 0 passed | | Date of last test = | | | |
| | 2 tests | | | | 0 failed | | | | | |

12.3.8 Unit 9: Place Alumni on Map

| Test Cases | | | | | | | | | | |
|------------------|-----------------------|-----------------------------|--------------------------------|----------------------|-------------------|-------------------------------|-----------------|----------------------------|-----------|-----------|
| Pass/Fail Status | Test Number | Description | Action to perform test (input) | Steps to be Executed | State Before Test | Expected result | Observed result | Comments | Tested By | Test Date |
| | 9.001 | Town and School Name | | | No Pin on map | Pin in correct positin on map | | | | |
| | 9.002 | Town and Company Name | | | No Pin on map | Pin in correct positin on map | | | | |
| | 9.003 | No Town and School Name | | | No Pin on map | Request for town info | | | | |
| | 9.004 | No Town and Company Name | | | No Pin on map | Request for town info | | | | |
| | 9.005 | No Town and No School Name | | | No Pin on map | Request for Info | | | | |
| | 9.006 | No Town and No Company Name | | | No Pin on map | Request for Info | | | | |
| F | = Unit Summary | | 0% | | passing | 0 | passed | Date of last test = | | |
| | 6 | tests | | | | 0 | failed | | | |

12.3.9 Unit 10: LinkedIn API Connection

| Test Cases | | | | | | | | | | |
|------------------|-------------|---|---|--|-------------------|--|-----------------|----------|-----------|-----------|
| Pass/Fail Status | Test Number | Description | Action to perform test (input) | Steps to be Executed | State Before Test | Expected result | Observed result | Comments | Tested By | Test Date |
| | | | | | | | | | | |
| | 10.001 | Show Linked-In Button | Add Linked-In API javascript | Add Linked-In API javascript; load in browser | Register Form | Register Form shows Linked-Inlog in option | | | | |
| | 10.002 | Log in with Linked-In | Press Linked-In log in | Press log in with Linked-In button; Confirm log in | Log in form | Successfully log in correct alum | | | | |
| | 10.003 | Incorrect Log in with Linked-in | Press Linked-In log in | Press log in with Linked-In button; Confirm log in | Log in form | Display error; reshown log in form | | | | |
| | 10.004 | Send Linked-In Message | Press contact Linked-In connects option | Press contact Linked-In connects option | Register Form | Send Linked-In message to connects | | | | |
| | 10.005 | Send Linked-In Message to only CS Siena Alums | Press contact Linked-In connects option | Press contact Linked-In connects option | Register Form | Send message to only CS Siena alums | | | | |
| | 10.006 | Do not send message if button not clicked | Linked-In message option not clicked | Register form filled out without Linked-In option | Register Form | Do not send message | | | | |

| | | | | | | | | | | |
|----------|-----------------------|--|-------------------|----------|-----------------|--|----------------------------|--|--|--|
| | | | | selected | | | | | | |
| F | = Unit Summary | | 0% passing | | 0 passed | | Date of last test = | | | |
| | 6 tests | | | | 0 failed | | | | | |

12.3.10 Unit 11: Reset Password

| Test Cases | | | | | | | | | | |
|------------------|-----------------------|------------------------|--------------------------------|------------------------------|------------------------|---|----------------------------|----------|-----------|-----------|
| Pass/Fail Status | Test Number | Description | Action to perform test (input) | Steps to be Executed | State Before Test | Expected result | Observed result | Comments | Tested By | Test Date |
| | | | | | | | | | | |
| | 11.001 | Forgot password screen | press forgot password button | press forgot password button | Login screen | move to forgot password screen | | | | |
| | 11.002 | Input email | Input email | Input email, press button | Forgot password screen | New password sent to alum email, confirmation displayed | | | | |
| | 11.003 | No email | no input | no input, press button | Forgot password screen | Error displayed | | | | |
| F | = Unit Summary | | 0% passing | | 0 passed | | Date of last test = | | | |
| | 3 tests | | | | 0 failed | | | | | |

13. Environments

13.1 Development Environment

PC:

Operating System: Windows 7 Enterprise (x64) Service Pack 1 (build 7601)
Processor: 3.20 gigahertz Intel Core i5-3470
RAM: 6100 Megabytes Usable Installed Memory
HDD: 499.78 Gigabytes Usable Hard Drive Capacity

MAC:

Model Name: iMac
Model Identifier: iMac12,1
Operating System: OS X Lion 10.7.5
Processor Name: Intel Core i5
Processor Speed: 2.5 GHz
Memory: 4GB
HDD: 500GB

Server:

Server Name: oraserv.cs.siena.edu
Operating System: CentOS 5.2 (final)
CPU: Intel Xeon 2.66 GHz CPU
RAM: 8 GB of Memory

13.2 Operating Environment

CS-ACTIONS will be a web-based application and will be able to run on any operating system including, Mac, Windows, or Linux, and on any browser such as Google Chrome, Mozilla Firefox, Microsoft Internet Explorer, or Apple Safari.

13.3 Maintenance Environment

Most of the maintenance to this system will be done in the Software Engineering lab on the machines listed in section 1.7.1.

14. Testing Requirements

Our team will ensure C.S.-A.C.T.I.O.N.S. functions properly by continually testing throughout the development step. Our testing will include creating sample data such as test alumni profiles, test maps, and test alumni submissions. The test alumni profiles serve the purpose of ensuring our database can handle our desired amount of alumni information before our prototype is ready to be delivered to our clients. The test maps will ensure that our mapping interface will withstand a variety of different abnormal cases, such as alumni from out of the area and out of the country. The test alumni submissions will test our screening process that integrates an alumni survey into said alumni's profile on our system. Testing will not be done only at the conclusion of our first system but will be done continually throughout the year to ensure that all parts of the system can be integrated together with minimal errors. Testing will be done with input from our clients to ensure that the system will meet their every need. Before our system will be released for public use it will need to pass a strict series of tests that ensure it will be able to withstand rigorous use.

15. Appendices

Appendix A: Sources of information

Our primary source of information will come from Dr. Breimer and Professor Matthews through emails, and client meetings. Other sources of information include lectures from Dr. Meg Fryling in class, Dr. Lim in lab and through different reliable World Wide Web resources.

Appendix B: Glossary of Terms

API - Application Programming Interface specifies a software component in terms of its operations, their inputs and outputs and underlying types

CS-ACTIONS – Computer Science Alumni Connection Through Interactive Open Networking System – This is the name and acronym for our system.

Gantt – a chart in which a series of horizontal lines shows the amount of work done or production completed in certain periods of time in relation to the amount planned for those periods.

HTML – HyperText Markup Language – language used to develop websites

Java - Object-oriented programming language developed by and maintained by the Oracle Corporation

JavaScript - Computer programming language used primarily in web browsers for based client-side scripts

SQL - Structured Query Language, language used to develop databases

Appendix C: Timeline

| Task | Time Span (days) | Start | Finish |
|---------------------------------|-------------------------|--------------|---------------|
| Form Teams | 1 | 9/5 | 9/5 |
| Build Software Plan | 10 | 9/10 | 9/18 |
| Build Team Website | 15 | 9/15 | 9/29 |
| Software Plan Due | 1 | 9/19 | 9/19 |
| Software Plan Presentation | 1 | 9/23 | 9/23 |
| Team Website Due | 1 | 9/30 | 9/30 |
| Requirements Specifications | 34 | 9/24 | 10/27 |
| Requirement Documents Due | 1 | 10/28 | 10/28 |
| Requirement Presentation | 1 | 10/28 | 10/28 |
| Preliminary Design | 28 | 10/29 | 11/25 |
| Preliminary Design Due | 1 | 11/26 | 11/26 |
| Preliminary Design Presentation | 1 | 12/2 | 12/2 |
| Team Meetings | 83 | 9/10 | 12/1 |
| Client Meetings | 76 | 9/11 | 11/25 |

