

City University of Seattle

Registration System Technical Specification

Provided by

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20 May 2007

Revision History			
Date	Version	Description	Author
April 30, 2007	0.0.1	Initial In-House Draft started.	K. McGaughey
May 14, 2007	0.1.0	First Draft completed.	K. McGaughey
May 15, 2007	0.1.1	Revisions to Data Dictionary.	K. McGaughey
May 16, 2007	0.1.2	Revised Interface.	K. McGaughey
May 17, 2007	0.1.3	Added Navigation Map.	K. McGaughey
May 19, 2007	0.1.4	Replaced Use Case Diagrams.	K. McGaughey
May 20, 2007	1.0	Revision Complete.	K. McGaughey

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I. Introduction

This technical specification document provides the background analysis and design work for the Registration System. It is provided to ensure that all the technical aspects of this project have been reviewed prior to the actual project coding. Any changes to the project not defined within this document or approved per addendum, will not be accomplished.

Included within this document are the use cases, navigation diagrams, data flow diagrams, data dictionary and basic interface of the project.

II. Design and Testing Strategy

This project has been designed to support the proposal requirements. Ideally, the project modules would be further designed to eliminate any non-standard design and coding issues. The different modules would be assigned to different coders to accomplish and at the end, the modules merged and the system integrated and tested. For our purposes, the interface design of the site has been established and all the coding will be accomplished by the lone coder. Testing will be accomplished as each module is completed. Once the project is completed, the entire site will undergo thorough testing to ensure each section reacts as advertised. Time permitting, non-require items may be accomplished.

III. Users, Objects and Roles

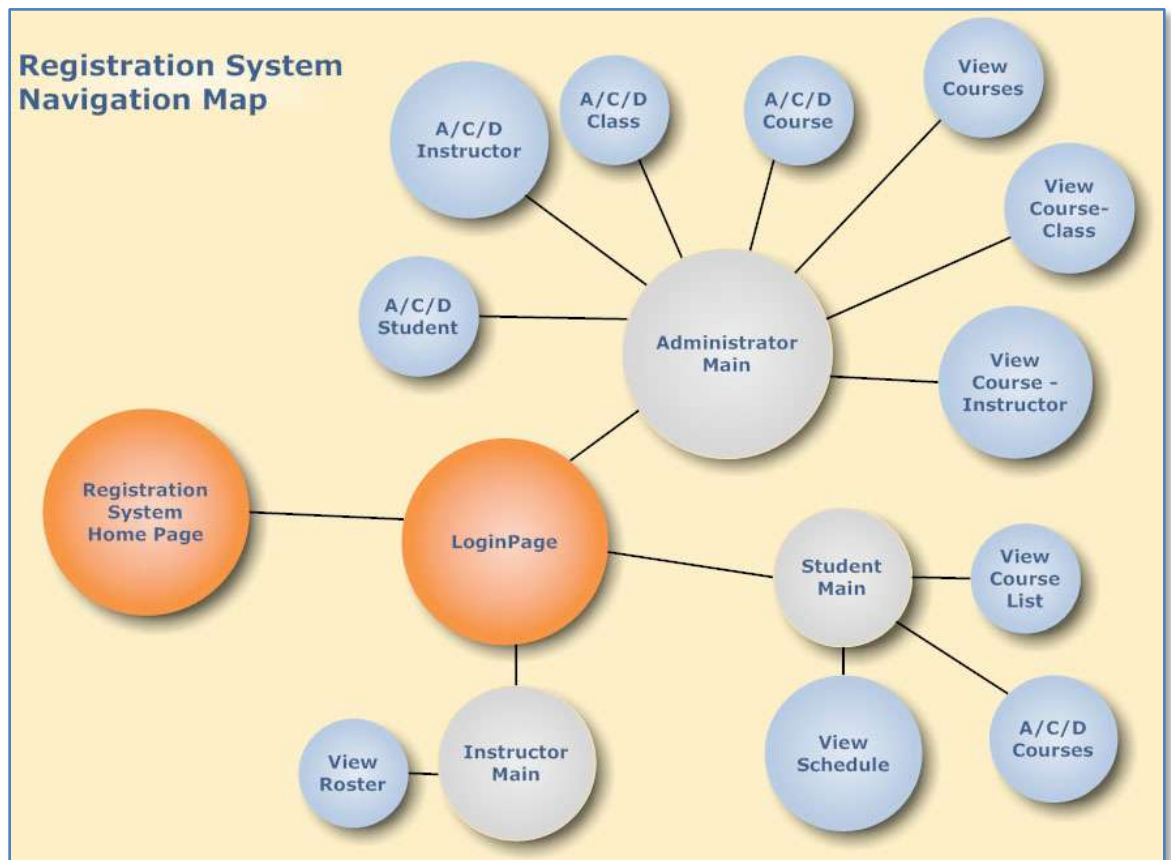
The users, objects and roles of this system are :

- Administrators
 - To accomplish maintenance on Courses, Classes, Instructors, and Students
 - To assign Courses to Classes and Instructors to Courses
 - To view reports on Class usage, Course availability, and Class rosters
- Instructors
 - To be assigned to Courses to teach the subject matter
 - To view personal information and view Course rosters
- Students
 - To be assigned to Courses to learn the subject matter

- To view personal information and to select or change Course requests
- Courses
 - Selected by the Administrator to be available for scheduling of Instructors and Students
- Classes
 - The physical rooms for Courses to take place

IV. Navigation Map

Below is the expected site navigation dependent on what type of user logs into the system.

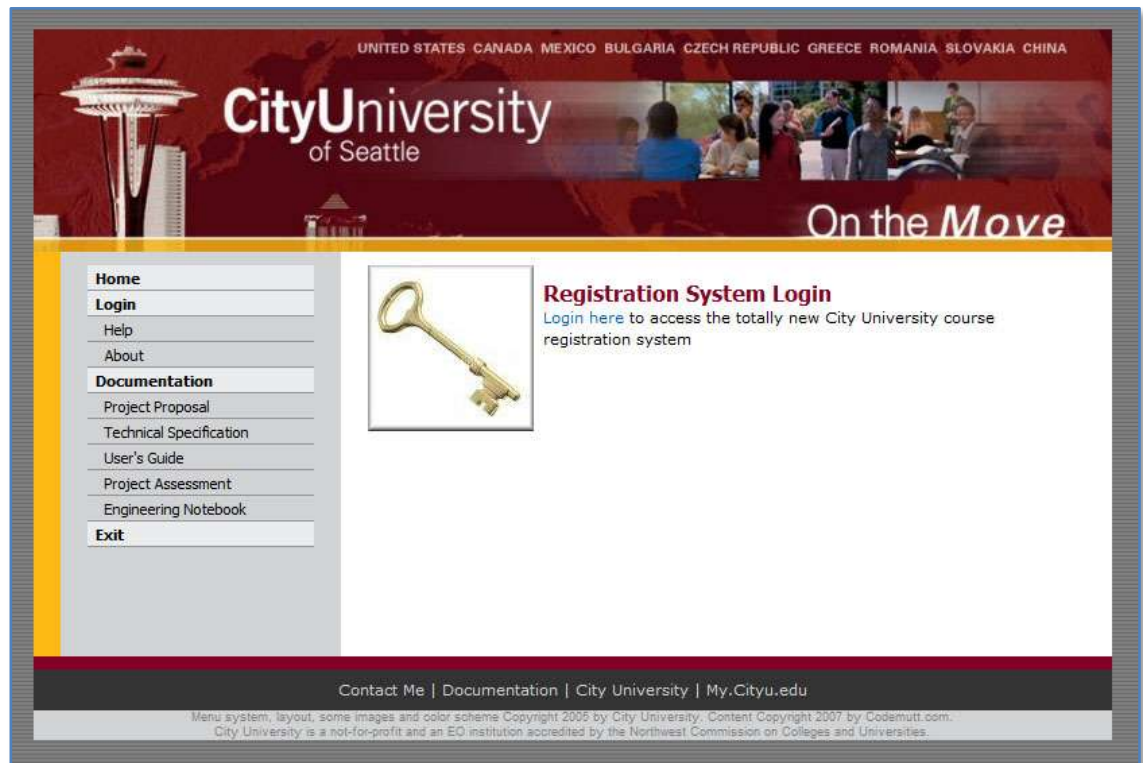


* A/C/D – shorthand for Add/Change/Delete

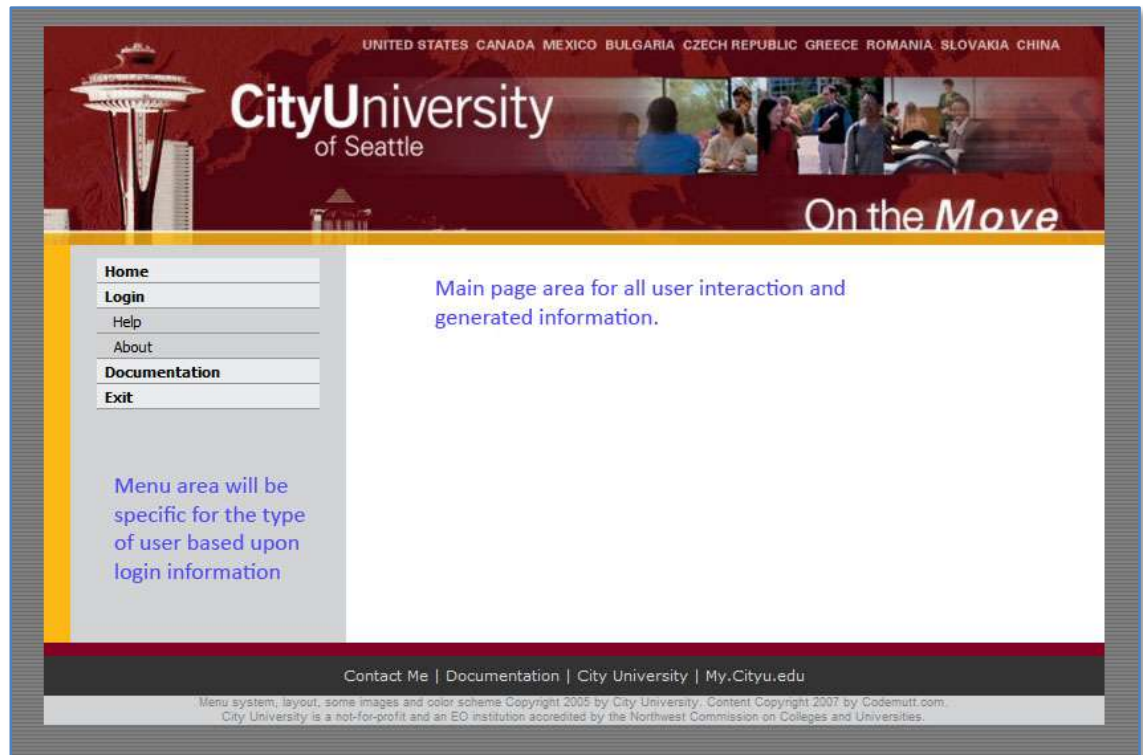
V. Interface

The interface of this system is closely tied to the format of the City University of Seattle public website. The graphics, background and menu are borrowed directly from that site with minor modifications.

This page will be the index page for the site. Options are limited as the only required item here is to proceed to the login page.

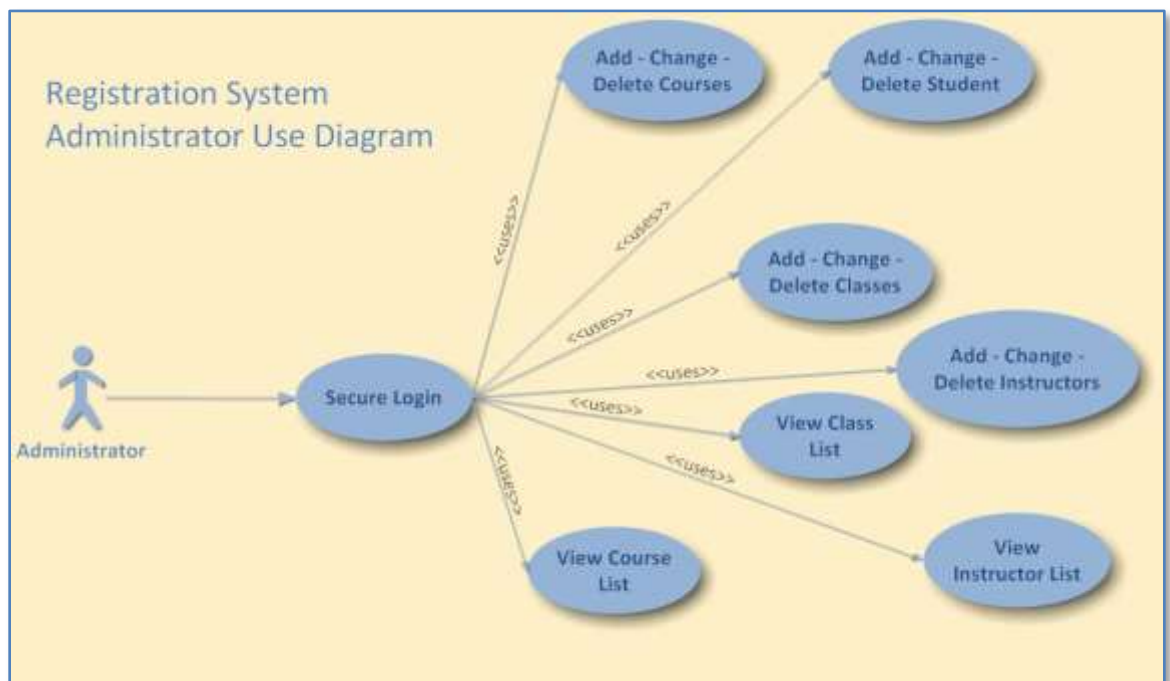


The following layout is the generic format for all of the pages after the index page. The menu on the left side will be user specific based upon what type of user logs into the system. The Documentation selection will be available through the link at the bottom of the page on all pages or on the left side of the main page only. The Home menu option will return the user to the index page and clear the user type.

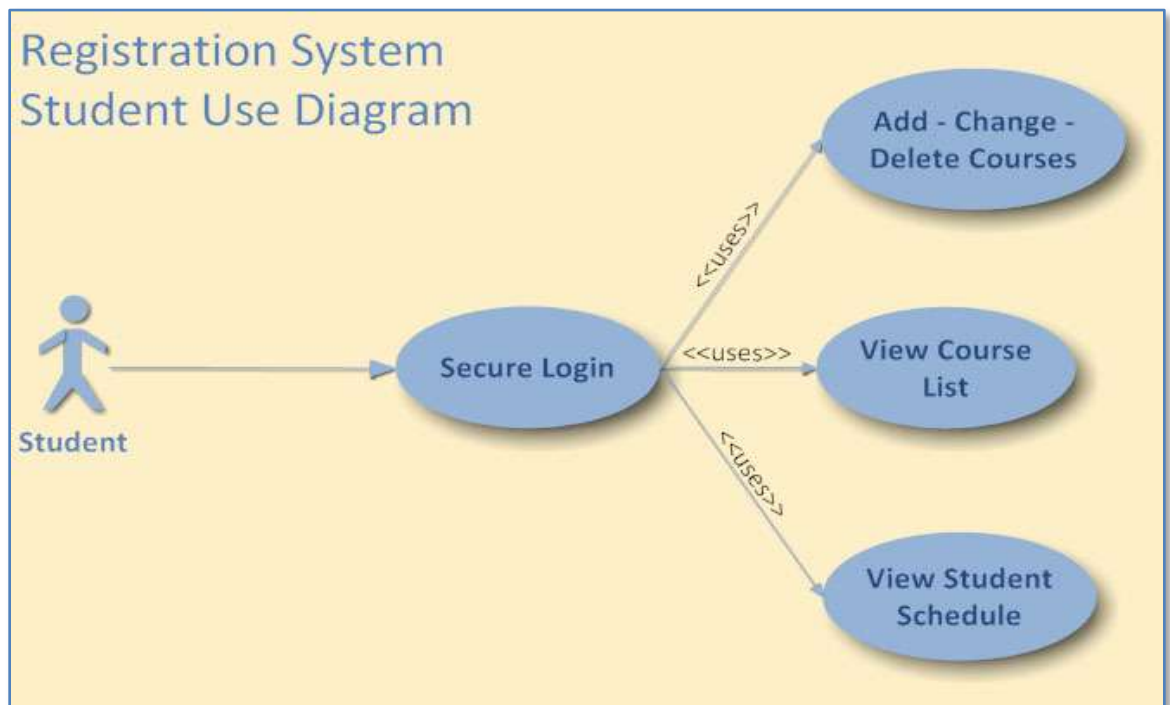


VI. Use Cases

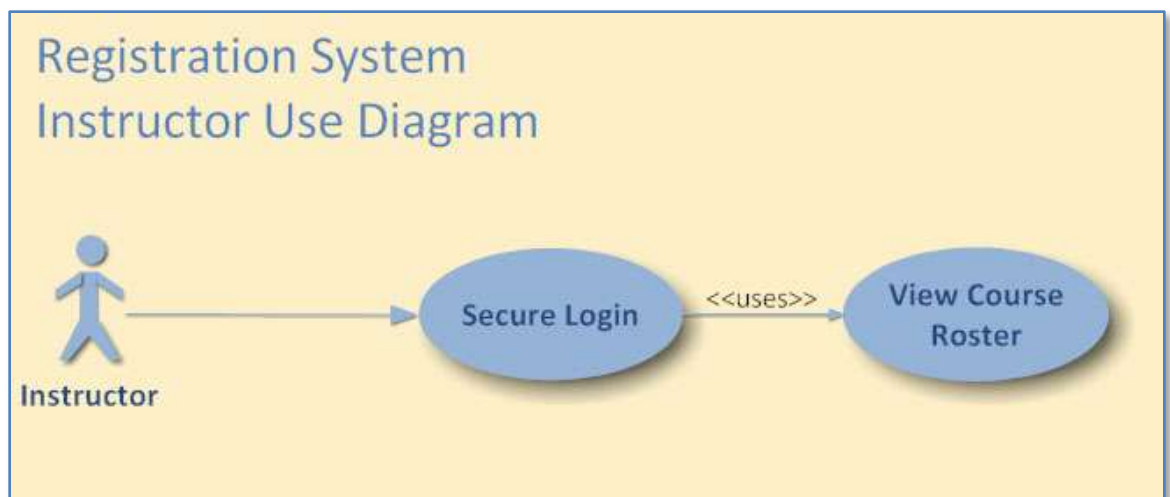
- Administrator



- Student

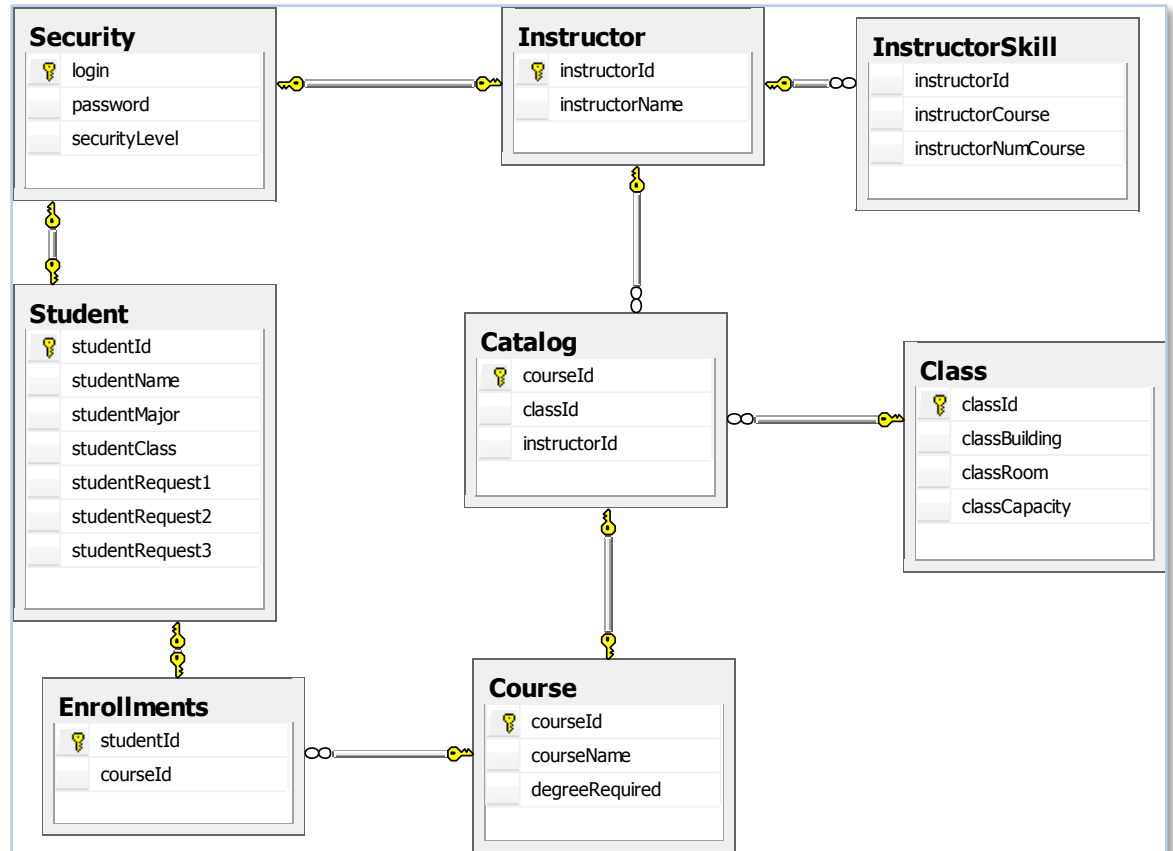


- Instructor



VII. Database Design

The following diagram is the planned table layout for this project.



VIII. Data Dictionary

Each of the tables is listed below with descriptions.

- Student table. Contains student information as well as top three course requests.

Column	Type	Description	Key
studentId	nchar(10)	Student ID number	Primary
studentName	text	Student name in last name, first name format	
studentMajor	nchar(10)	The major field. CS for Comp Sci, etc	
studentClass	int	The student class level: Senior=1, Junior=2, etc in	
studentRequest1	nchar(10)	The first choice class	
studentRequest2	nchar(10)	The second choice class	
studentRequest3	nchar(10)	The third choice class	

- Instructor table. Contains minimal instructor information.

Column	Type	Description	Key
instructorId	nchar(10)	Instructor ID number	Primary
instructorName	text	Instructor name in last name, first name format	

- InstructorSkill table. Contains the course skill level information for each instructor. Multiple entries per instructor are allowed.

Column	Type	Description	Key
instructorId	nchar(10)	Instructor ID number	Primary
instructorCourse	nchar(10)	Course the instructor can teach	Foreign
instructorNumCourse	int	Number of unique courses instructor can teach	

- Course table. Contains course information.

Column	Type	Description	Key
courseId	nchar(10)	Course ID number	Primary
courseName	text	Course name	
degreeRequired	int	A core degree course	

- Class table. Contains class room information.

Column	Type	Description	Key
classId	nchar(10)	Class room ID number	Primary
classBuilding	nchar(10)	Building class room is in	
classRoom	nchar(10)	The room number in the building	
classCapacity	int	Capacity of the classroom	

- Catalog table. Contains available courses with instructor and class keys.

Column	Type	Description	Key
courseId	nchar(10)	Course ID number	Primary
classId	nchar(10)	Class room ID number	Foreign
instructorId	nchar(10)	Instructor teaching the class	Foreign

- Enrollments table. Final course enrollments.

Column	Type	Description	Key
studentId	nchar(10)	Student ID number	Primary
courseId	nchar(10)	Course ID number	Foreign

- Security table. Login information and security levels.

Column	Type	Description	Key
login	nchar(10)	User login	Primary
password	nchar(10)	user password	
securityLevel	int	Access level, Admin=0, Instructor=1, Student=2	

IX. Technology Requirements

- User Access Requirements

This Registration System will be set up to be available to all users via the internet. The user will need to use a computer that has access to the internet and a web browser.

Any web browser should work, but the system will be optimized for only the most current versions of Internet Explorer and Firefox (This is not a requirement; simply the testing was accomplished upon a system with only the most current versions). The user is not required to have any special skills other than reading and the use of the mouse.

The user will require an internet connection. Although this can be any sort, broadband is highly recommended to speed up the operation. Dial up users can expect extended load times for graphics. Due to this fact, the graphics on the site are limited.

- Host System Requirements

The host systems will support the database and supporting server files that accomplish much of the behind the scenes work. The servers can run on any operating system that can support PHP and MySQL. Ideally, the system would interface directly with City University of Seattle database files and reside on the City University of Seattle servers. For educational and security purposes, the system is hosted off site and will not interface with any City University of Seattle systems or data.

- Software and Hardware used for Construction of the Site

The system was developed on a personal computer running Microsoft Windows Vista Ultimate, Macromedia Dreamweaver 8, Adobe Photoshop CS2, Jasc Paint Shop Pro 8, Ipswitch WS FTP Professional 2007, and HTML-Kit. MS SQL Server Management Studio Express 2007 was installed and used, but was unable to use it for managing the server database, as were several other third party tools.

The site is hosted on a Linux server running PHP and MySQL.