

Acceptance Test

R.O.S.E.S

(Redesign Of the Software Engineering Site)

Requested by:

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April 26, 2011

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1 Introduction

1.1 Product Overview

With the addition of Software Engineering to the computer science curriculum and advancements in website design, Dr. Timothy C. Lederman has decided that he wants the Software Engineering course website to be overhauled. The current site is inconsistent in its menu structure, lacks search capabilities and is not on par with other websites on an aesthetic level. The site needs these aspects to be updated so that users such as future employers, recommenders, students, course instructors, family and friends can use the website as needed. Each page will have a consistent main menu, each item on the main menu, once clicked, will display a submenu that will have options for the user to choose. A search feature will be added so that students and teams can be looked up with ease, allowing recommenders and future employers to gain some background about the student that they are referring or interviewing, respectively. The websites over all look and organization will be redone to accurately reflect the courses in-depth content and mission. These improvements will help to make the website more appropriate for the course it is representing.

1.2 Usage Case Narratives

1.2.1 Course Instructor Usage Case Narrative

The course instructor, as the administrator of the website and teacher of the Software Engineering course, is the main user of the website. The course instructor will be able to edit every aspect of the website, as well as add to any part of the website. The course instructor will also have the ability to edit the calendar as often as the course instructor would like. Since the course instructor not only runs the website, but also uses it in class as a reference point, the course instructor will be able to utilize the website in a similar manner to the other users, especially recommenders.

1.2.2 Software Engineering Student Usage Case Narrative

The student enrolled in Software Engineering will have the ability to access the calendar, along with the syllabus and resource links for the course. The student enrolled in Software Engineering will be able to go back and forth between semesters without becoming confused and will have the ability to use the consistent menu to go back to the main page. The student enrolled in Software Engineering will be able to use the links provided on the website to go to certain websites of the college. There will be four external links for the Software Engineering student to utilize, which will consist of links to Siena College's main site, the Siena College Computer Science Department site, the Siena College School of Science site, and the Siena College Career Center site. These links will be very important for the Software Engineering student because the four sites are frequently used by all students at Siena College. Also, the student enrolled in Software Engineering will be able to navigate to, as well as use the search function to get to a team page, either the site of the Software Engineering student's team or the sites of previous teams. The student enrolled in Software Engineering will need to see previous teams' sites to use as examples. Lastly, the student enrolled in Software Engineering will be able to use the website to show the team's accomplishments by providing a link to the team website.

1.2.3 Recommenders Usage Case Narrative

Recommenders will use the website mostly for references for Software Engineering students. Recommenders will be able to search for a specific Software Engineering student by the Software Engineering student's name, the name of the Software Engineering student's team, or the Software Engineering student's graduation year. When a recommender searches with the information the recommender provides, the recommender will be taken to a page with general information about the Software Engineering student being searched. The page will contain the resume, picture, class, and other background information of the Software Engineering student. Recommenders will need this information for references because then appropriate recommendations can be given by the recommenders. A URL will take recommenders to the Software Engineering website. This will benefit students by reminding the recommender who the student is and allows them to write a more personal recommendation.

1.2.4 Family/Friend Usage Case Narrative

The Software Engineering website is not just a tool that Software Engineering students use to keep up to date in the Software Engineering class; it is also a way to showcase talents and accomplishments of Software Engineering students. Therefore, it is important that family members and friends can easily find Software Engineering students on the website. Family members and friends will be able to search for a particular Software Engineering student by the Software Engineering student's name. A URL will take family members and friends to the Software Engineering website.

1.2.5 Alumnus/Alumna Usage Case Narrative

As previously stated, the website is the means by which a Software Engineering student can display the Software Engineering student's achievements through the Software Engineering student's own website. Once Software Engineering students have become alumni, it may be so desired to see the achievements when alumni were Software Engineering students. Alumni will be able to do so by using the search function to find themselves. Since alumni may not remember team names or names of teammates, the search function will assist alumni in doing so. This ability to search will be for reminiscent reasons as well as professional reasons. Alumni may just want to revisit the past, or alumni may want to use the website as a way to showcase past accomplishments, either to prospective employers or the average person. Additionally, if one alumnus, the interviewee, is being interviewed by a person, the interviewer, who happens to be a fellow alumnus, the interviewee can go to the Software Engineering site and see what type of Software Engineering experience the interviewer had when the interviewer was enrolled in Software Engineering.

1.3 Functional Requirements Inventory

View Website

- Will be able to view the Software Engineering course Homepage.
- Will be able to click links to this year's team pages.
- Will be able to click link to Siena College website.
- Will be able to click link to Siena Computer Science website.
- Will be able to click link to Siena School of Science website.
- Will be able to click link to Siena Career Center website.
- Will be able to view the Software Engineering I page.
- Will be able to view Software Engineering I Calendar page.
- Calendar will open to the current date (with notification if outside semester).
- Will be able to select a date to display to.
- Will be able to view Software Engineering I Grading page.
- Will be able to view the Software Engineering I Syllabus page.
- Will be able to view the Software Engineering II page.
- Will be able to view the Software Engineering II Calendar page.
- Will be able to view the Software Engineering II Grading page.
- Will be able to view the Software Engineering II Syllabus page.
- Will be able to view the Software Engineering II Speakers page.
- Will be able to view the Software Engineering II Killer Robot page.
- Will be able to view the Search page.
- Will have a consistent menu system that will allow users to navigate to all pages.

Searching

- Will be able to search by student name.
- Will be able to search by team name.
- Will be able to search by course year.
- Will be able to search by client name.
- Will be able to select Student Name, Team Name, Client Name, or Course Year from the displayed results.
- Will be able view page for a student.
- Will be able to view page for a software team.
- Will be able to view page for a team year.
- Will resize photos of teams and individuals to stay proportional given a static width.
- Will be able to print the result pages for Students and Teams
- Will be able to click link view all teams.
- Will be able to click link to view all course years.

1.4 Non-Functional Requirements Inventory

Non-functional requirements are requirements that have a specific criteria used to critique the operation of a system. Some of the criteria typically used are user interface, aesthetics, and more. These requirements explain what R.O.S.E.S is to *be* instead of what it *does*. Below is the list of our non-functional requirements inventory.

- The system must be aesthetically pleasing
- The system must be easily navigable
- The system must be easily maintainable
- The system must be easily modifiable
- The system must be editable

1.5 Future Enhancements

While we were able to fulfill most, if not all, our requirements, there is still room for improvement. First, while we have drastically made the web site more aesthetically pleasing compared to the previous one, there is always room from improvement. Due to time constraints, we were unable to take advantage of some technologies such as jQuery, jQuery UI, and AJAX. With the use of these technologies, we could implement things such as auto-fill when a user inputs something for a search, and make a more interactive menu system. Secondly, we could cross link more often with our results. For instance, when a user clicks on a student name from results.php, on that student's result page we could link to the clients result page (client.php). Same could be done for course year. Currently, we just display these items as text. Lastly, we could of tried and automate more things for our client. Making a user interface for adding and editing data in the database, automatically displaying the most current teams site links on the index.php page, and automatically updating the allyears.php and allteams.php pages are just some ideas. Lastly, we could enhance the security of our website. With our current system, we are passing PHP variables via the URL. We don't currently check for SQL injection. If time permitted, we would prepared statements to check for SQL injections.

2 External Design Specifications

2.1 User Displays & Report Formats

Here we have a fully functional website for our client to view. We have extensively gone through our functional and non-functional requirements and have come up with the product below. We believe this site fulfills all of our client's desires that they stated. For your convenience, we have listed some screen shots below. However, the site is live and can be viewed at:

http://oraserv.cs.siena.edu/~perm_css/at/

2.1.1 Home Page

SIENA COLLEGE SOFTWARE ENGINEERING

Home | Software Engineering I | Software Engineering II | Search

CSIS-410. Software Engineering I (3 credits)

Introduces the concepts of structured system analysis. Presents principles of software engineering including techniques for planning, specification, and system design. Specifications for an actual system will be developed. Prerequisite: CSIS—225. Required for all senior-level Computer Science majors

CSIS-415. Software Engineering II (3 credits)

Implementation of a software engineering methodology. Complete design, testing, and verification of a system developed using a programming team concept. Structured design and documentation. Prerequisite: CSIS—410

Current Software Engineering Teams

[Code Shark Solutions](#) [Empire Solutions](#)

Siena College | Siena College C.S. Department | Siena College School of Science | Siena College Career Center

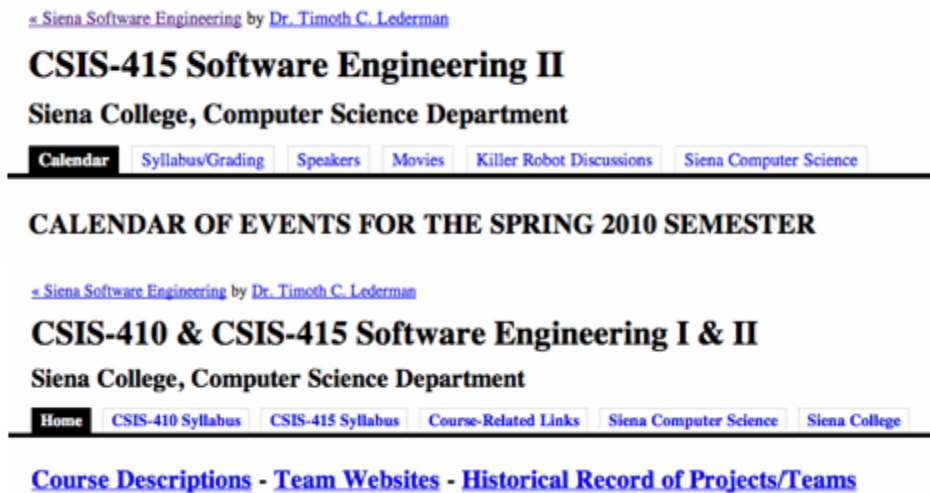
The home page is the initial page the user will be directed to when first going to the site. There will be a small paragraph describing the course as a whole, along with some image that the client desires, and links to the current teams in Software Engineering. Descriptions of the menus on the site will be described elsewhere.

2.1.2 Main Menu

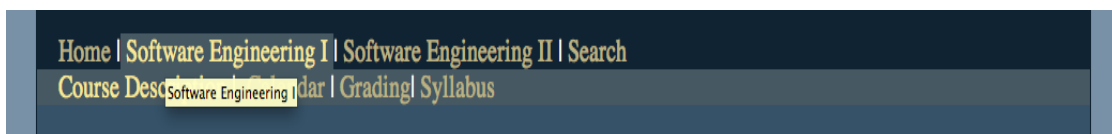


For our main menu, which will be located at the top left section of the screen, consistency is top priority. One of the major issues of the current site is the confusing navigation (shown below). This menu will be included on every page of the site. The items are links to the home page, Software Engineering I syllabus page, Software Engineering II syllabus page, and the search page. In addition, the banner with the text “SIENA SOFTWARE ENGINEERING” will link to the home page (index.php). The currently displayed page will have its name in color.

Current menus:



2.1.3 Sub Menu



The sub menu is for additional pages for items on the main menu. Software Engineering I & II are the pages that will have a sub menu. A page for the course description, course calendar, grading, and syllabus will be on both Software Engineering I & II’s sub menus. However, Software Engineering II’s sub menu will also include links to a speaker’s page and killer robot page. The currently displayed page will have its name in color.

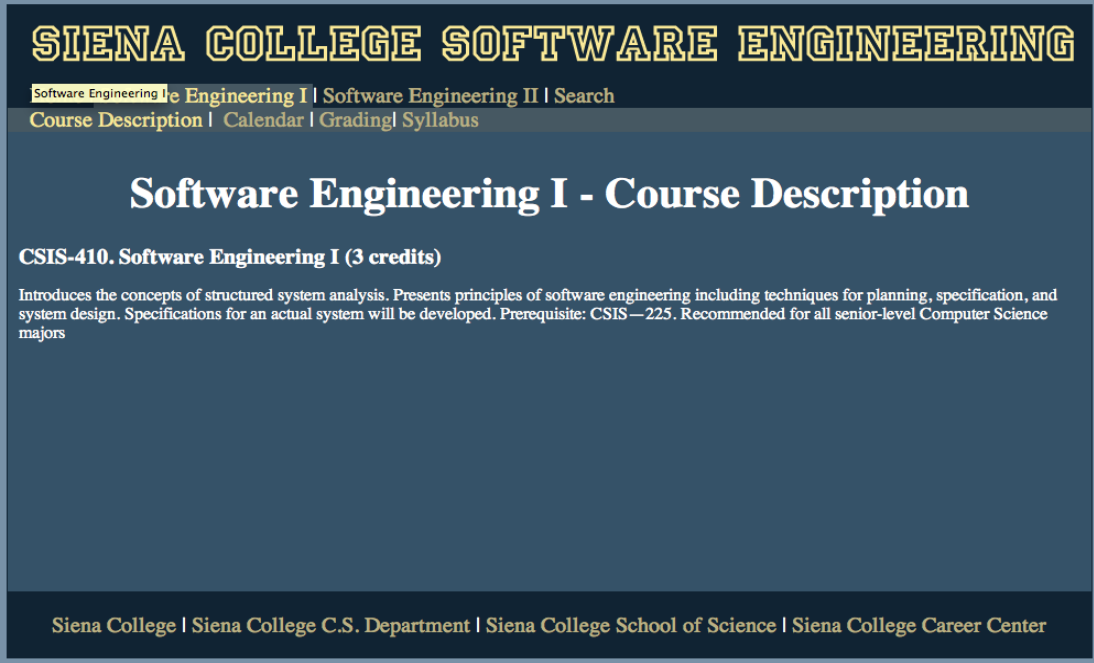
2.1.4 Footer Links

A screenshot of a dark blue footer bar with a light blue border. It contains the following text in a light blue font: Siena College | Siena College C.S. Department | Siena College School of Science | Siena College Career Center.

Siena College | Siena College C.S. Department | Siena College School of Science | Siena College Career Center

As requested by our client, we will have a set of links on the bottom of each page. These items include a link to Siena College website, Siena College C.S. department website, Siena College School of Science website, and the Siena College Career Center website.

2.1.5 Software Engineering I – Course Description

A screenshot of a web page for 'Software Engineering I - Course Description'. The page has a dark blue background with white and yellow text. At the top, it says 'SIENA COLLEGE SOFTWARE ENGINEERING' in large yellow letters. Below that is a navigation menu with 'Software Engineering I' highlighted. The main title is 'Software Engineering I - Course Description'. The course code is 'CSIS-410. Software Engineering I (3 credits)'. The description follows: 'Introduces the concepts of structured system analysis. Presents principles of software engineering including techniques for planning, specification, and system design. Specifications for an actual system will be developed. Prerequisite: CSIS—225. Recommended for all senior-level Computer Science majors'. At the bottom, there is a footer with the same navigation links as in 2.1.4.

SIENA COLLEGE SOFTWARE ENGINEERING

Software Engineering I | Software Engineering II | Search
Course Description | Calendar | Grading | Syllabus

Software Engineering I - Course Description

CSIS-410. Software Engineering I (3 credits)

Introduces the concepts of structured system analysis. Presents principles of software engineering including techniques for planning, specification, and system design. Specifications for an actual system will be developed. Prerequisite: CSIS—225. Recommended for all senior-level Computer Science majors

Siena College | Siena College C.S. Department | Siena College School of Science | Siena College Career Center

This is the page where the course description of Software Engineering I will be. When a user clicks on the Software Engineering I click on the menu, this is where they'll be directed.

2.1.6 Software Engineering I - Calendar

Home | Software Engineering I | Software Engineering II | Search
Course Description | Calendar | Grading | Syllabus

Software Engineering I - Calendar

COURSE CALENDAR FOR THE FALL 2010 SEMESTER, calendar for the [spring semester](#).

Month: Day:

Month	Day	In-Class Activities	Assignments
September	8	Orientation	Send instructor e-mail nominations for team leaders
September	10	<ul style="list-style-type: none"> Vote on Team/Group Leaders (in class) email/voicemail etiquette How to shake hands and make introductions Teams/Groups formed by team leaders & Dr. Lederman (after class) 	<ul style="list-style-type: none"> Definition: Software Engineering E-mail etiquette Phone & Voicemail etiquette Get your resume ready
September	13	<ul style="list-style-type: none"> Discuss first meeting with client Discussion : Software Plan Outlines 	<ul style="list-style-type: none"> Decide upon team member's "roles/titles" by Friday Look at previous Software Plans Various models for Software Engineering Attend a Career Center Senior Meeting
September	15	<ul style="list-style-type: none"> Speaker - Project Management 	<ul style="list-style-type: none"> Decide upon an evening for Dining Etiquette Decide on Final Exam time/date (in RR-328)

Siena College | Siena College C.S. Department | Siena College School of Science | Siena College Career Center

The calendar for the new website will be more polished than the current one (below). Instead of scrolling the entire page, the user can scroll within the page. In addition, the calendar will be implemented to display the current date in the window. If the current date is not an item on the calendar, the calendar will go to the closest next date. In addition, the calendar will start from the top when the date is past the last date on the calendar. Lastly, we allow the user to input a date to go to, and the calendar will then display that date. A notification will be displayed on the browser if the user chooses a date outside of the semester (This notification will be on all calendars on the website). A link to the spring semester calendar is also included. Our client decided to not include the course related links page in the new Software Engineering site, so all those links will also be placed in the calendar.

Current calendar page:

CALENDAR OF EVENTS FOR THE FALL 2010 SEMESTER



Course Description

Introduces the concepts of structural system analysis. Presents principles of software engineering including techniques for planning, specification, and system design. Specifications for an actual system will be developed. Prerequisite: CSES-125. Recommended for all senior-level Computer Science majors (Required for all major who matriculate Fall 2009 or later).

Month	Day	In-Class Activities	Assignments
September	8	Orientation	<ul style="list-style-type: none"> Send instructor e-mail nominations for team leaders
September	10	<ul style="list-style-type: none"> Vote on Team/Group Leaders (in class) email/voicemail etiquette How to shake hands and make introductions Teams/Groups formed by team leaders & Dr. Lederman (after class) 	<ul style="list-style-type: none"> Definition: Software Engineering E-mail etiquette Phone & Voicemail etiquette Get your resume ready
September	13	<ul style="list-style-type: none"> Discuss first meeting with client Discussion : Software Plan Outlines 	<ul style="list-style-type: none"> Decide upon team member's "roles/titles" by Friday Look at previous Software Plans Various models for Software Engineering

Out-of-semester Notification (in Safari):

The screenshot shows a Safari browser window displaying the 'SIENA COLLEGE SOFTWARE ENGINEERING' website. The page title is 'Software Engineering I | Software Engineering II | Search'. The navigation menu includes 'Home | Software Engineering I | Software Engineering II | Search | Course Description | Calendar | Grading | Syllabus | Speakers | Killer Robot'. The main content area is titled 'Software Engineering I | Software Engineering II | Search | Calendar' and 'COURSE CALENDAR FOR THE SPRING SEMESTER'. A modal dialog box is overlaid on the calendar, displaying the URL 'http://oraserv.cs.siena.edu' and the message 'You have entered a date outside of the semester'. The dialog box has a compass icon and an 'OK' button. The calendar content is as follows:

Tuesday April 19	Presentation:	"The Case of the Killer Robot", led by Empire Unlimited 10. The Trial of Randy Samuels
	Discussion:	"The Case of the Killer Robot", led by Code Shark Solutions 11. Who Really Killed Bart Matthews
	Walk-Through:	Development Walk-Through
Tuesday April 26	Deliver:	By noon: Acceptance Test Documents
Tuesday April 26	Presentations:	Tuesday: Acceptance Test Presentations Joe Piperata, BS, Computer Science (Siena College, 1995), joep@cisco.com Cisco Systems "Evolving Hardware & Software Solutions for the Next Generation Data Center"
Friday April 29	Demonstrations:	Friday: Academic Celebration - each team will demonstrate its results and documentation (tentative date)
Monday May 2	Party:	Monday: End of Semester Party (8 pm) in Roger Bacon 340 - Look for Email Message - Turn in <i>evaluations</i> , semester logs, updated resumes, and legacies (ALL ARE REQUIRED)

2.1.7 Software Engineering I - Grading

Software Engineering I - Grading

COURSE GRADING FOR THE FALL 2010 SEMESTER

50% Exams (Midterm: 25%, Final: 25%)

50% Project (10%, 20%, 20%)
The project portion of the grade will have three components:

- 1. Project Grades -- which are based on:
 - a) Results
 - b) Documentation
 - c) Demonstration of mastery of course concepts
 - d) Team website
- 2. Individual Time-Logs -- a record of the time YOU worked on the project
- 3. Rating Grades (done after each phase and at the end of the semester), Which includes:
 - a) Ratings of group members by Group Leaders
 - b) Ratings of group members/leaders by Instructor
 - c) Peer Evaluations -- your personal assessment of the distribution of project work over your team

(not graded in Fall 2009) Presentations:

- Your level of understanding of what you presented
- The quality of the material you present
- The quality of your presentation-style

Grade Deductions: One point will be subtracted from the final grade for each time an assignment is completed late, or, not completed properly:

- Resume review by Career Center (twice)
- Carry out a Career Center mock interview (6 components)
 - Cover Letter
 - Resume
 - References
 - Preparation for the interview
 - Seriousness in role-playing during the interview
 - Interaction during the interview

This page will include all the information regarding the grading of Software Engineering I.

2.1.8 Software Engineering I - Syllabus

Software Engineering I - Syllabus

COURSE SYLLABUS FOR THE FALL 2010 SEMESTER

Dr. Timothy Lederman
Office Hours: Wednesday, & Friday 9:30 am - 12:00 noon
And, by appointment (made at least 24 hours in advance via email or phone)

Office: Roger Bacon 326
Phone: 783-4197
email: lederman@siena.edu

This syllabus gives an overview of the course (with some information about the second semester, CSIS-415), including information on projects, schedules, teams, grading, and other matters. I update and revise this syllabus throughout the semester. Please keep this link for a reference throughout the entire year.

PROJECTS: (CSIS-410 and CSIS-415)

Two projects will be presented and discussed in class during the first class of the semester. A brief and terse description of the projects will be provided by the prospective clients on the first day of class.

1. Dr. Robert Yoder, Associate Professor (and Department Head) of Computer Science, Siena College
Produce a weekly display of classroom usage for the Computer Science Department. This should provide displays by room and by faculty and as a composite for all rooms and faculty.

3. Dr. Timothy Lederman, Professor of Computer Science
Produce a better set of webpages for the information provided on the Siena College Software Engineering websites. This undertaking will include correcting all former teams' websites so that are web-page-addressing is relative.

During the first week, teams will be selected. The teams will remain the same during the entire semester

The projects will be carried over into the second semester.

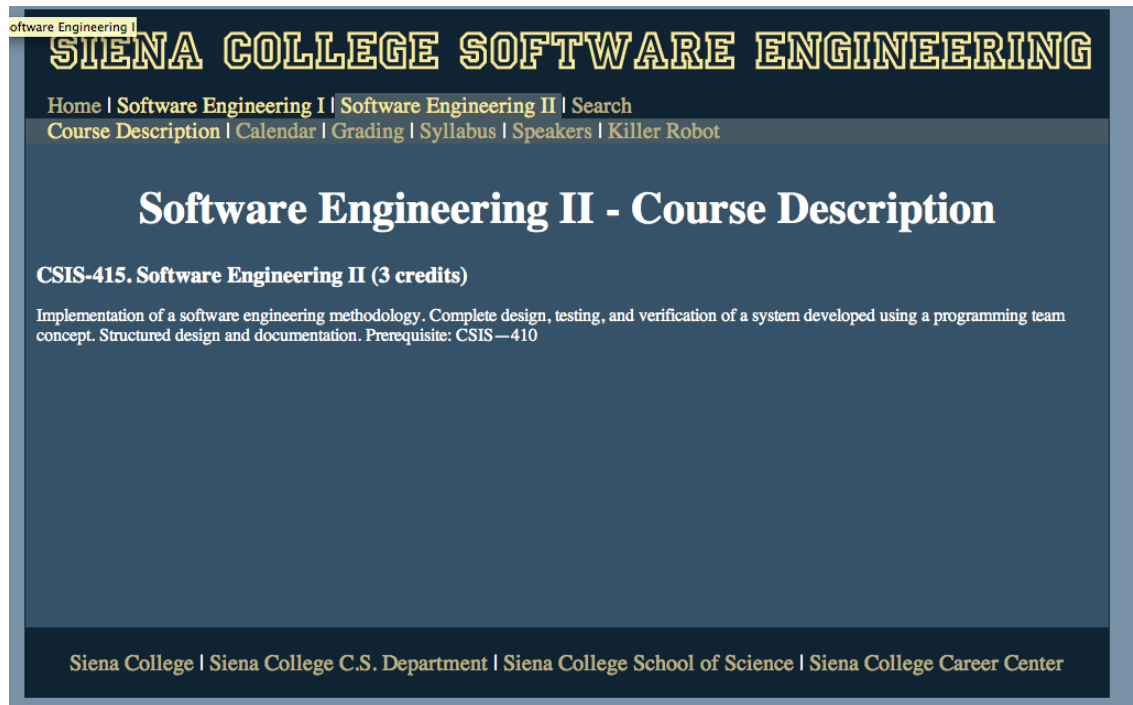
Team leaders will be elected for the first semester. At the beginning of the second semester, teams might be reorganized and the instructor will select new team leader(s).

WORK BREAKDOWN BY SEMESTER

First Semester:

This page will act as the online version of the syllabus for Software Engineering I.

2.1.9 Software Engineering II – Course Description



The screenshot shows a web page for Siena College Software Engineering. The header includes the text "software Engineering" in a small box, followed by "SIENA COLLEGE SOFTWARE ENGINEERING" in large, yellow, outlined letters. Below this is a navigation menu with links: "Home | Software Engineering I | Software Engineering II | Search | Course Description | Calendar | Grading | Syllabus | Speakers | Killer Robot". The main heading is "Software Engineering II - Course Description" in white text on a dark blue background. Below the heading is the course title "CSIS-415. Software Engineering II (3 credits)" and a brief description: "Implementation of a software engineering methodology. Complete design, testing, and verification of a system developed using a programming team concept. Structured design and documentation. Prerequisite: CSIS—410". At the bottom, there is a footer with links: "Siena College | Siena College C.S. Department | Siena College School of Science | Siena College Career Center".

This is the page where the course description of Software Engineering II will be. When a user clicks on the Software Engineering II click on the menu, this is where they'll be directed.

2.1.10 Software Engineering II - Calendar

Course Description | [Calendar](#) | Grading | Syllabus | Speakers | Killer Robot

Software Engineering II - Calendar

COURSE CALENDAR FOR THE SPRING 2011 SEMESTER, calendar for the [fall semester](#).

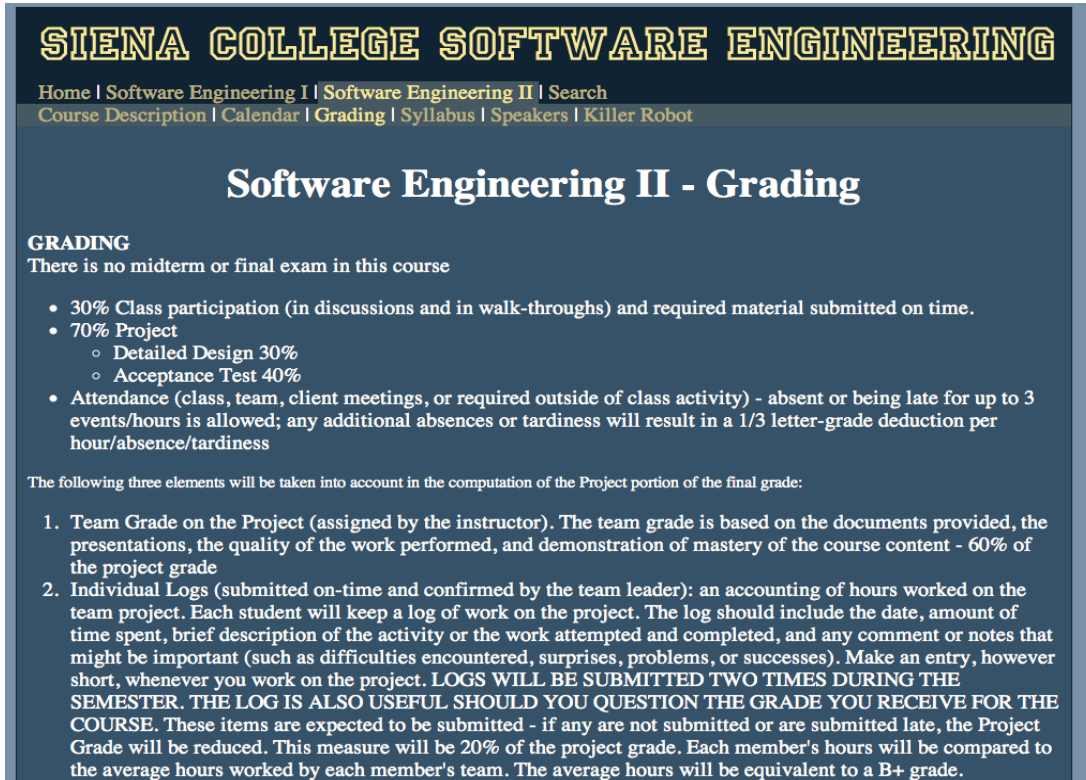
Month: Day:

Tuesday April 26	<i>Deliver:</i>	By noon: Acceptance Test Documents
Tuesday April 26	<i>Presentations:</i>	Tuesday: Acceptance Test Presentations
Friday April 29	<i>Demonstrations:</i>	Friday: Academic Celebration - each team will demonstrate its results and documentation (tentative date)
Monday May 2	<i>Party:</i>	<p>Monday: End of Semester Party (8 pm) in Roger Bacon 340 - Look for Email Message</p> <ul style="list-style-type: none"> - Turn in <i>evaluations</i>, semester logs, updated resumes, and legacies (ALL ARE REQUIRED) - Team Websites Must Be Up-To-Date by 8am this morning. - Team leaders, also turn in: team evaluations and attendance - Team Songs will be presented (at 9 pm) and video-recorded. - Background movie: "The Forbidden Planet" (1956, 98 minutes) <p>May 4: Reading Day</p> <p>May 5-?: Final Examinations (no final examination for CSIS-415 Software Engineering II)</p>

Siena College | Siena College C.S. Department | Siena College School of Science | Siena College Career Center

This is the calendar page for Software Engineering II. It will have the same functionality and design as the calendar page for Software Engineering I.

2.1.11 Software Engineering II – Grading



SIENA COLLEGE SOFTWARE ENGINEERING

Home | [Software Engineering I](#) | [Software Engineering II](#) | [Search](#)
[Course Description](#) | [Calendar](#) | [Grading](#) | [Syllabus](#) | [Speakers](#) | [Killer Robot](#)

Software Engineering II - Grading

GRADING
There is no midterm or final exam in this course

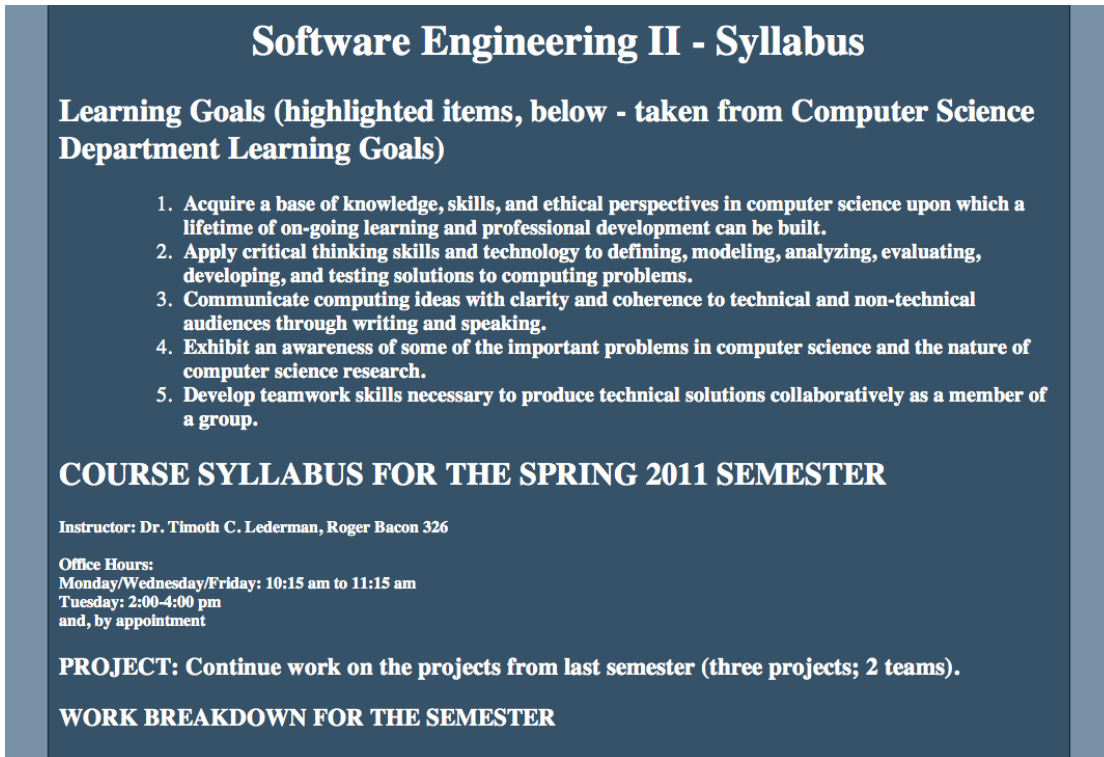
- 30% Class participation (in discussions and in walk-throughs) and required material submitted on time.
- 70% Project
 - Detailed Design 30%
 - Acceptance Test 40%
- Attendance (class, team, client meetings, or required outside of class activity) - absent or being late for up to 3 events/hours is allowed; any additional absences or tardiness will result in a 1/3 letter-grade deduction per hour/absence/tardiness

The following three elements will be taken into account in the computation of the Project portion of the final grade:

1. Team Grade on the Project (assigned by the instructor). The team grade is based on the documents provided, the presentations, the quality of the work performed, and demonstration of mastery of the course content - 60% of the project grade
2. Individual Logs (submitted on-time and confirmed by the team leader): an accounting of hours worked on the team project. Each student will keep a log of work on the project. The log should include the date, amount of time spent, brief description of the activity or the work attempted and completed, and any comment or notes that might be important (such as difficulties encountered, surprises, problems, or successes). Make an entry, however short, whenever you work on the project. LOGS WILL BE SUBMITTED TWO TIMES DURING THE SEMESTER. THE LOG IS ALSO USEFUL SHOULD YOU QUESTION THE GRADE YOU RECEIVE FOR THE COURSE. These items are expected to be submitted - if any are not submitted or are submitted late, the Project Grade will be reduced. This measure will be 20% of the project grade. Each member's hours will be compared to the average hours worked by each member's team. The average hours will be equivalent to a B+ grade.

This is the grading page for Software Engineering II. It will have the same functionality and design as the grading page for Software Engineering I.

2.1.12 Software Engineering II – Syllabus



Software Engineering II - Syllabus

Learning Goals (highlighted items, below - taken from Computer Science Department Learning Goals)

1. Acquire a base of knowledge, skills, and ethical perspectives in computer science upon which a lifetime of on-going learning and professional development can be built.
2. Apply critical thinking skills and technology to defining, modeling, analyzing, evaluating, developing, and testing solutions to computing problems.
3. Communicate computing ideas with clarity and coherence to technical and non-technical audiences through writing and speaking.
4. Exhibit an awareness of some of the important problems in computer science and the nature of computer science research.
5. Develop teamwork skills necessary to produce technical solutions collaboratively as a member of a group.

COURSE SYLLABUS FOR THE SPRING 2011 SEMESTER

Instructor: Dr. Timothy C. Lederman, Roger Bacon 326


Office Hours:
Monday/Wednesday/Friday: 10:15 am to 11:15 am
Tuesday: 2:00-4:00 pm
and, by appointment

PROJECT: Continue work on the projects from last semester (three projects; 2 teams).

WORK BREAKDOWN FOR THE SEMESTER

This is the syllabus page for Software Engineering II. It will have the same functionality and design as the syllabus page for Software Engineering I.

2.1.13 Software Engineering II – Speakers



Throughout the Spring semester, Siena College Computer Science Alumni and other professionals are scheduled to make presentations about how their organizations develop software. The speakers provide information on how they employ different models for Software Engineering, with emphasis on requirements, design, and testing. Speakers discuss techniques, policies, and procedures that are followed at their organization (or that are not being followed, or that have been followed but are no longer deployed). In addition, the speakers discuss their career paths, their continued education (graduate courses, graduate degrees, training courses, and professional certifications), and how they balance their personal and private lives.

All presentations are in Roger Bacon 328, and they start at 6:00 pm, and they last about an hour.

Month: Day:


Tuesday April 12	<p>John LaBatt, Esq, BS in Computer Science (1993, Siena); MS in Computer Science (1995, RPI), JD (2001, Albany Law School) Patent Attorney, Hoffman Warnick LLC</p> <p>Mike Cusack, Esq, BS in Computer Science (1986); JD (1990, Albany Law School), cusacklaw@verizon.net Attorney at Law (Telecommunications, Land Use, Environmental and Municipal Law), Counsel to Young, Sommer, Ward, Ritzenberg, Baker & Moore, LLC.</p> <p><i>"Does The World Need More Lawyers? Maybe, with a Computer Science degree?"</i></p>
Tuesday April 19	NO SPEAKER - <i>Killer Robot Discussions</i> ; and, <i>Benefits/Retirement</i>
Tuesday April 26	<p>Acceptance Test</p> <p>Joe Piferata, BS, Computer Science, Siena College, 1995, joep@cisco.com Cisco Systems</p> <p><i>"Evolving Hardware & Software Solutions for the Next Generation Data Center"</i></p>

This page is dedicated to all the speakers for the semester. The calendar here has the same functionality as the Software Engineering I and II calendars.

2.1.14 Software Engineering II – Killer Robot

Software Engineering II - Kill Robot Discussion

"The Case of the Killer Robot" - Discussions for the Spring 2011 Semester



The Killer Robot Papers
Richard G. Epstein
West Chester University of PA, West Chester, PA 19383
epstein@golden.wcupa.edu
Copyright © 1989,1994 Richard G. Epstein

Permission is granted to copy this material for use in classroom instruction at a college or university. This material may not be copied for any other purpose without express written permission of the author.

This online archive contains the Killer Robot Papers consisting of seven newspaper articles, one journal article and one Sunday newspaper magazine interview. The Case of the Killer Robot book, published by John Wiley & Sons (Epstein 1997), contains a lot more material.

The persons and institutions involved in this scenario are entirely fictitious (except for the references to the venerable computer scientists: Ben Shneiderman and Jim Foley). Silicon Valley was chosen as the location for the accident because Silicon Valley is an icon of high technology. All of the persons, business entities and institutions named in Silicon Valley are purely fictitious. Silicon Valley University is purely fictitious and has nothing to do with any actual university in Silicon Valley or elsewhere. It is just a fictitious device. N.K.Taylor@hw.ac.uk

Questions for Killer Robot Discussions

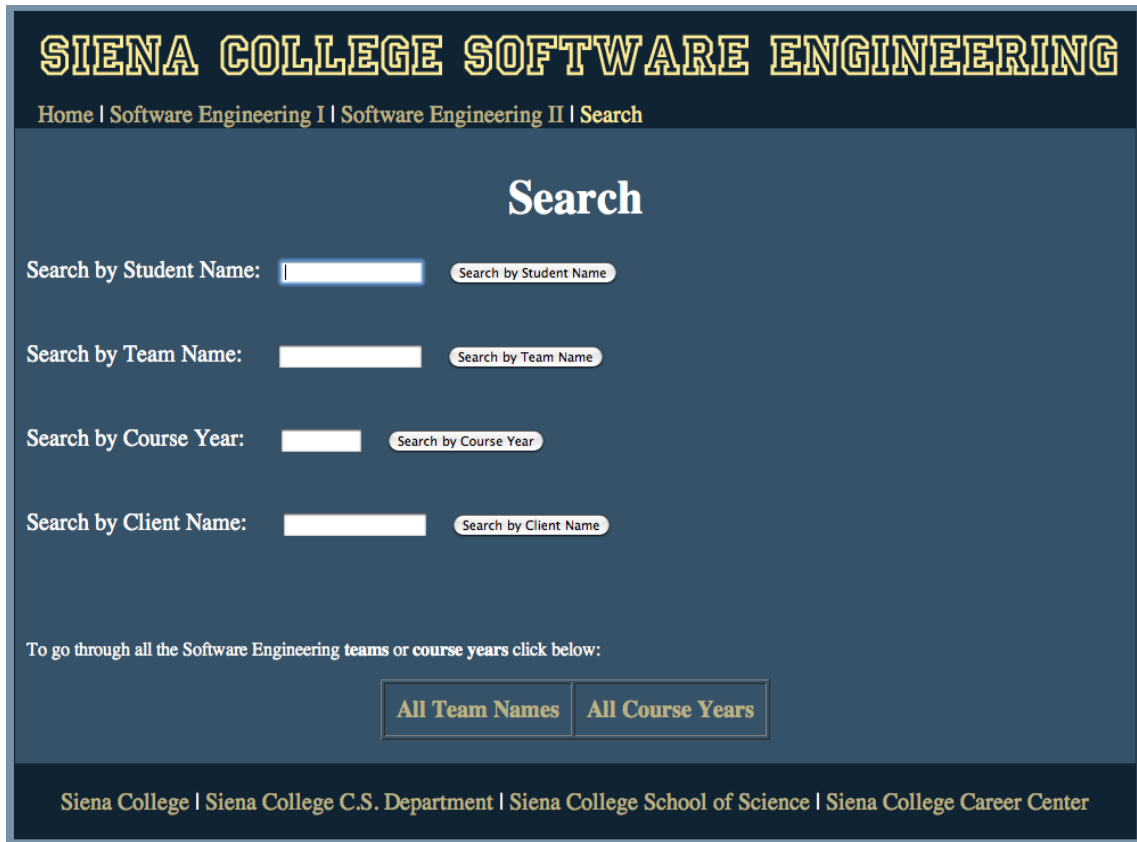
Month: Day:

Tuesday April 26	Acceptance Test Presentations	
Tuesday May 2	Party in RB-340	

Questions for Killer Robot Discussions

This page is where all the dates of the killer robot discussion will be. The calendar here has the same functionality as the Software Engineering I and II calendars.

2.1.15 Search Page



A new feature on the new Software Engineering website will be the search page. Here, the user can search by student name, team name, course year, or client. If the user wishes, they can view all team names and course years (images below) by clicking on their respective links.

2.1.15 Search Page Continued

All course years page:

SIENA COLLEGE SOFTWARE ENGINEERING

Home | Software Engineering I | Software Engineering II | Search

All Software Engineering Course Years

(for which we have records)

1984-1985	1989-1990	1994-1995	1999-2000	2004-2005	2009-2010
1985-1986	1990-1991	1995-1996	2000-2001	2005-2006	2010-2011
1986-1987	1991-1992	1996-1997	2001-2002	2006-2007	
1987-1988	1992-1993	1997-1998	2002-2003	2007-2008	
1988-1989	1993-1994	1998-1999	2003-2004	2008-2009	

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2.1.15 Search Page Continued

All teams page:

SIENA COLLEGE SOFTWARE ENGINEERING

Home | Software Engineering I | Software Engineering II | Search

All Software Engineering Teams

Team Websites, 2010-2011
Team Members for Fall 2010 - Team Members for Spring 2011

Empire Unlimited | Code Shark Solutions

Team Websites, 2009-2010 | Team Members for Fall 2009 - Team Members for Spring 2010

518 Interactive | Digital Evolution | Infinite Solutions

Team Websites, 2008-2009 | Team Members for Fall 2008 and Spring 2009

ID-10t Consultants | Phoenix Tech

2.1.16 Results Page

2.1.16.1 By Student Name

Results - dan					
Back to Search					
First Name	Last Name	Team Name(s)	Project Name(s)	Client Name(s)	Course Year
Dan	Hopkins	Digital Foundry	SCIPnet (Siena College Internship Program)	Client 1: Timoth Lederman	2002 - 2003
Dan	Balon	NoDrumSolo	Financial Aid Services System FASS	Client 1: Noel Hogan	1994 - 1995
Dan	Rossmann	Computer Literate Unemployed Educated Lively Engineering Students	Administrative Information System	Client 1: Donald Weaver	1993 - 1994
Dan	Hoffman	No Name11	Lenox Town Hall Assessment System	Client 1:	1984 - 1985
Daniel	Rotondo	Code Shark Solutions	Redesign Of the Software Engineering Site R.O.S.E.S.	Client 1: Timoth Lederman	2010 - 2011
				Client 1:	

This page is where the user will be directed after attempting a search a student name. The user will be given a table of student name, team name(s) and acronym, project name(s) and acronym, client name(s), and course years that are close to what the user inputted. They will then be able to click on the results in the table to get more information on the selected link.

2.1.16.2 By Team Name



Team Name	Project Name	Client Name(s)	Course Year
Code Shark Solutions C.S.S.	Redesign Of the Software Engineering Site R.O.S.E.S.	Client 1: Timoth Lederman	2010 - 2011
Infinite Solutions	Networking for Antique Truck Owners N.A.T.O.	Client 1: Timoth Lederman	2009 - 2010
Initrode Solutions	Alumni Spotlight Web Systems ASWS	Client 1: Eric Breimer	2006 - 2007
MAJIK Software Solutions	Virtual Network Device Mapping System	Client 1: Eric Crossman Client 2: Ken Swarner	2006 - 2007
Performance Software Solutions	Automated Grading System for Microsoft Excel Spreadsheets	Client 1: Jami Cotler Client 2: Scott	2005 - 2006

This page is where the user will be directed after attempting a search a team name. The user will be given a table of team name and acronym, project name and acronym, client name(s), and course years that are close to what the user inputted. They will then be able to click on the results in the table to get more information on the selected link.

2.1.16.3 By Course Name

Results - 1999			
Back to Search			
Team Name	Project Name	Client Name(s)	Course Year
CompWizards	Siena Online Information System SOLIS	Client 1:	1999 - 2000
Imperial Engineering	electronic Application Tracking System eATS	Client 1: Kenneth Wittig	1999 - 2000
Computer Science Geek Posse	Admissions Center Technology Utilization Program A.C.T.U.P.	Client 1: Ned Jones	1999 - 2000
Dirty Half Dozen	Universally Accessible Student Catalog UASC	Client 1:	1999 - 2000
The Dapp's Pack	Web development software	Client 1: Noel Hogan	1998 - 1999
Little Indian Software	Virtual College	Client 1: Noel Hogan Client 2: Jonathan Madden	1998 - 1999

This page is where the user will be directed after attempting a search a course year. The user will be given a table of team name and acronym, project name and acronym, client name(s), and course years that are close to what the user inputted. If a team has no client, we leave Client 1: field blank. They will then be able to click on the results in the table to get more information on the selected link.

2.1.16.4 By Client Name

Results - Lederman			
Back to Search			
Client Name	Team Name	Project Name	Course Year
Timoth Lederman	Code Shark Solutions C.S.S.	Redesign Of the Software Engineering Site R.O.S.E.S.	2010 - 2011
Timoth Lederman	Infinite Solutions	Networking for Antique Truck Owners N.A.T.O.	2009 - 2010
Timoth Lederman	InnoSmart Technologies	Simnet View	2007 - 2008
Timoth Lederman	EIN Systems	Remote Access Environmental Monitoring System RAEMS	2005 - 2006
Timoth Lederman	EdgeTech Development	TCP/IP Packet Reader	2004 - 2005
Timoth Lederman	SaintSoft	Environmental Monitoring System	2005 - 2006
Timoth Lederman	Mirage Incorporated	TCP/IP packet descriptor	2003 - 2004

This page is where the user will be directed after attempting a search a client name. The user will be given a table of team name and acronym, project name and acronym, client name, and course years that are close to what the user inputted. They will then be able to click on the results in the table to get more information on the selected link.

2.1.17 Results – Student Information

[Print this page](#)
[Back to Results](#)

Daniel Nakhla

 <p style="font-size: small; margin: 0;">Pear Software</p> <p>Pear Software</p> <p>Team Acronym:</p> <p>Project Name: The Electronic Spreadsheet Automated Teaching System</p> <p>Project Acronym:</p> <p>Client(s): Scott Hunter, Jami Cotler</p> <p>Team Song</p> <p>Project Demo:</p> <p>http://siena-software-teams.com/~perm_pear/eSata/protoInst/</p>	<p>2006 - 2007</p> <p>Daniel Nakhla</p>  <p>Team Members Résumés:</p> <p>Colin Cubinski</p> <p>Daniel Nakhla</p> <p>Matthew Restivo</p> <p>James Rocco</p> <p>Justin Valentini</p>
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If the user selects a student name, the page above will appear. The information on the left side of the table will include the individuals' software engineering team name, team picture, team project name, the project name's acronym, client name, link to team website, and if they have it, links to their team song and project demo. On the right column will be the course years the individual was in Software Engineering, a picture of the individual, their first and last name, link to their resume, and links to all the other team members resumes along with the first and last names. A print button is also on the page to print the page.

View of print screen:

Home | Software Engineering I | Software Engineering II | Search

[Print this page](#) [Back to Results](#)


Daniel Nakhla

 <p>Pear Software</p> <p>Team Acronym:</p> <p>Project Name: The Electronic Spreadsheet Automated Teaching System</p> <p>Project Acronym:</p> <p>Client(s): Scott Hunter, Jami Cotler</p> <p>Team Song</p> <p>Project Demo:</p> <p>http://siena-software-teams.com/~perm_pear/eSata/protoInst/</p>	<p>2006 - 2007</p> <p>Daniel Nakhla</p>  <p>Team Members Résumés:</p> <p>Colin Cubinski</p> <p>Daniel Nakhla</p> <p>Matthew Restivo</p> <p>James Rocco</p> <p>Justin Valentini</p>
---	--

2.1.18 Results – Team Information

[Print this page](#)
[Back to Results](#)

Digital Evolutions

 <p>Digital Evolutions</p> <p>Team Acronym:</p> <p>Project Name: SaintBook</p> <p>Project Acronym:</p> <p>Client(s): Eric Brelmer</p> <p>Team Song</p> <p>Project Demo:</p> <p>http://www.sb.sienacs.com/source_files/php_files/login.php</p>	<p>2009 - 2010</p> <p>Team Members Résumés:</p> <p>Christopher Badalucco</p> <p>Alan DiStasio</p> <p>Erik Mulvaney</p> <p>Daniel Quickenton</p> <p>Janelle Rizzo</p> <p>Michael Stellato</p>
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If the user decides to click on a team name on the results page, they will be directed to a page that looks like this. The information on the left side of the table will include the software engineering team name, team picture, team project name, the project name's acronym, client name, link to team website, and if they have it, links to their team song and project demo. On the right column will be the course years the team was in Software Engineering and links to all the team members' senior resumes along with the first and last names. A print button is also on the page to print the page.

View of print screen:

Results

4/25/11 9:07 PM

[Home](#) | [Software Engineering I](#) | [Software Engineering II](#) | [Search](#)

[Print this page](#)

[Back to Results](#)

Digital Evolutions



Digital Evolutions

Team Acronym:

Project Name: SaintBook

Project Acronym:

Client(s): Eric Breimer

Team Song

Project Demo:

http://www.sb.sienacs.com/source_files/php_files/login.php

2009 - 2010

Team Members Résumés:

Christopher Badalucco

Alan DiStasio



Erik Mulvaney

Daniel Quickenton

Janelle Rizzo



Michael Stellato

2.1.19 Results – Course Year Information

2009	
 <p>Infinite Solutions</p> <p><u>Team Acronym:</u></p> <p><u>Project Name:</u> Networking for Antique Truck Owners</p> <p><u>Project Acronym:</u> N.A.T.O.</p> <p><u>Client(s):</u> Timoth Lederman</p> <p><u>Team Song</u></p> <p><u>Project Demo:</u></p>	<p>2009 - 2010</p> <p><u>Team Members Résumés:</u></p> <p>David Nopper</p> <p>Kelly Monroe</p> <p>Alexander Johnson</p> <p>Alexander Evanclew</p> <p>Timothy Egan</p> <p>Robert DeSarbo</p>
 <p>Digital Evolutions</p> <p><u>Team Acronym:</u></p> <p><u>Project Name:</u> SaintBook</p> <p><u>Project Acronym:</u></p> <p><u>Client(s):</u> Eric Breimer</p> <p><u>Team Song</u></p> <p><u>Project Demo:</u></p> <p>http://www.sb.sienacs.com/source_files/php_files/login.php</p>	<p>2009 - 2010</p> <p><u>Team Members Résumés:</u></p> <p>Christopher Badalucco</p> <p>Alan DiStasio</p> <p>Erik Mulvaney</p> <p>Daniel Quickenton</p> <p>Janelle Rizzo</p> <p>Michael Stellato</p>
	<p>2009 - 2010</p> <p><u>Team Members Résumés:</u></p> <p>Lawrence Gregory</p>

If the user clicks on a course year on the results page, they will be directed to a page that look likes the image above. This page will be a table of teams that has all the information as the team information page. This page displays only the teams that existed during that specific year. For example, all the teams from Spring 2010 and Fall 2010 would be displayed if the user searched for course year “2010”.

View of print screen:

<p>http://siena-software-teams.com/~perm_saintsoft/prototype/prototypes.htm</p>	
 <p>MAJIK Software Solutions</p> <p>Team Acronym:</p> <p>Project Name: Virtual Network Device Mapping System</p> <p>Project Acronym:</p> <p>Client(s): Ken Swarner, Ken Swarner</p> <p>Team Song</p> <p>Project Demo:</p> <p>http://siena-software-teams.com/~perm_majik/prototype/demo.htm</p>	<p>2006 - 2007</p> <p>Team Members Résumés:</p> <p>Amanda Danko</p> <p>Kevin Johnson</p> <p>Ian Kost</p> <p>Kelly Morgan</p> <p>Mark Riley</p>
	<p>2005 - 2006</p> <p>Team Members Résumés:</p> <p>Ybelka Brito</p> <p>Michael Devanandan</p> <p>Joseph Halvey</p>

2.1.20 Results – Client Information

Home | Software Engineering I | Software Engineering II | Search

Print this page Back to Results

Eric Breimer

<p>Client name: Eric Breimer</p> <p>Title: Professor of Computer Science</p> <p>Organization: Siena College</p>	<p>2009 - 2010</p> <p>Digital Evolutions</p> <p>Team Acronym:</p> <p>Project Name: SaintBook</p> <p>Project Acronym:</p> <hr/> <p>2006 - 2007</p> <p>Initrode Solutions</p> <p>Team Acronym:</p> <p>Project Name: Alumni Spotlight Web Systems</p> <p>Project Acronym: ASWS</p> <hr/>
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If the user searches for a client, they will be directed to a page that looks like this. The left side will include the client’s name, title, and organization. On the right will be info from all the teams that the client was a client for.

View of print screen:

Results

4/25/11 9:07 PM

Home | Software Engineering I | Software Engineering II | Search

[Print this page](#) [Back to Results](#)

Eric Breimer

<p>Client name: Eric Breimer</p> <p>Title: Professor of Computer Science</p> <p>Organization: Siena College</p>	<p>2009 - 2010</p> <p>Digital Evolutions</p> <p>Team Acronym:</p> <p>Project Name: SaintBook</p> <p>Project Acronym:</p> <hr/> <p>2006 - 2007</p> <p>Initrode Solutions</p> <p>Team Acronym:</p> <p>Project Name: Alumni Spotlight Web Systems</p> <p>Project Acronym: ASWS</p> <hr/>
---	---

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2.2 Logical Data Dictionary

A Logical Data Dictionary is a list of all data entities and variables within a system. Any form of data that will be input, manipulated, or stored will be found in the data dictionary. The data dictionary contains the name of the data entity, what the entity stores, how it is used, the data type of that entity, the size of the entity, and what table it can be found in. A key is listed to better understand the entries in the data dictionary.

KEY:

Table Name- The name of the table the data entity will be stored

Data Name- The name of the data entity

Comment- What the entity is used for

Applicable to- What page/functions the Data entity will be used in

Data Type- What type the data entity will be stored as(String, Int)

Data Size- How big the data entity is allowed to be

Good Example of Input- One example of how this data entity can be stored

Notes- Any additional information that is useful in understanding the data entity

Please see the next page for the complete Data Dictionary.

Table Name	Data Name	Applicable to	Data Type	Data Size	Good Example of Input	Notes
Team	teamName	Multi-Results, Search, Student/Team/Course -Year result profiles	String	1-150 Characters	Code Shark Solutions	
Team	acronym	Multi-Results, Search, Student/Team/Course -Year result profiles	String	1-15 Characters	C.S.S.	Can be left NULL
Team	clientID	Database Foreign Key	Int			
Team	siteLink	Multi-Results, Search, Student/Team/Course -Year result profiles	String	1-100 Characters	http://oraserv.cs.siena.edu/~perm_css/	Must have oraserv prefix: http://oraserv.cs.siena.edu/~perm
Team	fallYear	Multi-Results, Search, Student/Team/Course -Year result profiles	Int		2010	Year of Software Engineering I
Team	springYear	Multi-Results, Search, Student/Team/Course -Year result profiles	Int		2011	Year of Software Engineering II
Team	projectName	Multi-Results, Search	String	1-200 Characters	Redesign of the Software Engineering Site	
Team	projectAcronym	Multi-Results, Search	String	1-15 Characters	R.O.S.E.S.	Can be left NULL
Team	demo	Team Profile	String	1-100 Characters		Will be a string that will be extracted for use as a link on the webpage
Team	song	Team Profile	String	1-100 Characters		Will be a string that will be extracted for use as a link on the webpage
Team	teamPic	Team Profile	String	1-100 Characters		Will be a string that will be extracted for use as a link on the webpage
Team	clientID2	Database Foreign Key	Int			
Student	studentID	Database Primary Key	Int			

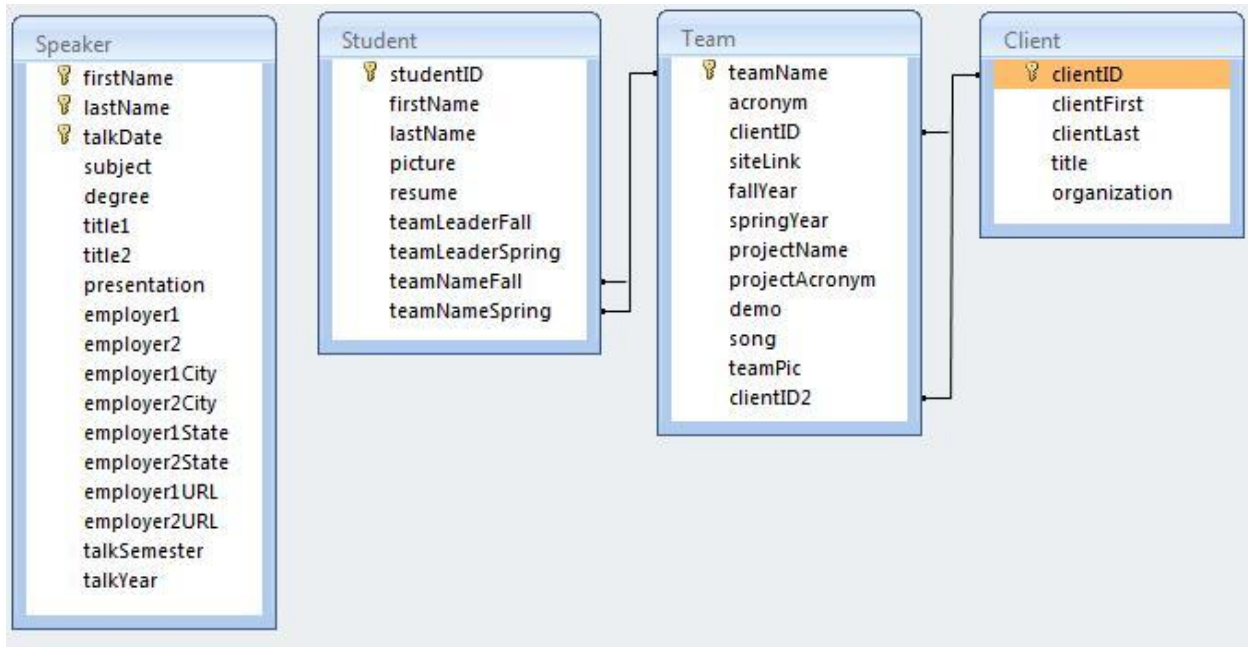
Student	firstName	Multi-Results, Search, Student/Team/Course-Year result profiles	String	1-50 Characters	Joseph	
Student	lastName	Multi-Results, Search, Student/Team/Course-Year result profiles	String	1-50 Characters	D'Avanzo	
Student	picture	Student search results, Student Profile	String	1-100 Characters		Will be a string that will be extracted for use as the user's image on the site
Student	resume	Student search results, Student Profile	String	1-100 Characters		Will be a URL linking to the student's resume
Student	teamLeaderFall	Student Profile	Bit	1 Bit	0, 1, NULL	
Student	teamLeaderSpring	Student Profile	Bit	1 Bit	0, 1, NULL	
Student	teamNameFall	Student/Team search results, Student Profile	String	1-150 Characters	Code Shark Solutions	Student's Fall Semester Team Name
Student	teamNameSpring	Student/Team search results, Student Profile	String	1-150 Characters	Code Shark Solutions	Student's Spring Semester Team Name
Speaker	firstName	Speaker Profile	String	1-50 Characters	Joseph	
Speaker	lastName	Speaker Profile	String	1-50 Characters	D'Avanzo	
Speaker	talkDate	Speaker Profile	Date		5/15/2011	Acceptable format for Date: Month/Day/Year
Speaker	subject	Speaker Profile	String	1-150 Characters	PHP For Fun & Profit	Cannot be left NULL
Speaker	degree	Speaker Profile	String	1-100 Characters	B.S. Computer Science	Highest degree attained

Speaker	title1	Speaker Profile	String	1-200 Characters	Vice President Information Technology	Work related titles will always go first unless one isn't available and then education titles replace otherwise
Speaker	title2	Speaker Profile	String	1-200 Characters	PhD student & Teacher's Assistant (Introduction to Java Programming)	Will be used in the case that speaker's have more than one titles. Two most important are listed.
Speaker	employer1	Speaker Profile	String	1-200 Characters		Will either be a string that is extracted as a link or an actual employer name
Speaker	employer2	Speaker Profile	String	1-200 Characters		Will either be a string that is extracted as a link or an actual employer name. Primarily for speakers who are current Ph.D students.
Speaker	employer1City	Speaker Profile	String	1-50 Characters	Atlanta	
Speaker	employer2City	Speaker Profile	String	1-50 Characters	Atlanta	
Speaker	employer1State	Speaker Profile	String	1-25 Characters	New York	
Speaker	employer2State	Speaker Profile	String	1-25 Characters	New York	

Speaker	employer1URL	Speaker Profile	String	1-100 Characters		Will be a string that is extracted as a link to the employer's URL if one exists.
Speaker	employer2URL	Speaker Profile	String	1-100 Characters		Will be a string that is extracted as a link to the employer's URL if one exists.
Speaker	presentation	Speaker Profile	String	1-100 Characters		Will be a URL linking to the speaker's presentation
Speaker	talkSemester	Speaker Profile	String	1-6 Characters	Fall	
Speaker	talkYear	Speaker Profile	Int		2010	
Client	clientID	Database Primary Key	Int			
Client	clientFirst	Client Profile	String	1-50 Characters		
Client	clientLast	Client Profile	String	1-50 Characters		
Client	title	Client Profile	String	1-250 Characters		
Client	organization	Client Profile	String	1-250 Characters		

2.3 Microsoft Access Relationships Diagram

The image provided below is a visual representation of the database tables, fields, and relationships between the tables and their fields. The fields that have a key to the left of them represent the primary keys of the table.

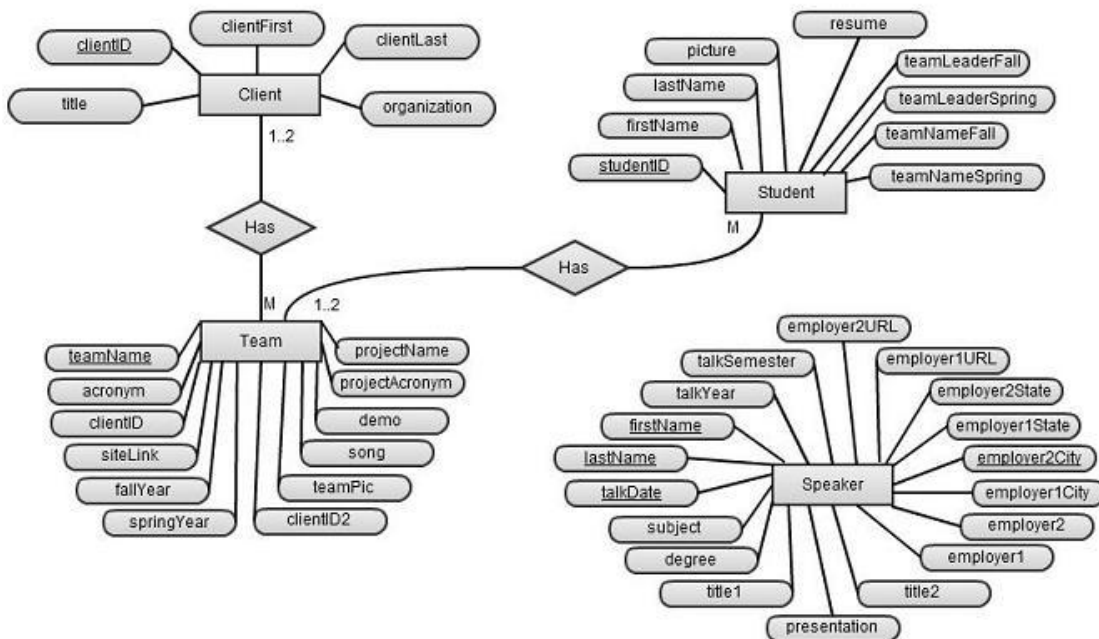


2.4 Entity-Relationship (ER) Diagram

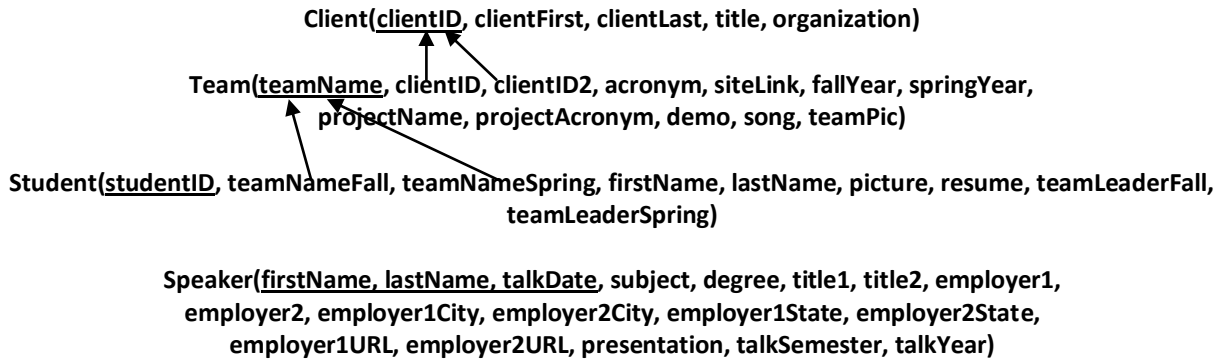
AN ER diagram is a graphical representation of entities and their relationships to each other. An ER diagram consists of three different features: entities, relationships, and attributes. Entities are displayed as rectangles and represent a table in the database. Relationships are displayed as diamonds and represent the relationships between two entities. These relationships usually have a quantitative value associated with them:

- One-to-One: A relationship is defined as one-to-one if one instance of an entity (A) is associated with one other instance of another entity (B).
- One-to-Many: A relationship is defined as one-to-many if one instance of an entity (A) is associated with zero, one or many instances of another entity (B), but for one instance of entity B there is only one instance of entity A.
- Many-to-Many: A relationship is defined as many-to-many if one instance of an entity (A) is associated with one, zero, or many instances of another entity (B), and one instance of entity B is associated with one, zero, or many instances of entity A.

The last feature of ER diagrams are attributes which are displayed as ovals. Attributes represent data that is associated with an entity or a relationship.



2.5 Database Relational Schema



3 Architectural Design Specification

3.1 Development, Operation and Maintenance Environment

Code Shark Solutions' development environments are as follows:

Server:

Operating System:	CentOS (Linux) Release 5.2 (Final)
Server Name:	oraserv.cs.siena.edu
CPU Type:	x86_64
Web Server:	Apache Version 2.2.9
PHP Version:	5.2.6
Database:	MySQL Version 5.0.45; Oracle Version 9.0.1
Virtual Server:	YES

Macintosh Computer:

Operating System:	Mac OS X 10.6.4
Model:	iMac 5,1
Processor:	Intel Core 2 Duo
Speed:	2 GHz
Memory:	1 GB
L2 Cache:	4MB

Windows Computer:

Operating System:	Windows Vista Enterprise (6.0, Build 6002)
Model:	Dell OptiPlex 760
Processor:	Intel Core 2 Duo
Speed:	2.93 GHz
Memory:	3 GB

The website will be functional across all major browsers: Internet Explorer 8, Firefox 3.6, Google Chrome 7 and Safari 5.

3.2 Deliverables

Code Shark Solutions has prepared a DVD with the following items for our client Dr. Lederman:

- A copy of our team files from the team directory located on our Oraserv account:
 - Team Website source code
 - Project Source Code
 - Project Images
 - Project Documentation
- A README.txt file explaining the DVD File Hierarchy
- Team Song Lyrics
- Team Song Music
- Audio recording of Team Song

Along with the DVD, Code Shark Solutions will be delivering our Acceptance Test Documentation and Results as well as our presentation.

3.3 Data Flow Diagrams

Data Flow Diagrams are created to show the movement of data throughout the system. They are used as a visual aid to help the reader to better understand how the system works. The context diagram is a general overview of the entire system. The level 0 diagram shows in more detail how each entity interacts with the system through a process. The level 1 diagrams show an in-depth look at each process within the system. In all diagrams arrows are drawn between entities, databases and processes to show the movement of data.

See the included Appendix C for the complete set of diagrams.

3.4 Source Code

See the attached Appendix D for the most recent version of the project's source code.

4 Test Requirements & Results

4.1 Testing Approach

The method our team used to test the new Software Engineering site (R.O.S.E.S.) was to follow all guidelines outlined in this document to ensure all the functional and non-functional requirements are met. The testing is a multi-step process that consists of activities for validating the software product, from the most primitive elements up to the fully integrated system. This area includes activities such as unit testing, integration testing, system testing, performance testing, and acceptance testing.

Our strategy consisted of dividing the project up into separate modules, each with a distinct functionality. Each module has a Unit Test script that is followed, moving test case by test case to ensure that all parts of the module are thoroughly tested. In order for each unit to be considered 'passed' each test case in the unit must pass. Once each unit has passed testing, the units that interact with each other will be tested to make sure that they work together properly. The system is then tested as a whole to make sure all the functional and non-functional requirements have been met. When errors are found, Code Shark Solutions will come with a solution to the problem and then repeat the testing procedure to make sure the fix didn't create a problem elsewhere.

4.2 Acceptance Test – Acceptance Criteria

Acceptance Testing is concerned with knowledge about validating the functional and non-functional requirements of a system. This is a useful way to go through the efforts required to validate the acceptability of the system. After it's complete, the test plan will help people not involved in the process to understand the 'why' and 'how' of our product validation. Our test plan documents the way we will authenticate and make certain that our system being tested meets the requirements and specifications.

The Acceptance Criteria was determined by the functional and non-functional requirements inventory listed in our other documents. What the system can do and what is testable is considered our functional requirements while the non-functional requirements are things our system will be. At the completion of this project, Code Shark Solutions will be able to determine which of the requirements were met and those that were not met. Please keep in mind that these requirements are still subject to change according to our client's preferences and more information is obtained.

R.O.S.E.S. was tested on both Windows and Mac operating systems and with the four major browsers Internet Explorer 7 and 8, Mozilla Firefox, Safari and Google Chrome. Code Shark Solutions will determine the testing requirements. We will use three different types of tests: a full system test, individual unit tests, and then integrated/regression tests.

Please see the included Appendix E for all of our testing documentation.

4.3 Unit Tests

The Unit Test will test each of the programs to make sure it runs as expected. It is concerned with knowledge about testing a program unit to determine that it is free of data, logic, or standards errors.

Please see the included Appendix E for all of our testing documentation.

5 Appendices

5.1 Appendix A: Glossary

Actor: An entity in UML Use Case Diagrams and UML Activity Diagrams. It represents the human and non-human external entities (outside the system boundary) that interact with the system.

AJAX: An acronym for “Asynchronous JavaScript And XML”. AJAX is a group of interrelated web development methods used on the client-side to create interactive web applications.

Apache Server: Known as Apache, it is web server software notable for playing a key role in the initial growth of the World Wide Web.

CSS (Cascading Style Sheets): CSS is used alongside HTML to add aesthetic value to a website.

Database Relational Schema: refers to the organization of data to create a blueprint of how a database will be constructed

Data Flow Diagram (DFD): a pictorial representation of the flow of data in a Software System which is comprised of varying levels of detail.

Data Flows: A component of a Data Flow Diagram (DFD) that represents the movement of data from an External Entity to a Process or Data Store, and vice versa.

Data Stores: A component of a Data Flow Diagram (DFD) that represents any location in which information or data is stored.

External Entities: A component of a Data Flow Diagram that represents any human or non-human user of a Software System.

Functional Requirements Inventory: Define what the system will be able to do and what is testable about the system.

Hardware: The physical parts of a computer, such as the hard drive and the CPU.

HTML (HyperText Markup Language): HTML is a scripting language used to design the structural layout of a website.

JavaScript: is a prototype-based, object-oriented scripting language that is dynamic, weakly typed and has first-class functions.

JQuery: is a cross-browser Javascript library designed to simplify the client-side scripting of HTML.

jQueryUI: provides abstractions for low-level interaction and animation, advanced effects and high-level, themeable widgets, built on top of the jQuery JavaScript library, that can be used to build interactive web applications.

JavaScript: JavaScript is an object-oriented scripting language that operates on the user's computer rather than on the hosting server.

Killer Robot Discussion: A page with links to access the Killer Robot papers, which are used to generate in-class discussion between the Software Engineering students.

MySQL: MySQL is open source relational database management software based on the SQL vocabulary which can be employed in combination with most server-side languages and can be used to access information in databases (25 Requirements Specification *Code Shark Solutions*).

Non-Functional Requirements: Specifies how a product is supposed to *be*, compared to functional requirements that describe what the product *does*. Such examples are the user interface, aesthetics, accessibility, maintainability, security, etc. Non-functional are difficult, if not impossible to quantifiably test.

PHP (PHP Hypertext Preprocessor): PHP is a “server side” programming language that is used to create in depth functionality on websites. PHP can also communicate with servers and databases.

Primary Key: uniquely identifies each record in the table. Primary keys may consist of a single attribute or multiple attributes in combination.

Processes: A component of a Data Flow Diagram that represents any scenario or action within a Software System.

Relationship: A component of a UML Use Case Diagram which represents the interactions between the Actor and the System.

R.O.S.E.S.: Acronym for the project name: **Redesign of the Software Engineering Site**

Screen Resolution: The screen resolution is the number of pixels displayed on the screen, it is usually given in the form Width x Height where width and height are the number of pixels across and down the screen.

Software: The programs installed on the computer, such as Microsoft Office and Adobe Fireworks.

Speakers: A page consisting of a list of speakers that come to the Software Engineering class and talk to the students about certain topics.

System: A component of UML Use Case Diagram which represents the Software System.

UML (Unified Modeling Language) Use Case Diagram: A general pictorial explanation of the basic processes of a Software System used by Software Development Teams.

Unit Testing – a method by which individual units of source code are tested to determine if they are fit for use. A unit is the smallest testable part of an application.

Use Case: A component of a UML Use Case Diagram which represents any process located within the System that is performable by an Actor.

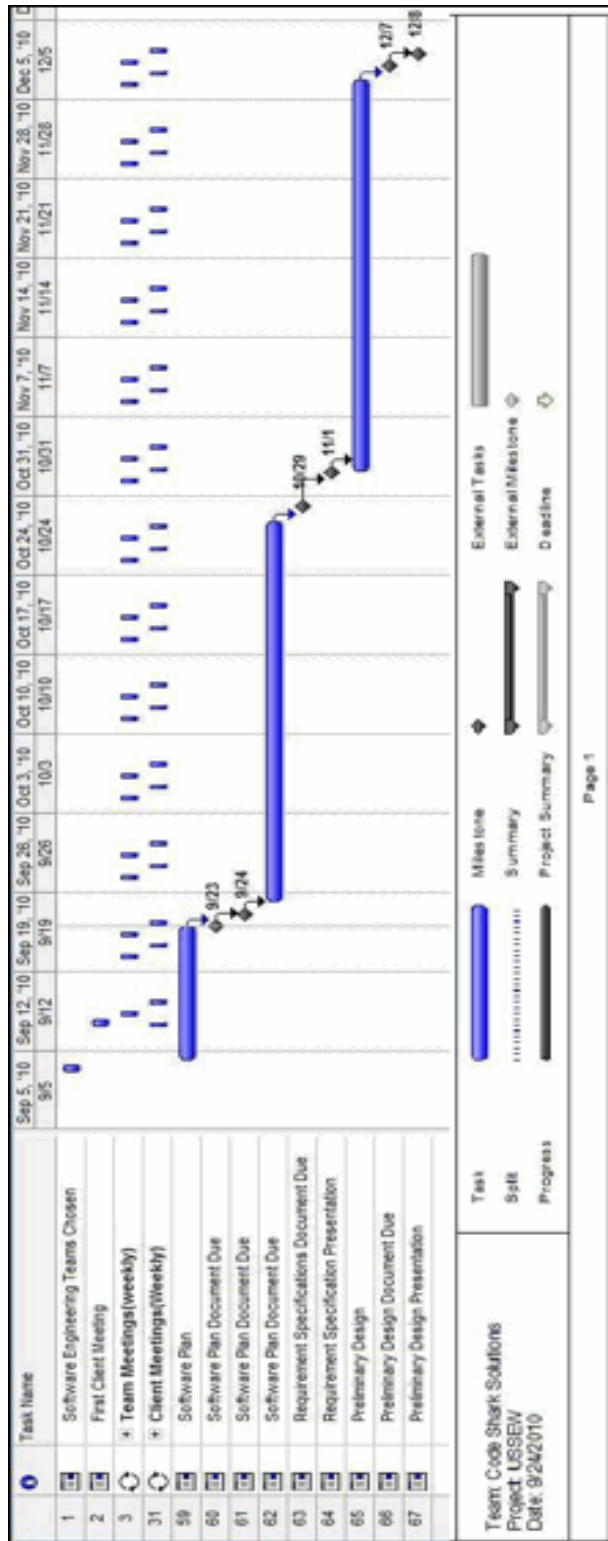
Usage Case Narrative: an explanation of the functions and abilities users have for a specific Software System.

Waterfall Model: A basic software development strategy that clearly labels each phase of the software engineering process. The strategy follows consecutively the following steps: Requirements Specification, Design, Construction, Verification, and Maintenance.

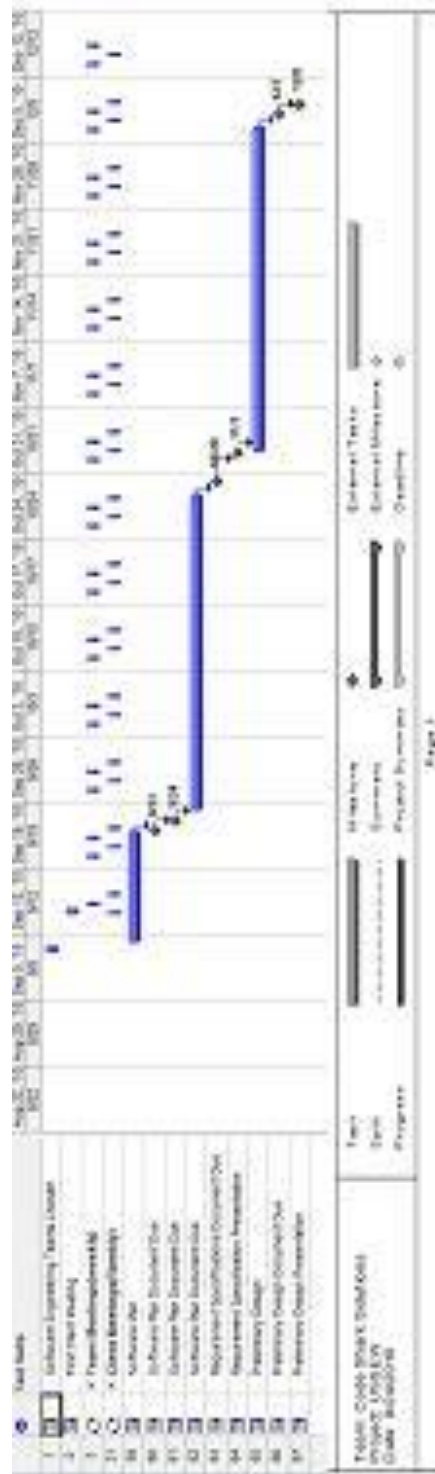
XML: “Extensible Markup Language” is a set of rules for encoding documents in machine-readable form.

5.2 Appendix B: Timeline

5.2.1 Fall Semester



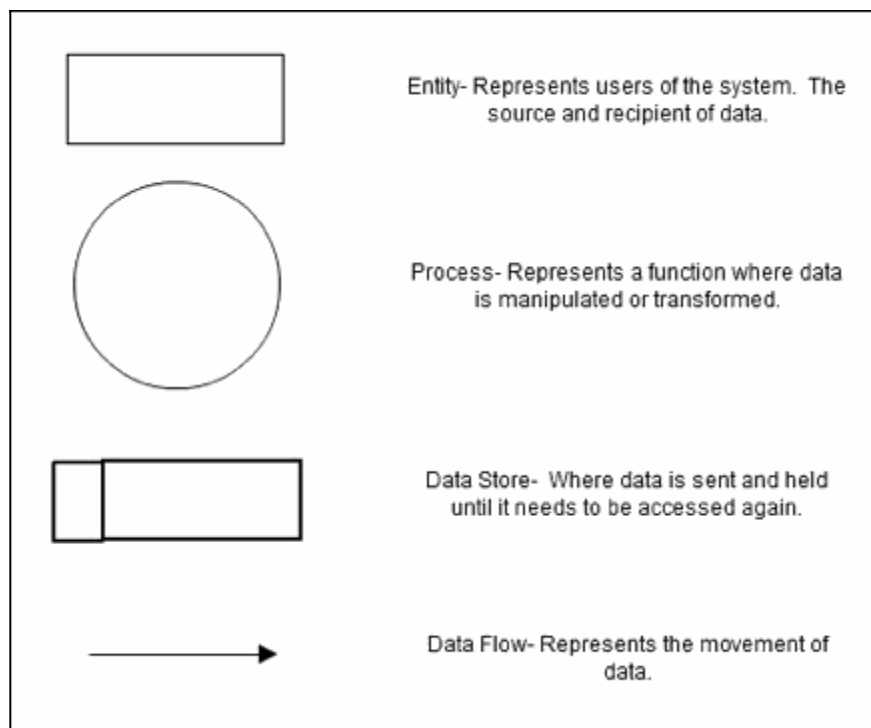
5.2.2 Spring Semester



5.3 Appendix C: Data Flow Diagrams

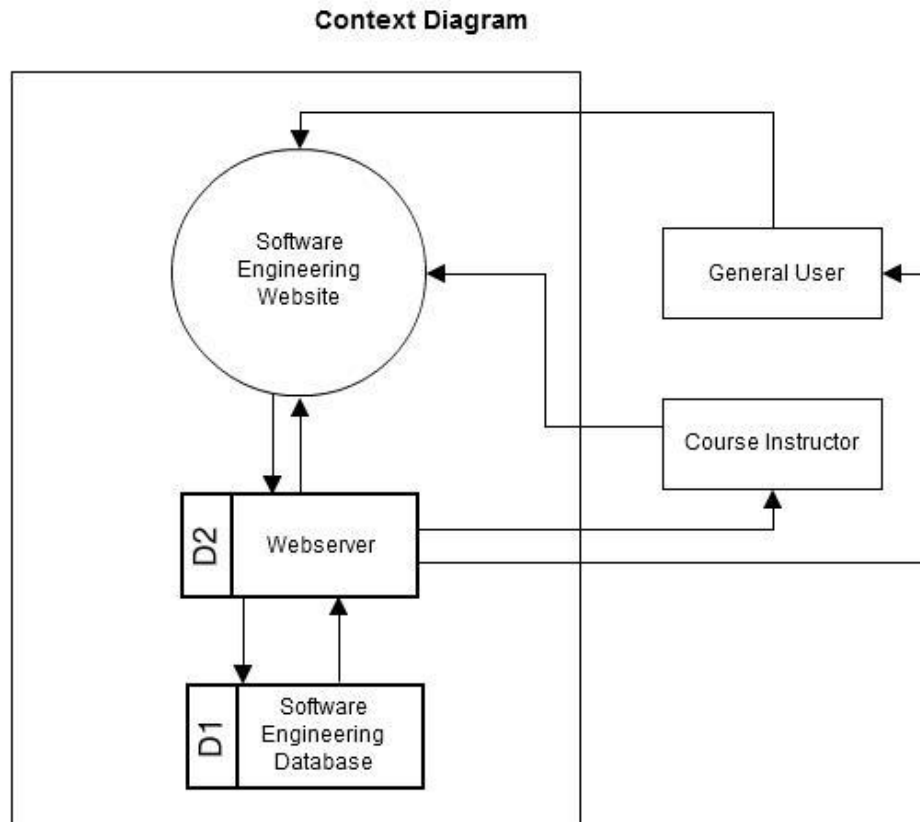
Data Flow Diagrams are created to show the movement of data throughout the system. They are used as a visual aid to help the reader to better understand how the system works. The context diagram is a general overview of the entire system. The level 0 diagram shows in more detail how each entity interacts with the system through a process. The level 1 diagrams show an in-depth look at each process within the system. In all diagrams arrows are drawn between entities, databases and processes to show the movement of data.

5.3.1 Data Flow Diagram Legend



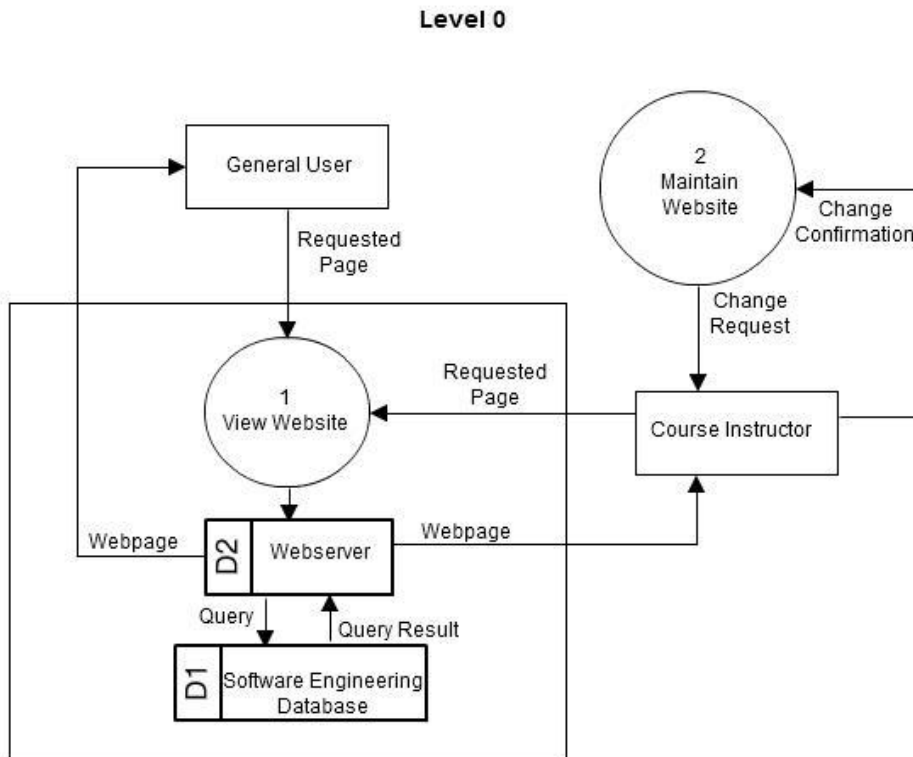
5.3.2 Context Diagram

This is the highest level and most general representation of data flow in our system. It shows interactions between users, databases, and software engineering website.



5.3.3 Level 0 Diagram

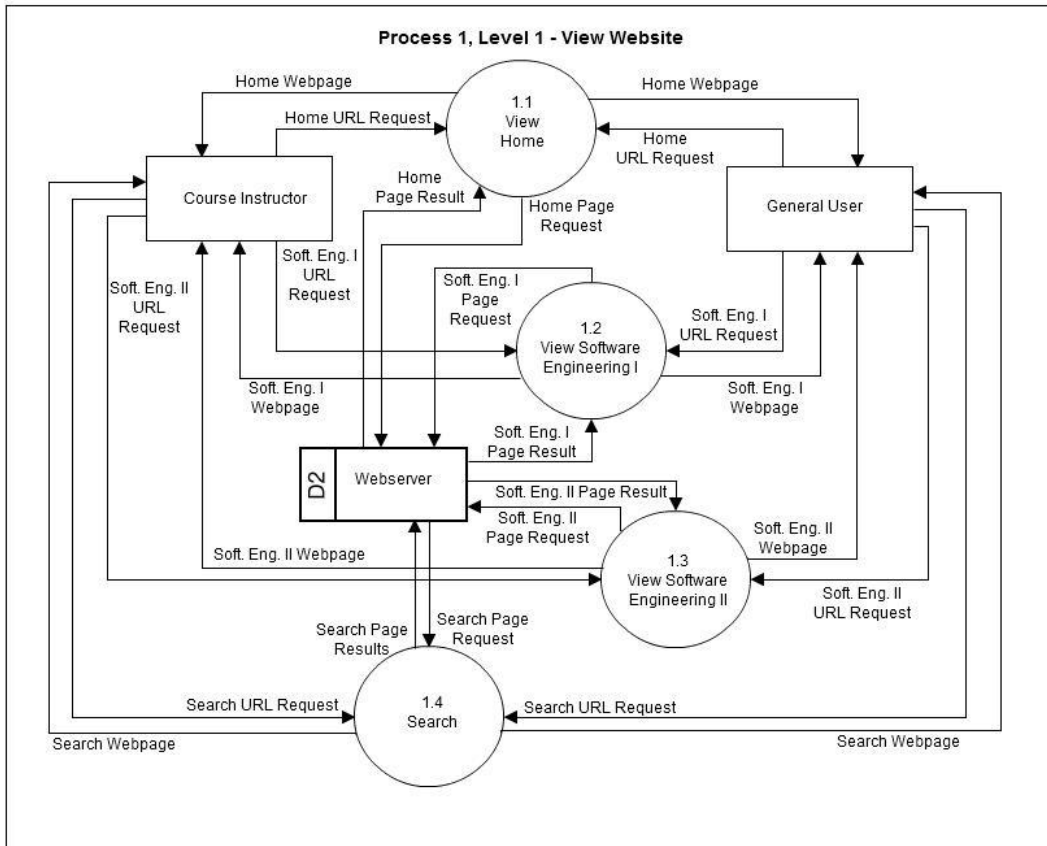
This diagram shows the major processes of the system.



5.3.4 Level 1 Diagrams

This Diagram shows the main use of the website.

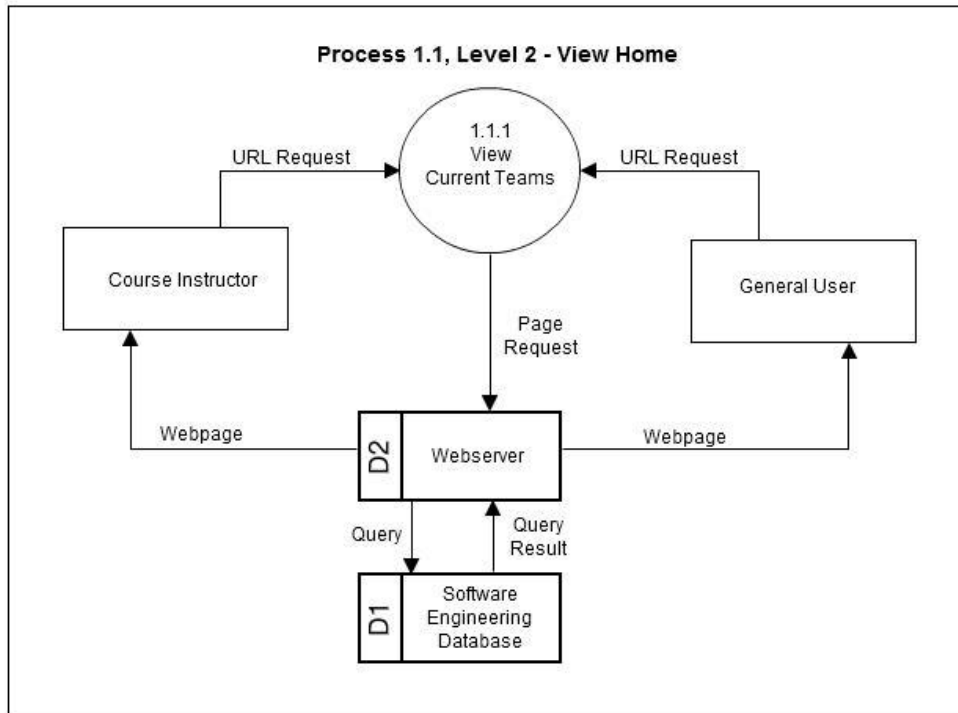
5.3.4.1 View Website



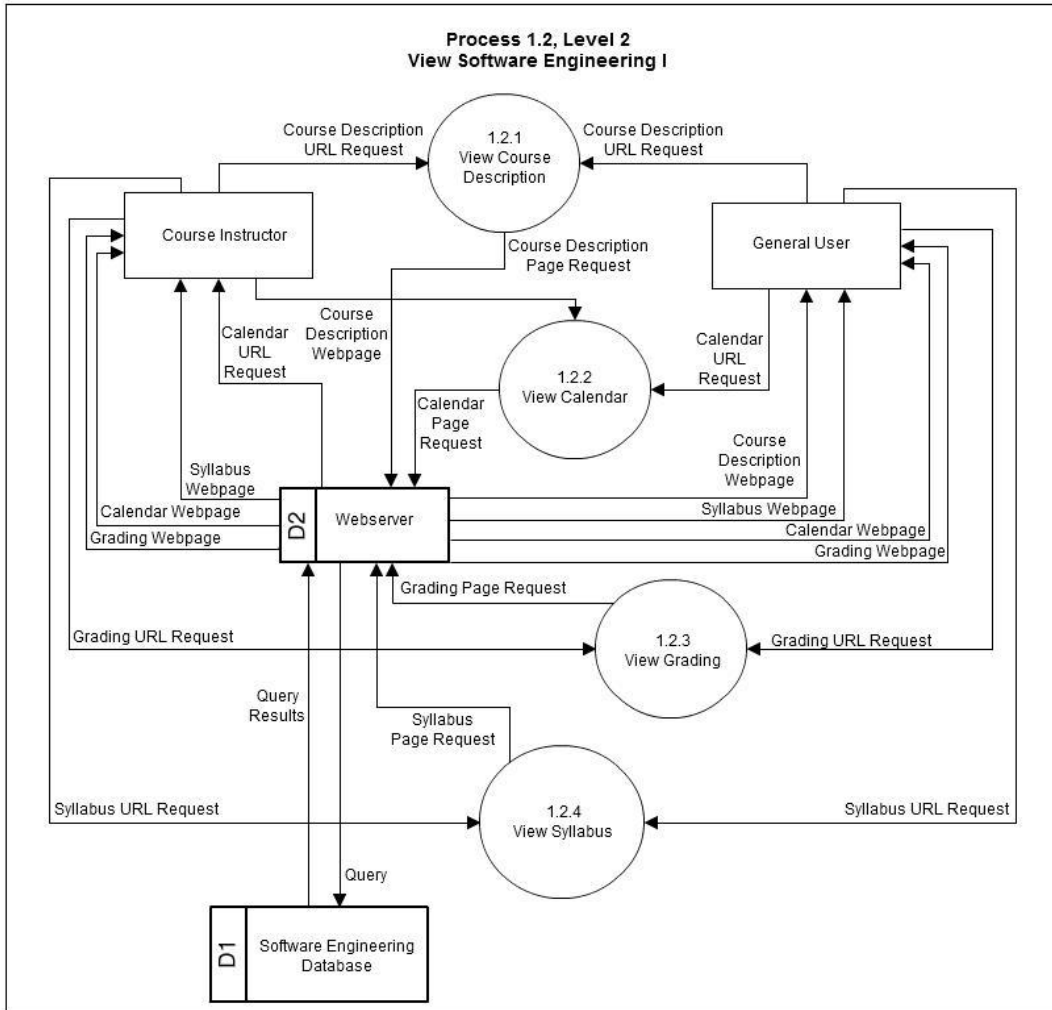
5.3.5 Level 2 Diagrams

These Diagrams break down the processes of the level one diagram.

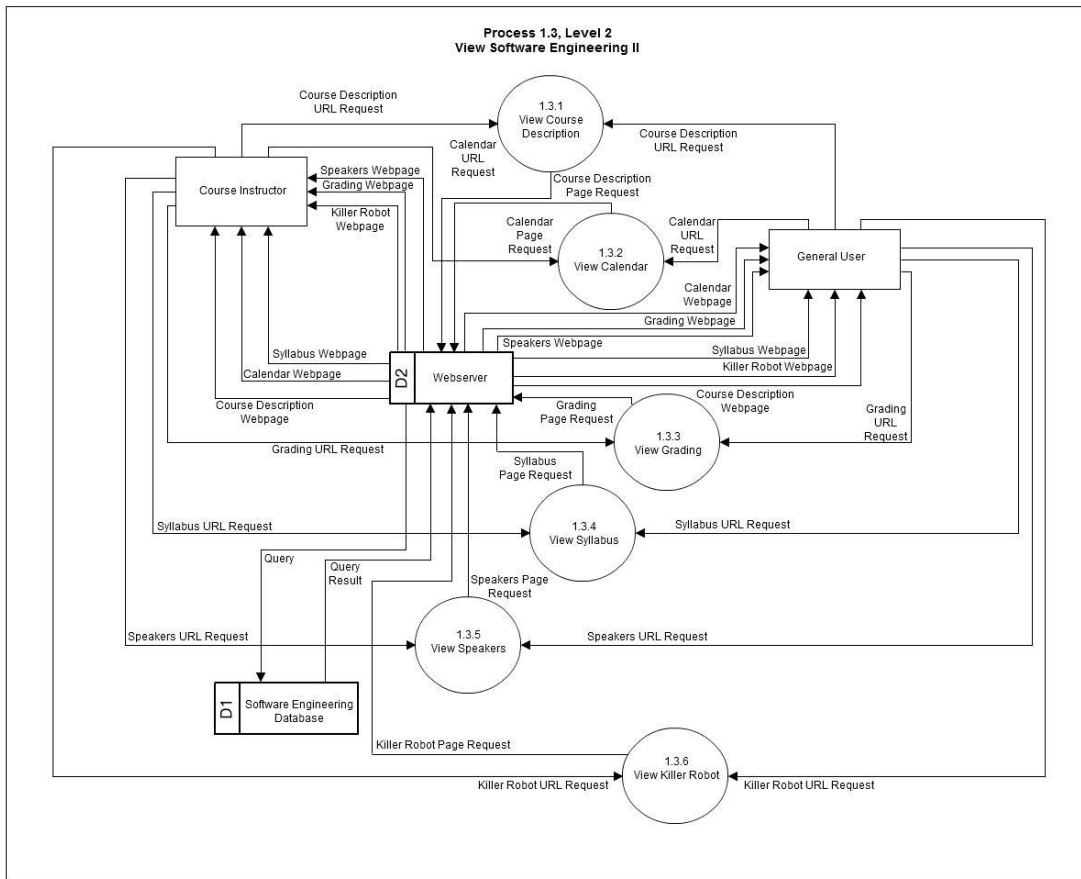
5.3.5.1 View Home



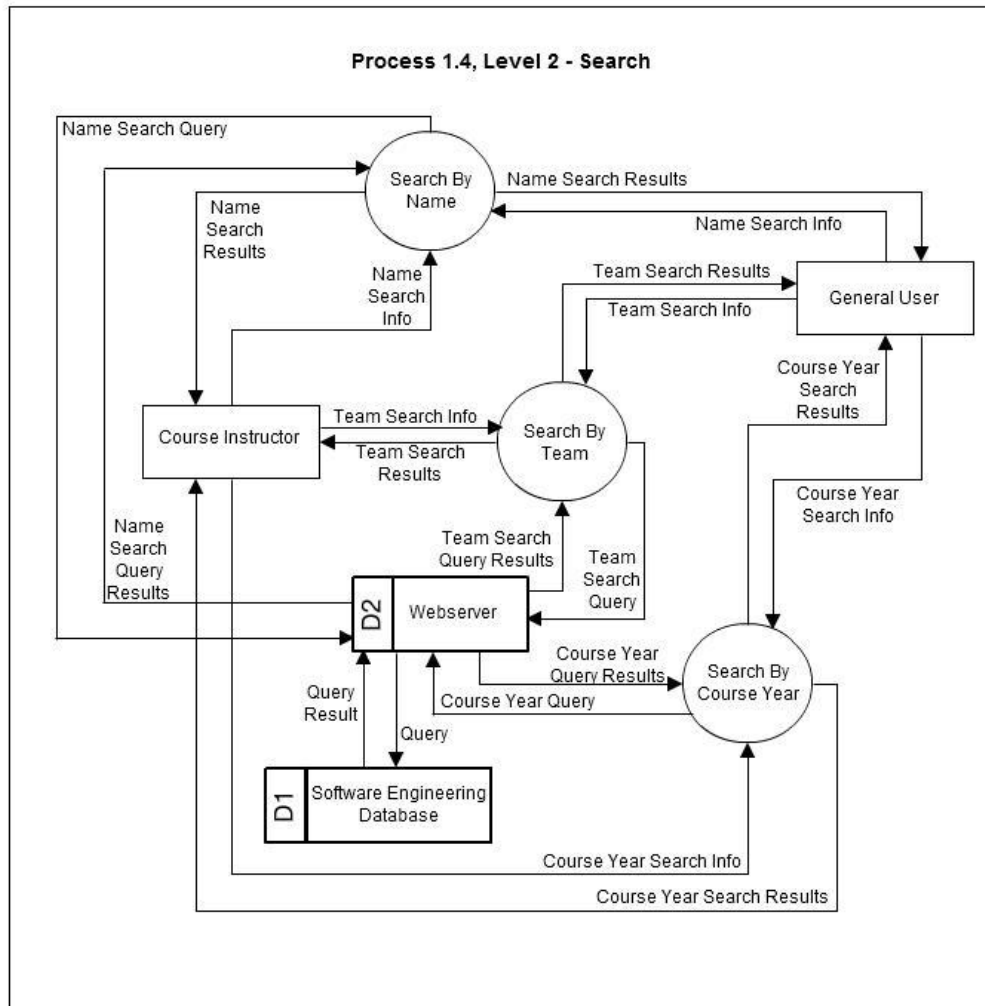
5.3.5.2 View Software Engineering I



5.3.5.3 View Software Engineering II



5.3.5.4 Search



5.4 Appendix E: Test Results

5.4.1 Functional Requirements

View Website

- {MET / NOT MET} -Will be able to view the Software Engineering course Homepage.
- {MET / NOT MET} -Will be able to click links to this year's team pages.
- {MET / NOT MET} -Will be able to click link to Siena College website.
- {MET / NOT MET} -Will be able to click link to Siena Computer Science website.
- {MET / NOT MET} -Will be able to click link to Siena School of Science website.
- {MET / NOT MET} -Will be able to click link to Siena Career Center website.
- {MET / NOT MET} -Will be able to view the Software Engineering I page.
- {MET / NOT MET} -Will be able to view Software Engineering I Calendar page.
- {MET / NOT MET} -Calendar will open to the current date.
- {MET / NOT MET} -Will be able to select a date to display (with notification).
- {MET / NOT MET} -Will be able to view Software Engineering I Grading page.
- {MET / NOT MET} -Will be able to view the Software Engineering I Syllabus page.
- {MET / NOT MET} -Will be able to view the Software Engineering II page.
- {MET / NOT MET} -Will be able to view the Software Engineering II Calendar page.
- {MET / NOT MET} -Will be able to view the Software Engineering II Grading page.
- {MET / NOT MET} -Will be able to view the Software Engineering II Syllabus page.
- {MET / NOT MET} -Will be able to view the Software Engineering II Speakers page.
- {MET / NOT MET} -Will be able to view the Software Engineering II Killer Robot page.
- {MET / NOT MET} -Will be able to view the Search page.
- {MET / NOT MET} -Will have a consistent menu system that will allow users to navigate to all pages.

Searching

- {MET / NOT MET} -Will be able to search by student name.
- {MET / NOT MET} -Will be able to search by team name.
- {MET / NOT MET} -Will be able to search by course year.
- {MET / NOT MET} -Will be able to select Student Name, Team Name, Client Name, or Course Year from the displayed results.
- {MET / NOT MET} -Will be able view page for a student.
- {MET / NOT MET} -Will be able view page for a client.
- {MET / NOT MET} -Will be able to view page for a software team.
- {MET / NOT MET} -Will be able to view page for a team year.
- {MET / NOT MET} -Will resize photos of teams and individuals to stay proportional given a static width.
- {MET / NOT MET} -Will be able to print the result pages for Students and Teams
- {MET / NOT MET} -Will be able to click link view all teams.
- {MET / NOT MET} -Will be able to click link to view all course years.

5.4.2 Non-Functional Requirements

Non-functional requirements are requirements that have a specific criteria used to critique the operation of a system. Some of the criteria typically used are user interface, aesthetics, and more. These requirements explain what R.O.S.E.S is to *be* instead of what it *does*. Below is the list of our non-functional requirements inventory.

- {MET / NOT MET} The system must be aesthetically pleasing
- {MET / NOT MET} The system must be easily navigable
- {MET / NOT MET} The system must be easily maintainable
- {MET / NOT MET} The system must be easily modifiable
- {MET / NOT MET} The system must be editable

5.4.3 Unit Tests

System Test - Test Results for All Unit Tests

Code Shark Solutions
 R.O.S.E.S.
 Timoth
 Lederman

Directory of *Unit Tests* (note: this could also be called an *Index* or a *Catalog*)

NOTE: In order for a test case to pass it MUST pass on all browsers indicated in the acceptance criteria

Pass/Fail Status	Unit Number	Unit Test Name	Date Last Tested	Comments or brief description	Integrated with these units
P	100%	1	Unit Test #1	04/25/11	2
P	100%	2	Unit Test #2	04/25/11	1, 3
P	100%	3	Unit Test #3	04/25/11	2, 1

100.00% of Test Cases Passed

Links Tests**Unit 1.1**

Test the links on the Home page

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
P		Navigate to Homepage.								
P	1.001	Test link to Siena College home page.		Click on the link to the Siena College home page on the footer of the Software Engineering home page.	Software Engineering home page.	Browser directed to Siena College home page.	Expected outcome		RG	4/25/11
P	1.002	Test link to Siena Computer Science home page.		Click on the link to the Siena Computer Science home page on the footer of the Software Engineering home page.	Software Engineering home page.	Browser directed to Siena Computer Science home page.	Expected outcome		RG	4/25/11
P	1.003	Test link to School of Science home page.		Click on the link to the School of Science home page on the footer of the Software Engineering home page.	Software Engineering home page.	Browser directed to School of Science home page.	Expected outcome		RG	4/25/11
P	1.004	Test link to Career Center home page.		Click on the link to the Career Center home page on the footer of the Software Engineering home page.	Software Engineering home page.	Browser directed to Career Center home page.	Expected outcome		RG	4/25/11

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Detailed Design

P	1.005	Test Home menu item.		Click on the 'Home' menu item on the main menu.	Software Engineering home page.	Software Engineering home page.	Expected outcome		RG	4/25/11
P	1.006	Test Software Engineering I menu item.		Click on the 'Software Engineering I' menu item on the main menu.	Software Engineering home page.	Software Engineering I Description page.	Expected outcome		RG	4/25/11
P	1.007	Test Software Engineering II menu item.		Click on the 'Software Engineering II' menu item on the main menu.	Software Engineering home page.	Software Engineering II Description page.	Expected outcome		RG	4/25/11
P	1.008	Test Search menu item.		Click on the 'Search' menu item on the main menu.	Software Engineering home page.	Search page.	Expected outcome		RG	4/25/11
P	1.009	Test "This Year's Teams" links.		Click on the link for one of This Year's Teams.	Software Engineering home page.	Selected team's website.	Expected outcome		RG	4/25/11
P	1.010	Repeat Test Case 1.009 until all of "This Year's Teams" links have been tested.					Expected outcome		RG	4/25/11
P										
P	= Unit Summary		100%	passing	10	passed			Date of last test =	4/25/11
	10	tests			0	failed				

Unit 1.2

Test the links on the Software Engineering I page

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
P		Navigate to the Siena Software Engineering I home page.								
P	1.001	Test link to Siena College home page.		Click on the link to the Siena College home page on the footer of the Software Engineering I main page.	Software Engineering I main page.	Browser directed to Siena College home page.	Expected Result		RG	4/25/11
P	1.002	Test link to Siena Computer Science home page.		Click on the link to the Siena Computer Science home page on the footer of the Software Engineering I main page.	Software Engineering I main page.	Browser directed to Siena Computer Science home page.	Expected Result		RG	4/25/11
P	1.003	Test link to School of Science home page.		Click on the link to the School of Science home page on the footer of the Software Engineering I main page.	Software Engineering I main page.	Browser directed to School of Science home page.	Expected Result		RG	4/25/11

Code Shark Solutions

Detailed Design

P	1.004	Test link to Career Center home page.		Click on the link to the Career Center home page on the footer of the Software Engineering I main page.	Software Engineering I main page.	Browser directed to Career Center home page.	Expected Result		RG	4/25/11
P	1.005	Test Home menu item.		Click on the 'Home' menu item on the main menu.	Software Engineering I main page.	Software Engineering home page.	Expected Result		RG	4/25/11
P	1.006	Test Software Engineering I menu item.		Click on the 'Software Engineering I' menu item on the main menu.	Software Engineering I main page.	Software Engineering I Description page.	Expected Result		RG	4/25/11
P	1.007	Test Software Engineering II menu item.		Click on the 'Software Engineering II' menu item on the main menu.	Software Engineering I main page.	Software Engineering II Description page.	Expected Result		RG	4/25/11
P	1.008	Test Search menu item.		Click on the 'Search' menu item on the main menu.	Software Engineering I main page.	Search page.	Expected Result		RG	4/25/11
P	1.009	Test Course Description submenu item.		Click on the 'Course Description' menu item on the submenu.	Software Engineering I main page.	Software Engineering I main page.	Expected Result		RG	4/25/11
P	1.010	Test Calendar submenu item.		Click on the 'Calendar' menu item on the submenu.	Software Engineering I main page.	Software Engineering I Calendar page.	Expected Result		RG	4/25/11
P	1.011	Test Calendar Select Date functionality	Select a date outside of the 1 st semester.	Using the drop down menus, choose a desired input and press 'Go to Date' button.	Software Engineering I Calendar page.	Error message displayed.	Expected Result		RG	4/25/11

Code Shark Solutions

Detailed Design

P	1.012	Test Calendar Select Date functionality	Select a date inside of the 1 st semester.	Using the drop down menus, choose a desired input and press 'Go to Date' button.	Software Engineering I Calendar page.	Selected date is show on scrollable calendar.	Expected Result		RG	4/25/11
P	1.013	Test Grading submenu item.		Click on the 'Grading' menu item on the submenu.	Software Engineering I main page.	Software Engineering I Grading page.	Expected Result		RG	4/25/11
P	1.014	Test Syllabus submenu item.		Click on the 'Syllabus' menu item on the submenu.	Software Engineering I main page.	Software Engineering I Syllabus page.	Expected Result		RG	4/25/11
P										
P	= Unit Summary		100%	passing	14	passed			Date of last test =	4/25/11
	14 tests				0	failed				

*Links Tests***Unit 1.3**

Test the links on the Software Engineering II page

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
P		Navigate to the Siena Software Engineering I home page.								
P	1.001	Test link to Siena College home page.		Click on the link to the Siena College home page on the footer of the Software Engineering II main page.	Software Engineering II main page.	Browser directed to Siena College home page.	Expected Result		RG	4/25/11
P	1.002	Test link to Siena Computer Science home page.		Click on the link to the Siena Computer Science home page on the footer of the Software Engineering II main page.	Software Engineering II main page.	Browser directed to Siena Computer Science home page.	Expected Result		RG	4/25/11
P	1.003	Test link to School of Science home page.		Click on the link to the School of Science home page on the footer of the Software Engineering II main page.	Software Engineering II main page.	Browser directed to School of Science home page.	Expected Result		RG	4/25/11

Code Shark Solutions

Detailed Design

P	1.004	Test link to Career Center home page.		Click on the link to the Career Center home page on the footer of the Software Engineering II main page.	Software Engineering II main page.	Browser directed to Career Center home page.	Expected Result		RG	4/25/11
P	1.005	Test Home menu item.		Click on the 'Home' menu item on the main menu.	Software Engineering II main page.	Software Engineering home page.	Expected Result		RG	4/25/11
P	1.006	Test Software Engineering I menu item.		Click on the 'Software Engineering I' menu item on the main menu.	Software Engineering II main page.	Software Engineering I Description page.	Expected Result		RG	4/25/11
P	1.007	Test Software Engineering II menu item.		Click on the 'Software Engineering II' menu item on the main menu.	Software Engineering II main page.	Software Engineering II Description page.	Expected Result		RG	4/25/11
P	1.008	Test Search menu item.		Click on the 'Search' menu item on the main menu.	Software Engineering II main page.	Search page.	Expected Result		RG	4/25/11
P	1.009	Test Course Description submenu item.		Click on the 'Course Description' menu item on the submenu.	Software Engineering II main page.	Software Engineering II main page.	Expected Result		RG	4/25/11
P	1.010	Test Calendar submenu item.		Click on the 'Calendar' menu item on the submenu.	Software Engineering II main page.	Software Engineering II Calendar page.	Expected Result		RG	4/25/11
P	1.011	Test Calendar Select Date functionality	Select a date outside of the 2 nd semester.	Using the drop down menus, choose a desired input and press 'Go to Date' button.	Software Engineering II Calendar page.	Error message displayed.	Expected Result		RG	4/25/11

Code Shark Solutions

Detailed Design

P	1.012	Test Calendar Select Date functionality	Select a date inside of the 2 nd semester.	Using the drop down menus, choose a desired input and press 'Go to Date' button.	Software Engineering II Calendar page.	Selected date is show on scrollable calendar.	Expected Result		RG	4/25/11
P	1.013	Test Grading submenu item.		Click on the 'Grading' menu item on the submenu.	Software Engineering II main page.	Software Engineering II Grading page.	Expected Result		RG	4/25/11
P	1.014	Test Syllabus submenu item.		Click on the 'Syllabus' menu item on the submenu.	Software Engineering II main page.	Software Engineering II Syllabus page.	Expected Result		RG	4/25/11
P	1.015	Test Speakers submenu item.		Click on the 'Syllabus' menu item on the submenu.	Software Engineering II main page.	Software Engineering II Speakers page.	Expected Result		RG	4/25/11
P	1.016	Test Speakers calendar functionality.	Select a date outside of the 2nd semester.	Using the drop down menus, choose a desired input and press 'Go to Date' button.	Software Engineering II Speakers page.	Error message displayed.	Expected Result		RG	4/25/11
P	1.017	Test Speakers calendar functionality.	Select a date outside of the 2nd semester.	Using the drop down menus, choose a desired input and press 'Go to Date' button.	Software Engineering II Speakers page.	Selected date is show on scrollable calendar.	Expected Result		RG	4/25/11
P	1.018	Test Killer Robot submenu item.		Click on the 'Killer Robot' menu item on the submenu.	Software Engineering II main page.	Software Engineering II Killer Robot page.	Expected Result		RG	4/25/11
P	1.019	Test Killer Robot calendar functionality.	Select a date outside of the 2nd semester.	Using the drop down menus, choose a desired input and press 'Go to Date' button.	Software Engineering II Killer Robot page.	Error message displayed.	Expected Result		RG	4/25/11

Code Shark Solutions

Detailed Design

P		Test Killer Robot calendar functionality.	Select a date inside of the 2nd semester.	Using the drop down menus, choose a desired input and press 'Go to Date' button.	Software Engineering II Killer Robot page.	Selected date is show on scrollable calendar.	Expected Result		RG	4/25/11
P										
P	= Unit Summary		100%	passing	19	passed		Date of last test =	4/25/11	
	19	tests			0	failed				

*Links Tests***Unit 1.4**

Test the links on the Search page

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
P		Navigate to the Search main page.								
P	1.001	Test link to Siena College home page.		Click on the link to the Siena College home page on the footer of the Search main page.	Search main page.	Browser directed to Siena College home page.	Expected Result		RG	4/25/11
P	1.002	Test link to Siena Computer Science home page.		Click on the link to the Siena Computer Science home page on the footer of the Search main page.	Search main page.	Browser directed to Siena Computer Science home page.	Expected Result		RG	4/25/11
P	1.003	Test link to School of Science home page.		Click on the link to the School of Science home page on the footer of the Search main page.	Search main page.	Browser directed to School of Science home page.	Expected Result		RG	4/25/11
P	1.004	Test link to Career Center home page.		Click on the link to the Career Center home page on the footer of the Search main page.	Search main page.	Browser directed to Career Center home page.	Expected Result		RG	4/25/11
P	1.005	Test Home menu item.		Click on the 'Home' menu item on the main menu.	Search main page.	Software Engineering home page.	Expected Result		RG	4/25/11

Code Shark Solutions

Detailed Design

P	1.006	Test Software Engineering I menu item.		Click on the 'Software Engineering I' menu item on the main menu.	Search main page.	Software Engineering I Description page.	Expected Result		RG	4/25/11
P	1.007	Test Software Engineering II menu item.		Click on the 'Software Engineering II' menu item on the main menu.	Search main page.	Software Engineering II Description page.	Expected Result		RG	4/25/11
P	1.008	Test Search menu item.		Click on the 'Search' menu item on the main menu.	Search main page.	Search page.	Expected Result		RG	4/25/11
P	1.009	Test All Team Names Link		Click on the 'All Team names' link at the bottom of the page	Search main page.	Page with all the teams listed	Expected Result		RG	4/25/11
P	1.010	Test All Course Years Link		Click on the 'All Course Years' link at the bottom of the page	Search main page.	Page with all the years listed	Expected Result		RG	4/25/11
P										
P		= Unit Summary		100%	passing	10	passed	Date of last test =		4/25/11
		10 tests				0	failed			

*Search Tests***Unit 2.1**

Test the Search by Student functionality.

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
P		Navigate to Search main page.						
P	2.001	Enter search criteria.	Enter a Student's name exactly as it is spelled.	Enter desired input and press the Search button.	Search main page.	Exact Matches should appear first followed by matches where the string is contained in the result followed by inexact matches.	Expected result	Searched Ryan. Matches came back as expected
P	2.002	Enter search criteria.	Enter part of a Student's name.	Enter desired input and press the Search button.	Search main page.	Exact Matches should appear first followed by matches where the string is contained in the result followed by inexact matches.	Expected result	Searched yan. Matches came back as expected
P	2.003	Enter search criteria.	Enter a Student's name slightly misspelled.	Enter desired input and press the Search button.	Search main page.	Exact Matches should appear first followed by matches where the string is contained in the result followed by inexact matches.	Expected result	Searched Kurt Griener. Found Kurt Greiner

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P	2.004	Enter search criteria.	Enter a Student's name with punctuation.	Enter desired input and press the Search button.	Search main page.	Exact Matches should appear first followed by matches where the string is contained in the result followed by inexact matches.	Expected result	Searched Ryan Godfrey!!!!!!!!!!!!!!!!!!!! @*#*(&^\$*(#. Found Ryan Godfrey
P	2.005	Enter search criteria.	Enter a Student's name last name first, followed by the first name.	Enter desired input and press the Search button.	Search main page.	Exact Matches should appear first followed by matches where the string is contained in the result followed by inexact matches.	Expected result	Searched Godfrey Ryan. Found Ryan Godfrey
P	2.006	Enter search criteria.	Enter a Student's name with no spaces.	Enter desired input and press the Search button.	Search main page.	Exact Matches should appear first followed by matches where the string is contained in the result followed by inexact matches.	Expected result	Searched RyanGodfrey. Found Ryan Godfrey
P								
P	= Unit Summary		100%	passing	6	passed		Date of las
	6	tests			0	failed		

*Search Tests***Unit 2.2**

Test the Search by Team functionality.

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
P		Navigate to Search main page.								
P	2.001	Enter search criteria.	Enter a Team's name exactly as it is spelled.	Enter desired input and press the Search button.	Search main page.	Exact Matches should appear first followed by matches where the string is contained in the result followed by inexact matches.	Expected Result	Searched Code Shark Solutions. It was the first entry followed by other entries.	RG	4/25/11
P	2.002	Enter search criteria.	Enter part of a Team's name.	Enter desired input and press the Search button.	Search main page.	Exact Matches should appear first followed by matches where the string is contained in the result followed by inexact matches.	Expected Result	Searched Solutions. Found multiple teams with solutions in the name.	RG	4/25/11
P	2.003	Enter search criteria.	Enter a Team's name slightly misspelled.	Enter desired input and press the Search button.	Search main page.	Exact Matches should appear first followed by matches where the string is contained in the result followed by inexact matches.	Expected Result	Searched Code Sark Solutions. Code Shark Solutions was found.	RG	4/25/11

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P	2.004	Enter search criteria.	Enter a Team's name with punctuation.	Enter desired input and press the Search button.	Search main page.	Exact Matches should appear first followed by matches where the string is contained in the result followed by inexact matches.	Expected Result	Searched C@#%ode. Sa#@%%rk .Solutions. Code Shark Solutions was found.	RG	4/25/11
P	2.006	Enter search criteria.	Enter a Team's name with no spaces.	Enter desired input and press the Search button.	Search main page.	Exact Matches should appear first followed by matches where the string is contained in the result followed by inexact matches.	Expected Result	Searched CodeSharkSolutions. Code Shark Solutions was found	RG	4/25/11
P	2.007	Enter search criteria.	Enter a Team's acronym.	Enter desired input and press the Search button.	Search main page.	Exact Matches should appear first followed by matches where the string is contained in the result followed by inexact matches.	Expected Result	Searched C.S.S. Code Shark Solutions and ABS was found	RG	4/25/11
P	2.008	Enter search criteria.	Enter a Team's acronym without punctuation.	Enter desired input and press the Search button.	Search main page.	Exact Matches should appear first followed by matches where the string is contained in the result followed by inexact matches.	Expected Result	Searched CSS. Code Shark Solutions and ABS was found.	RG	4/25/11
P										
P	= Unit Summary		100%	passing	8	passed			Date of last test =	4/25/11
	8 tests				0	failed				

*Search Tests***Unit 2.3**

Test the Search by Year functionality.

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
P										
P	1.001	Enter search criteria.	Enter a year.	Enter desired input and press the Search button.	Search main page.	Desired Year's data should appear somewhere in results.	Expected Result	Searched 2008. Both Fall and Spring 2008 teams were found.	RG	4/25/11
P	1.002	Enter search criteria.	Enter two consecutive years separated by a '-'.	Enter desired input and press the Search button.	Search main page.	Desired Year's data should appear somewhere in results.	Expected Result	Searched 2008-2009. All teams with either fall or spring 2008 or 2009 were found.	RG	4/25/11
P	1.003	Enter search criteria.	Enter two consecutive years separated by a '-'.	Enter desired input and press the Search button.	Search main page.	Desired Year's data should appear somewhere in results.	Expected Result	Same as above.	RG	4/25/11
P	= Unit Summary		100%	passing	3	passed	Date of last test =			4/25/11
	3	tests			0	failed				

Search Tests**Unit 2.4**

Test the Search by Client functionality.

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
P		Navigate to Search main page.								
P	2.001	Enter search criteria.	Enter a Client's name exactly as it is spelled.	Enter desired input and press the Search button.	Search main page.	Desired Client's data row should appear somewhere in results.	Expected Result	Searched Timoth Lederman	RG	4/25/11
P	2.002	Enter search criteria.	Enter part of a Client's name.	Enter desired input and press the Search button.	Search main page.	Desired Client's data row should appear somewhere in results.	Expected Result	Searched Lederman. Timoth Lederman was found.	RG	4/25/11
P	2.003	Enter search criteria.	Enter a Client's name slightly misspelled.	Enter desired input and press the Search button.	Search main page.	Desired Client's data row should appear somewhere in results.	Expected Result	Searched Timoth Lderman. Timoth Lederman was found.	RG	4/25/11
P	2.004	Enter search criteria.	Enter a Client's name with punctuation.	Enter desired input and press the Search button.	Search main page.	Desired Client's data row should appear somewhere in results.	Expected Result	Searched t.i.m.o.t.h. lederman. Timoth Lederman was found.	RG	4/25/11
P	2.005	Enter search criteria.	Enter a Client's name last name first, followed by the first name.	Enter desired input and press the Search button.	Search main page.	Desired Client's data row should appear somewhere in results.	Expected Result	Searched Lederman Timoth. Timoth Lederman was found.	RG	4/25/11

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P	2.006	Enter search criteria.	Enter a Client's name with no spaces.	Enter desired input and press the Search button.	Search main page.	Desired Client's data row should appear somewhere in results.	Expected Result	Searched TimothyLederman . Timothy Lederman was found.	RG	4/25/11
P										
P	= Unit Summary		100%	passing	6	passed	Date of last test = 4/25/11			
	6	tests			0	failed				

*Search Results Tests***Unit 3**

Test results information for Student.

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
P		Navigate to Search page and search for a Student that exists in the database.								
P	3.001	Check to make sure First Name field directs browser correctly.		Click on the link in the First Name or Last Name field of selected Student.	Results Page	Selected Students page.	Expected Result		RG	4/25/11
P	3.002	Check to make sure the 'Print this page' button works.		Click 'Print this page' button.	Selected Students page.	Print Information pop-up.	Expected Result		RG	4/25/11
P	3.003	Check to make sure the 'Back to Results' button works.		Click 'Back to Results' button.	Selected Students page.	Results Page	Expected Result		RG	4/25/11
P	3.004	Check the link to the Team's page.		Click the link that is labeled with the student's team name under the team picture.	Selected Students page.	Team's Home page	Expected Result		RG	4/25/11
P	3.005	Check the link to the Team's Song.		Click the link that is under the 'Team Song' heading.	Selected Students page.	Team song should download.	Expected Result		RG	4/25/11
P	3.006	Check the link to the Team's Demo.		Click the link that is under the 'Project Demo' heading.	Selected Students page.	Browser should be redirected to team site.	Expected Result		RG	4/25/11
P	3.007	Check selected student's resume.		Click on the picture of the student on the right hand side of the page.	Selected Students page.	Browser should be redirected to Student's resume.	Expected Result		RG	4/25/11

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P	3.008	Check links to other team members' resumes.		Click on the names of students under the selected students picture.	Selected Students page.	Browser should be redirected to Teammate's resume.	Expected Result		RG	4/25/11
P	3.009	Repeat Test Case 3.008 for all member's on selected Student's team.					Expected Result		RG	4/25/11
P	3.010	Go back to Search page and search for the same student.					Expected Result		RG	4/25/11
P	3.011	Check to make sure Team Name field directs browser correctly.		Click on the link in the Team field of the selected Student.	Results Page	Selected Team's page.	Expected Result		RG	4/25/11
P	3.012	Check to make sure the 'Print this page' button works.		Click on the 'Print this page' button.	Selected Team's page.	Print info pop-up	Expected Result		RG	4/25/11
P	3.013	Check to make sure the 'Back to Results' button works.		Click the 'Back to Results' button.	Selected Team's page.	Results for selected Student	Expected Result		RG	4/25/11
P	3.014	Check the link to the Team's page.		Click the link that is under the team's picture.	Selected Team's page.	Team's homepage	Expected Result		RG	4/25/11
P	3.015	Check the link to the Team's Song.		Click the link that is under the 'Team's Song' heading.	Selected Team's page.	Team's song file download.	Expected Result		RG	4/25/11
P	3.016	Check the link to the Team's Demo.		Click the link that is under the 'Team's Demo'	Selected Team's page.	Browser redirected to demo.	Expected Result		RG	4/25/11
P	3.017	Check links to team members' resumes.		Click on the names of the team members.	Selected Team's page.	Selected Student's Resume	Expected Result		RG	4/25/11
P	3.018	Repeat Test Case 3.017 for all member's on selected team.			Selected Team's page.		Expected Result		RG	4/25/11
P	3.019	Go back to Search page and search for the same student.					Expected Result		RG	4/25/11

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P	3.020	Check to make sure Project Name field directs browser correctly.		Click on the link in the Project Name field for the selected Student.	Results Page	Selected Team's page who developed the project.	Expected Result		RG	4/25/11
P	3.021	Check to make sure the 'Print this page' button works.		Click 'Print this page' button.	Selected Team's page	Print info pop-up	Expected Result		RG	4/25/11
P	3.022	Check to make sure the 'Back to Results' button works.		Click 'Back to Results' button.	Selected Team's page	Results page	Expected Result		RG	4/25/11
P	3.023	Check the link to the Team's page.		Click the link that is under the team's picture.	Selected Team's page	Team's homepage	Expected Result		RG	4/25/11
P	3.024	Check the link to the Team's Song.		Click the link that is under the 'Team's Song' heading.	Selected Team's page	Team's song file download.	Expected Result		RG	4/25/11
P	3.025	Check the link to the Team's Demo.		Click the link that is under the 'Team's Demo'	Selected Team's page	Browser redirected to demo.	Expected Result		RG	4/25/11
P	3.026	Check links to team members' resumes.		Click on the names of the team members.	Selected Team's page	Selected Student's Resume	Expected Result		RG	4/25/11
P	3.027	Repeat Test Case 3.026 for all member's on selected team.					Expected Result		RG	4/25/11
P	3.028	Go back to Search page and search for the same student.					Expected Result		RG	4/25/11
P	3.029	Check to make sure Client field directs browser correctly.		Click on the link in the Client Name Field for the selected Student.	Results Page	Selected Client's page.	Expected Result		RG	4/25/11
P	3.030	Check to make sure the 'Print this page' button works.		Click the 'Print this page' button.	Selected Client's page.	Print info pop-up	Expected Result		RG	4/25/11
P	3.031	Check to make sure the 'Back to Results' button works.		Click the 'Back to Results' button.	Selected Client's page.	Results page for selected Student	Expected Result		RG	4/25/11

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P	3.032	Check links to team's sites.		Click on the links on the right side of the page.	Selected Client's page.	Selected Team's homepage	Expected Result	Some teams do not have a website. In this case the browser is redirected to the search.	RG	4/25/11
P	3.033	Repeat Test Case 3.032 for all teams on selected Client.					Expected Result		RG	4/25/11
P	3.034	Go back to Search page and search for the same student.					Expected Result		RG	4/25/11
P	3.035	Check to make sure Course Year field directs browser correctly.		Click on the link under the Course Year field.	Results Page	Page listing all teams for the selected year should appear.	Expected Result		RG	4/25/11
P	3.036	Check to make sure the 'Print this page' button works.		Click the 'Print this page' button.	Selected Course Year's page	Print info pop-up	Expected Result		RG	4/25/11
P	3.037	Check to make sure the 'Back to Results' button works.		Click the 'Back to Results' button.	Selected Course Year's page	Results page	Expected Result		RG	4/25/11
P	3.038	Check the link to the Team's page.		Click the link that is under the team's picture.	Selected Course Year's page	Selected Team's homepage	Expected Result		RG	4/25/11
P	3.039	Check the link to the Team's Song.		Click the link that is under the 'Team's Song' heading.	Selected Course Year's page	Team's song downloaded	Expected Result		RG	4/25/11
P	3.040	Check the link to the Team's Demo.		Click the link that is under the 'Team's Demo'	Selected Course Year's page	Browser is redirected to the demo.	Expected Result		RG	4/25/11

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P	3.041	Check links to team members' resumes.		Click on the names of the team members.	Selected Course Year's page	Selected Team Member's resume	Expected Result		RG	4/25/11
P	3.042	Repeat Test Case 3.040 for all member's on selected team.					Expected Result		RG	4/25/11
P	3.043	Repeat Test Cases 3.037 through 3.041 for all teams for selected Year.					Expected Result		RG	4/25/11
P	3.044	Repeat whole Unit for searching by Team, Client and Year.					Expected Result		RG	4/25/11
P	= Unit Summary		100%	passing	44	passed			Date of last test =	4/25/11
	44	tests			0	failed				

Database ExceptionsClients

10, 21, 22, 33, 35 no title
17-Library no first name, no last name

Students

Students 1-285, 388, 466 have a null value for picture, resume, teamLeaderFall, and teamLeaderSpring
Students 1-45, 278, 284 have a null value for teamNameSpring
421, 426, 428 have null values for teamNameSpring
429 and 432 have null values for resume

Teams

Teams with no names we put "No NameX" X signifying a certain number as the teamName
Teams from fall 1984 to spring 2002 do not have values for siteLink, demo, song, teamPic
Fall 2010-spring 2011 is the only year with song values
Odyssey Information Systems and Initech teams did not use the relative path, they used the absolute path to the old server, so the links on their sites do not work
S E G's files were unable to be put in their public_html folder because I did not have permission