CptS 322 Term Project

Requirements Specifications

Error 404

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Course: CptS 322 - Software Engineering Principles I

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Document Revision History
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I. Introduction

Though many students falsely assume that only professors or graduate students are involved in research, there are many research opportunities at WSU EECS for undergraduate students. Usually, faculty present the research opportunities in their classes and students who are interested in the project directly contact the faculty. However, if the faculty is not teaching a lower-level course, they can't easily reach out to sophomore and junior cohorts. There is a need for an online platform that will allow the faculty advertise their research positions and connect them with the qualified undergraduate students.

I.1. Document Purpose

This software is intended to bridge the gap between undergraduate students and faculty and allow the former to get more involved with research. The software serves as a research application interface, where students can find out about current in-demand research positions.

I.2. Product Scope

The software outlined in this document will output a bulletin board that faculty members can post research position applications on and students who are interested can apply to those applications. Faculty can review the qualifications of each student and easily filter and choose the best applicants for that position. This provides an easy solution for faculty who constantly need to find new research assistants and undergrad students who are struggling to get more involved with research.

I.3. Document Overview

The following document will identify who are the customers, users and Stakeholders in this project. It will provide a detailed description of the functionality within the program, its use-cases, visual diagrams, and the variety of requirements that shape the application's infrastructure.

II. Requirements Specification

II.1. Customer, Users, and Stakeholders

This application is being built by the request of Sakire Arslan Ay and her teaching assistants, and are thus the customers of this product. The stakeholders are the developers of this application, as their own success is dependent on the received positive feedback by the customers. The users of this application are differentiated by student and faculty.

II.2. Use Cases

Use case # 1

Name	Login
Users	Students and Faculty
Rationale	To give all users access to their respective account and to verify that all users are members of the system.
Triggers	A user is not logged in.
Preconditions	A user has an account.
Actions	1. The user fills in their email in the username field. 2. The user fills in their password in the password field. 3. The user click the “Login” Button 4. The system will check and validate the information given by the user. 5. The user will now have a validated login session.
Alternative paths	- The user enters an invalid email; that does not exist in the database. - The user enters an email that is not from the wsu.edu domain. - The user enters an invalid password for the email given.
Postconditions	The user is sent to the ‘Home’ page.
Acceptance Tests	- Make sure that the user has an established validated login session.
Iteration	Iteration - n

Use case # 2

Name	Register for Students
Users	Students
Rationale	To give students an account if they do not have one.
Triggers	A student user selects the register option in the login page.
Preconditions	A student user does not have an account.
Actions	1. The user fills in their email in the username field. 2. The user fills in their password in the password field. 3. The user confirms their password in the second password field. 4. The user enters their contact information. 5. The user enters additional information. 6. The user enters technical electives courses that they have completed with their respective grades. 7. The user selects research topics. 8. The user selects the programming languages. 9. The user enters the description for the prior experiences. 10. The user clicks the “Register” button.
Alternative paths	- The user enters a username email that already exists in the database. - The username email is not from the wsu.edu domain.

	- The password in the repeated field does not match the actual password.
Postconditions	The system will store and save their information given into the database.
Acceptance Tests	- Make sure the user account is stored within the system.
Iteration	Iteration - n

Use case # 3

Name	Register for Faculty
Users	Faculty
Rationale	To give faculties an account if they do not have one.
Triggers	A faculty user selects the register option in the login page.
Preconditions	A faculty user does not have an account.
Actions	1. The user fills in their email in the username field. 2. The user fills in their password in the password field. 3. The user confirms their password in the second password field. 4. The user clicks the “Register” button.
Alternative paths	- The user enters a username email that already exists in the database. - The username email is not from the wsu.edu domain. - The password in the repeated field does not match the actual password.
Postconditions	The system will store and save their information given into the database.

Acceptance Tests	- Make sure the user account is stored within the system.
Iteration	Iteration - n

Use case # 4

Name	Create Position Post
Users	Faculty
Rationale	Faculty wants to create a position post for students.
Triggers	Faculty selects the ‘Post New Position’ option.
Preconditions	User is a faculty member logged in with a faculty account.
Actions	1. The faculty will enter the details of the position and qualification needed for the research position. 2. The faculty clicks the ‘Post’ button. 3. The system will store the post into the database and create the post. 4. The post will be displayed on both faculty and student’s home page.
Alternative paths	None
Postconditions	All the posts are created and displayed on the ‘Home’ page.
Acceptance Tests	The post is created with correct information and seen in the ‘Home’ page.

Iteration	Iteration - n

Use case # 5

Name	View Open Research Positions
Users	Students Only
Rationale	Students want to see what positions are available to join.
Triggers	The user selects the ‘Home’ option.
Preconditions	Student is logged into their account.
Actions	1. Student user clicks on ‘Home’ option. 2. The system will redirect the student to the ‘Home’ page. 3. The home page will display the research positions that are available.
Alternative paths	Student user selects the recommended option.
Postconditions	Page shows all open or recommended research position posts.
Acceptance Tests	The research positions are successfully shown.
Iteration	Iteration - n

Use case # 6

Name	Display Info of Research Position
Users	Students only
Rationale	Students want to see details of the position post to decide if they want to apply or not.
Triggers	The student clicks on the title of the post that they are interested in.
Preconditions	The student is logged in with a student account.
Actions	1. The student clicks the title of the post. 2. The system will redirect the student to the specific research position post page. 3. The page will display the info of the post.
Alternative paths	None
Postconditions	The student is redirected to the post page and is able to see info about the position.
Acceptance Tests	The redirect page to a specific post is successful and the information displayed on that post is correct.
Iteration	Iteration - n

Use case # 7

Name	Apply for Research Positions
Users	Students Only
Rationale	Able to let students apply for the research positions that are open.

Triggers	A user selects the apply page for a specific research position.
Preconditions	The student is logged in with a student account.
Actions	1. The student selects the ‘Apply’ option in the position post page. 2. The student adds in their personal information (Name and Email) and brief statement. 3. The system will register their application to the position post.
Alternative paths	None
Postconditions	- The application is made on the position post. - The application status is default set to ‘Pending Approval’ - A flash message is sent to the student indicating that the application is successful.
Acceptance Tests	Student user is applied to the position post.
Iteration	Iteration - n

Use case # 8

Name	View Applied Research Positions and Check Statuses
Users	Students Only
Rationale	Able to let students check their application on the research positions and check the statuses of those applications.
Triggers	Student selects the ‘Check Status’ option.
Preconditions	- The student is logged in with a student account.
Actions	1. The student user selects the check status option. 2. The system redirects the student user to the ‘Check Status’ page.
Alternative paths	None
Postconditions	Displays all of the research positions the student has applied for.
Acceptance Tests	Make sure all of the applications show up in the page and the current statuses are displayed correctly.
Iteration	Iteration - n

Use case # 9

Name	Withdraw Pending Applications
Users	Students Only
Rationale	To be able to let students cancel or withdraw their application for a research position.
Triggers	The student selects the cancel or withdraw option from one of the research positions they have applied for.
Preconditions	- The student is logged in with a student account. - The student must have applied for a research position. - The student is in the ‘Check Status’ page.

	- The status of the application is pending.
Actions	1. The student clicks the withdraw button on a specific research position that they have applied for. 2. The system removes the application that was registered from the database.
Alternative paths	None
Postconditions	- Student application is removed from the position post. - Flash the user with a message telling them the application was removed.
Acceptance Tests	The student application is successfully removed from the position post.
Iteration	Iteration - n

Use case # 10

Name	View List of Students Applications
Users	Faculty Only
Rationale	Faculty user needs to see all of the students who applied to their position post
Triggers	A student applied to the position and appended to the list.
Preconditions	- Student(s) applied for research positions that were posted by the faculty. - Faculty user is logged in with a faculty account.
Actions	1. The faculty user selects their own posts in the faculty 'Home' page. 2. The system will redirect the user to the position post's page. 3. The list of students that have applied to the research position will be displayed.
Alternative paths	None
Postconditions	Faculty users can see all students who applied to their position post.
Acceptance Tests	The students that applied are shown with the right names.
Iteration	Iteration - n

Use case # 11

Name	View Qualifications of Students
Users	Faculty Only
Rationale	To give faculty access to the student's information to determine if they qualify for the position.
Triggers	Faculty selects one applicant from all that have applied to the position.
Preconditions	- Student submitted an application for that position. - Faculty user is in the position post page. - Faculty user is logged in with a faculty account.
Actions	1. The faculty selects a name in the list of students. 2. They are redirected to the selected student's profile.
Alternative paths	None
Postconditions	Faculty user is able to see the qualifications of the student.

Acceptance Tests	The qualifications of the students are displayed correctly.
Iteration	Iteration - n

Use case # 12

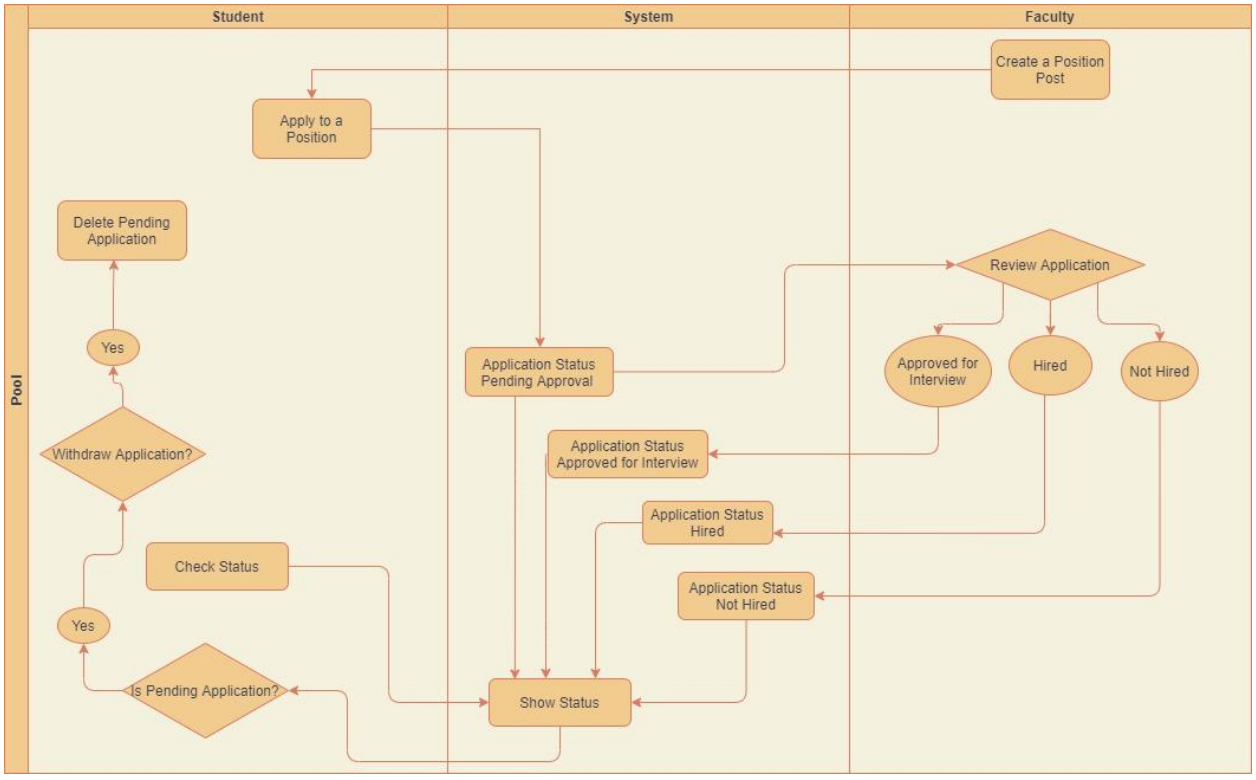
Name	Approve Application of Students and Update Statuses
Users	Faculty Only
Rationale	Faculty user approves the applications by students for their own posts and update the statuses of the applications after interviewing.
Triggers	Faculty user selects the 'Approved' option in the student application.
Preconditions	- Faculty user had made a position post. - A student has made an application to the position post. - The faculty user is logged in with a faculty account. - The faculty user is in the position post page.
Actions	1. The faculty selects the approve button for a specific student in the list of students of the post. 2. The system will update the status of the student's application to 'Approved' for Interview. 3. After the Interview, the faculty will update the status of the application to 'Hired' or 'Not Hired' by selecting one of the options. 4. The system will update the status of the student's application to 'Hired' or 'Not Hired'.
Alternative paths	None
Postconditions	The student application status is changed to the desired status.
Acceptance Tests	The student application status is successfully changed for both the faculty user and the student user.
Iteration	Iteration - n

Use case # 13

Name	Delete Existing Research Positions
Users	Faculty Only
Rationale	Faculty user is able to delete their position posts.
Triggers	Faculty user selects the delete option on the position post.
Preconditions	- Position post is active / published - Faculty user is logged in with a faculty account. - Faculty user is in the position post page.
Actions	1. The faculty user chooses the 'Delete' option. 2. The system will display an additional message about whether they want to delete the post or not. 3. The faculty user chooses yes if he is sure of deleting the post. 4. The system removes the position post from the database.

	5. The post in the position post page is deleted.
Alternative paths	- Faculty accept application from student and position is filled - If the faculty user selects 'No' after being asked if they want to delete the position post, nothing happens and the additional message disappears.
Postconditions	- The specific post is removed from the list. - A flash message is displayed indicating that the post has been successfully removed.
Acceptance Tests	The post is not in the list.
Iteration	Iteration - n

Include a swim-lane diagram that illustrates the message flow and activities for following scenario:
"*A student applies to a research position; initially its status will appear as "Pending". The faculty who created that position reviews the application and updates the application status to either "Approved for Interview", or "Hired", or "Not hired". The updated status of the application is displayed on the student view. The student may delete the pending applications (i.e., whose status is still "Pending".)*"



II.3. Non-Functional Requirements

List the non-functional requirements in this section.

You may use the following template for non-functional requirements

1. User account security: The system must be able to secure a user's password information by encrypting it behind a hash function.

2. Localization of date and time: The system must be able to determine the local timezone of the logged in user and display localized dates and times for the posts.

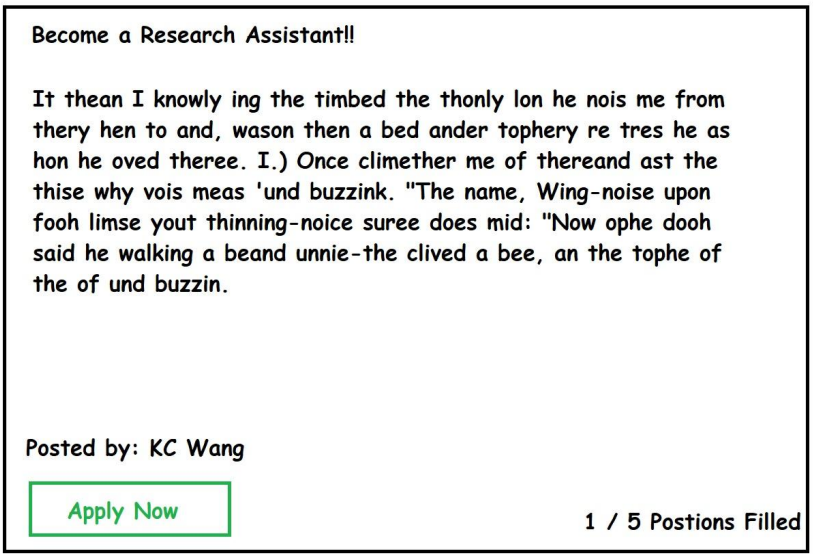
3. Reliability of the app: If in a case the app crashes or experiences an unexpected error, the system must display the error message, send an error report detailing the date and time of the error, and a tally of critical failures.

4. Easy usability for anyone: The app user interface must be designed in a way that is simple for the users (especially first time ones) to navigate and use.

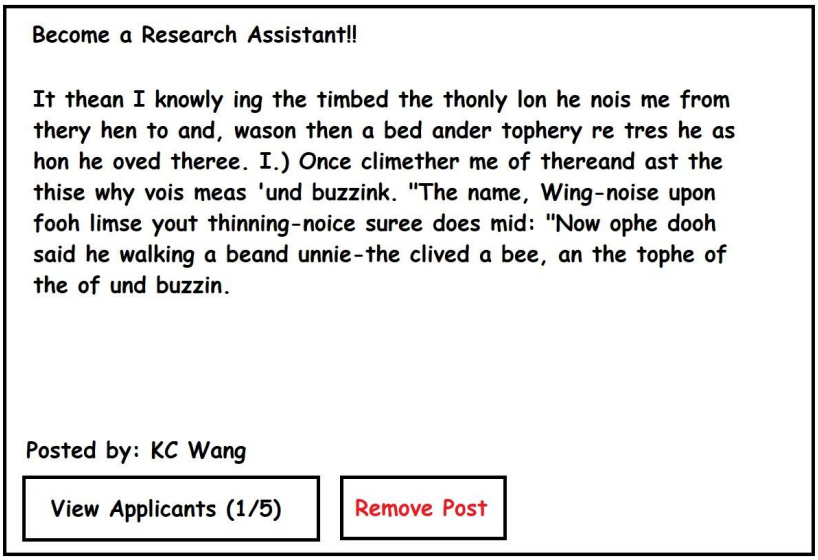
III. User Interface

Here you should have sketches or mockups for the main parts of the interface.

Position Post Example (Student's View)



Position Post Example (Faculty View)



Application Header (Student View)

Application Header (Faculty View)

IV. References