

CSCI 5448 Object Oriented Analysis and Design

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Title: MyCUOpportunities

Project Summary: An Android application that's used by CU Students to search for on-campus jobs as well as jobs posted by fellow students. Students can maintain their profile; upload their resume onto their profile and apply to jobs. Students can flag inappropriate job postings, which will then be reviewed by the admin and deleted if determined to be not appropriate.

Project Requirements:

Business Requirements		
ID	Requirement	Priority
BR-001	All login user-ids must be the user's school email address.	Critical

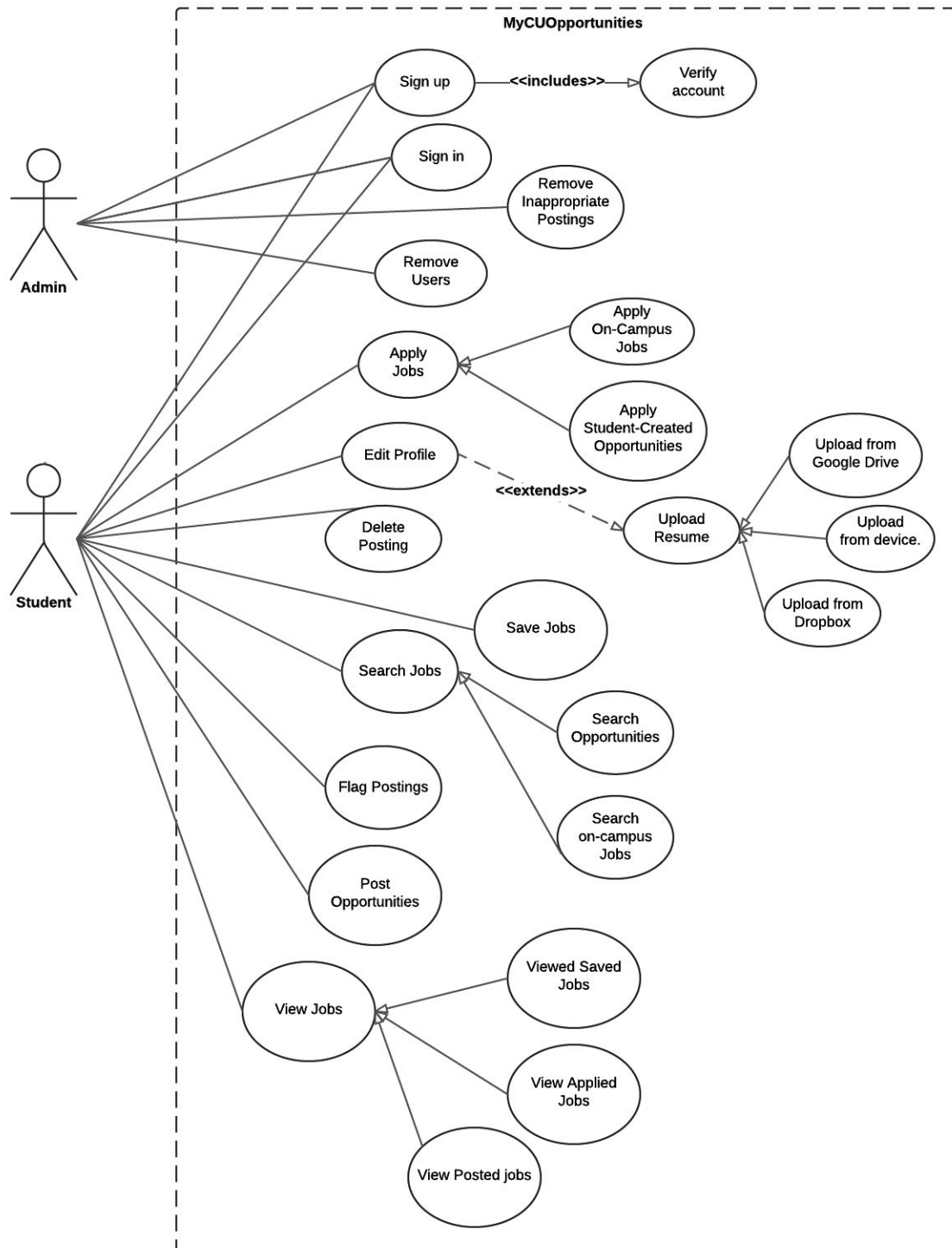
User Requirements		
ID	Requirement	Priority
US-001	All users must be able to sign up.	Critical
US-002	All users must be log in.	Critical
US-003	Students must be able to edit their profile.	High
US-004	Students must be able to upload resume.	Critical
US-005	Students must be able to search for jobs.	Critical
US-006	Students must be able to apply for jobs.	Critical
US-007	Students must be able to save interested jobs.	High
US-008	Students must be able to flag inappropriate postings.	High
US-009	Students must be able to view applied jobs.	High
US-010	Students must be able to view saved jobs.	High
US-011	Students must be able to post jobs.	Critical
US-012	Students must be able to view posted-jobs.	High

US-013	Students must be able to delete one's own posted-job.	Critical
US-014	Admin must be able to take down inappropriate postings.	Critical
US-015	Admin must be able to remove users.	High
US-016	All users must get notifications.	Medium

Functional Requirements		
ID	Requirement	Priority
FR-001	When a user flags a posting as inappropriate, system creates a log of that into the database.	Critical
FR-002	When the job seeker applies to a job posting, the system emails his application to the job poster.	Critical
FR-003	When the job seeker applies to a job posting, the system creates and stores it in the Database.	Critical
FR-004	The system logs user activities into the Database.	Critical

Non- Functional Requirements		
ID	Requirement	Priority
NFR-001	Reliability: Data entered by students must be stored in a persistent and reliable manner.	Critical
NFR-002	Security: The user's password and account details must be stored in a secure manner.	Critical
NFR-003	Performance: Upon entering search query, the user shall be provided with results within 5 seconds.	High

Use Cases:



Use Case ID:	UC-001
Use Case Name:	Sign up
Description:	Users must be able to sign up for an account.

Actors:	Students, Admin		
Preconditions:	Users must have a colorado.edu email ID.		
Postconditions:	On success:	User is signed up.	
	On Failure:	User is not able to sign up.	
Frequency of Use:	Once		
Flow of events:		Actor Action	System Response
	1.	User enters his username and password.	
	2.	User clicks enter.	An account is created for the user.
Variations:			
Notes and Issues:	Email should be verified.		
Developer Notes:			

Use Case ID:	UC-002
Use Case Name:	Log in
Description:	All users must be able to log into their account.

Actors:	Students, Admin		
Preconditions:	Users must have an signed up previously.		
Postconditions:	On Success:	User signs into his account.	
	On Failure:	User is not able to sign into his account.	
Frequency of Use:	Frequently		
Flow of events:		Actor Action	System Response
	1.	User enters his username and password.	
	2.	User clicks enter.	Systems logs in the user.
Variations:			
Notes and Issues:			
Developer Notes:			

Use Case ID:	UC-003
Use Case Name:	Edit Profile
Description:	Students can edit their profile to add information about themselves.

Actors:	Students		
Preconditions:	Students must be logged in.		
Postconditions:	Show message - "Profile updated successfully"		
Frequency of Use:	Rarely		
Flow of events:		Actor Action	System Response
	1.	Student clicks on the Edit Profile button.	Profile loads in a new page.
	2.	Student edits his profile information.	
	3.	Student saves his profile.	Student profile is updated.
Variations:			
Notes and Issues:			
Developer Notes:			

Use Case ID:	UC-004
Use Case Name:	Edit Profile - Upload Resume
Description:	Students can upload their resume into their profile.

Actors:	Students		
Preconditions:	Students must be logged in.		
Postconditions:	On success:	Resume is added to the students profile.	
	On failure:	Resume is not added to the students profile.	
Frequency of Use:	Rarely		
Flow of events:		Actor Action	System Response
	1.	Student clicks on the Edit Profile button.	
	2.	Student selects the upload resume option.	
	3.	Student chooses the mode of upload.	
	4.	Student saves his/her profile.	The resume is uploaded to his profile.
Variations:			
Notes and Issues:			
Developer Notes:			

Use Case ID:	UC-005
Use Case Name:	Search Jobs
Description:	Students can search for on-campus job opportunities and opportunities posted by fellow students.

Actors:	Students		
Preconditions:	User must be logged in		
Postconditions:			
Frequency of Use:	Frequently		
Flow of events:		Actor Action	System Response
	1.	Click on Search Jobs.	
	2.	Enter job keywords.	
	3.	Choose filter criteria.	List of jobs are displayed based on keywords and filter.
	4.	Click on the title of a job.	More information about the job is displayed on a new page.
Variations:			
Notes and Issues:			
Developer Notes:			

Use Case ID:	UC-006
Use Case Name:	Apply Job
Description:	Students must be able to apply for jobs and opportunities posted by other students.

Actors:	Students.		
Preconditions:	Student must be logged in.		
Postconditions:	Student applied to the job successfully.		
Frequency of Use:	Frequently		
Flow of events:		Actor Action	System Response
	1.	Student selects the job to apply.	The job description opens in a new page
	2.	Student clicks the apply button.	System emails the user's application to the job poster.
Variations:			
Notes and Issues:			
Developer Notes:			

Use Case ID:	UC-007
Use Case Name:	Save Job
Description:	Students can save jobs in their profile.

Actors:	Students		
Preconditions:	Students must be logged in.		
Postconditions:	On Success:	Job was saved in the profile.	
	On Failure:	Job was not saved in the profile.	
Frequency of Use:			
Flow of events:		Actor Action	System Response
	1.	Student selects a Job posting.	The posting is displayed in detail on a new page.
	2.	Student selects the save button.	The job posting is saved to his profile.
Variations:			
Notes and Issues:			
Developer Notes:			

Use Case ID:	UC-008
Use Case Name:	Flag Posting
Description:	Students can flag inappropriate postings made by other users.

Actors:	Students		
Preconditions:	Student must be logged in. The jobs database must have items in it.		
Postconditions:	Student has flagged a posting.		
Frequency of Use:	Rarely		
Flow of events:		Actor Action	System Response
	1.	Select the post to be flagged.	The post is opened on a new page.
	2.	Click the flag button.	The system notifies the admin regarding the posting and creates a log in the database.
Variations:			
Notes and Issues:			
Developer Notes:			

Use Case ID:	UC-009
Use Case Name:	View Applied Jobs
Description:	Students can view their Applied Jobs

Actors:	Students		
Preconditions:	Students must have applied to at least one job.		
Postconditions:	On Success:	Applied jobs is displayed	
	On Failure:	Applied jobs is not displayed	
Frequency of Use:	Frequently		
Flow of events:		Actor Action	System Response
	1.	Student selects the View Applied Jobs.	List of applied jobs is displayed
Variations:			
Notes and Issues:			
Developer Notes:			

Use Case ID:	UC-010
Use Case Name:	View Saved Jobs
Description:	Students can view their Saved Jobs

Actors:	Students		
Preconditions:	Students must have saved at least one job.		
Postconditions:	On Success:	Saved jobs is displayed	
	On Failure:	Saved jobs is not displayed	
Frequency of Use:	Frequently		
Flow of events:		Actor Action	System Response
	1.	Student selects the View Saved Jobs.	List of saved jobs is displayed
Variations:			
Notes and Issues:			
Developer Notes:			

Use Case ID:	UC-011
Use Case Name:	Post Jobs
Description:	Students can post jobs for other students.

Actors:	Students		
Preconditions:	Students must be logged in.		
Postconditions:	Student posts his job opportunity.		
Frequency of Use:	Frequently		
Flow of events:		Actor Action	System Response
	1.	Student selects the post opportunity button.	
	2.	Student fills out the opportunity description.	
	3.	Student posts the opportunity.	The opportunity is updated in the database.
Variations:			
Notes and Issues:			
Developer Notes:			

Use Case ID:	UC-012
Use Case Name:	View Posted Jobs
Description:	Students can view their Posted Jobs

Actors:	Students		
Preconditions:	Students must have posted at least one job.		
Postconditions:	On Success:	Posted jobs is displayed	
	On Failure:	Posted jobs is not displayed	
Frequency of Use:	Frequently		
Flow of events:		Actor Action	System Response
	1.	Student selects the View Posted Jobs.	List of posted jobs is displayed
Variations:			
Notes and Issues:			
Developer Notes:			

Use Case ID:	UC-013
Use Case Name:	Delete Posting
Description:	Students can delete their own job posts.

Actors:	Students		
Preconditions:	Students must have posted at least a job.		
Postconditions:	On Success:	Job was deleted from the profile.	
	On Failure:	Job was not deleted from the profile.	
Frequency of Use:			
Flow of events:		Actor Action	System Response
	1.	Student selects a Job posting.	The posting is displayed in detail on a new page.
	2.	Student selects the delete button.	The job posting is deleted from his profile.
Variations:			
Notes and Issues:			
Developer Notes:			

Use Case ID:	UC-014
Use Case Name:	Remove Inappropriate Postings
Description:	The admin can remove inappropriate postings.

Actors:	Admin		
Preconditions:	Admin received a notification regarding an inappropriate posting.		
Postconditions:	On Success:	The post gets deleted.	
	On Failure:	The post does not get deleted.	
Frequency of Use:	Frequently		
Flow of events:		Actor Action	System Response
	1.	Select the posting which has been flagged as inappropriate.	The posting is displayed in detail on a new page.
	2.	Admin selects the delete button.	The posting gets deleted.
Variations:			
Notes and Issues:			
Developer Notes:			

Use Case ID:	UC-015
Use Case Name:	Remove Users
Description:	Admins can remove users.

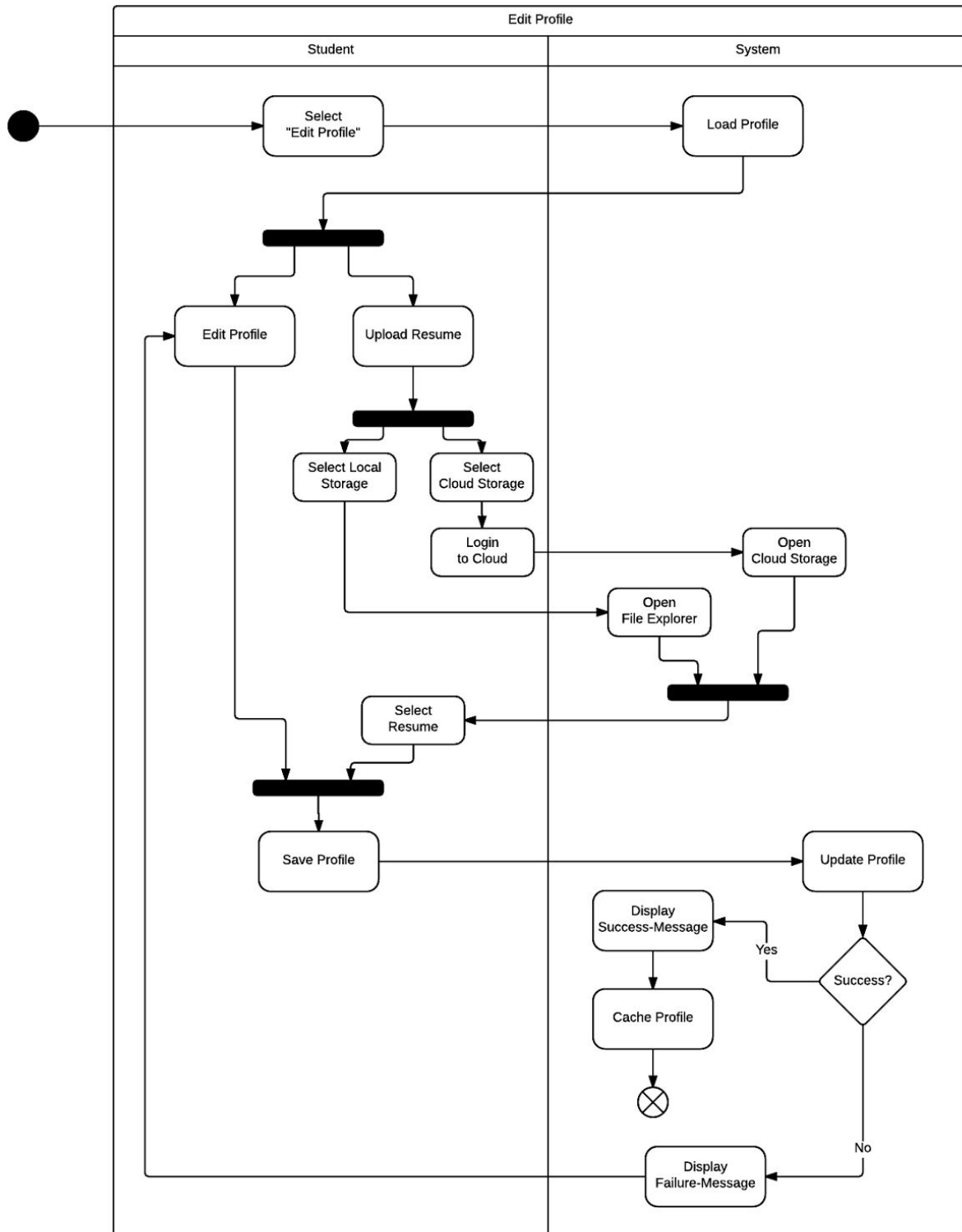
Actors:	Admin		
Preconditions:	User must be present in the system.		
Postconditions:	On Success:	User is removed from the system.	
	On Failure:	User is not removed from the system.	
Frequency of Use:	Rarely		
Flow of events:		Actor Action	System Response
	1.	Select the user to be removed.	
	2.	Remove the selected user.	The user and his profile is deleted from the system.
Variations:			
Notes and Issues:			
Developer Notes:			

Activity Diagrams:

Requirements ID: US-003, 4

Use Case ID: UC-003, 4

Created By: Ram Das Diwakaran

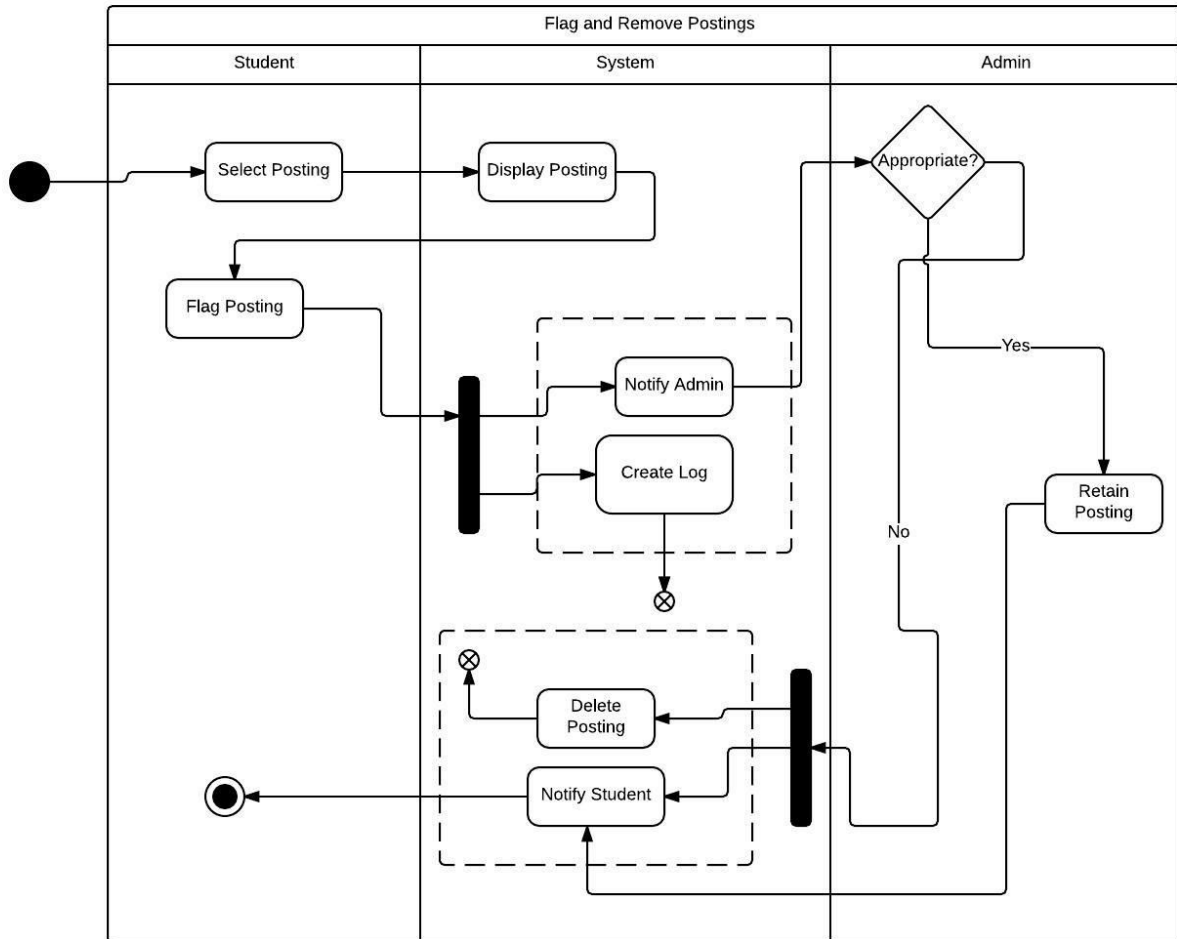


Requirements ID: US - 008, US - 014

Use case ID: UC-008, UC-013

Use Case Name: Flag Postings, Remove Postings

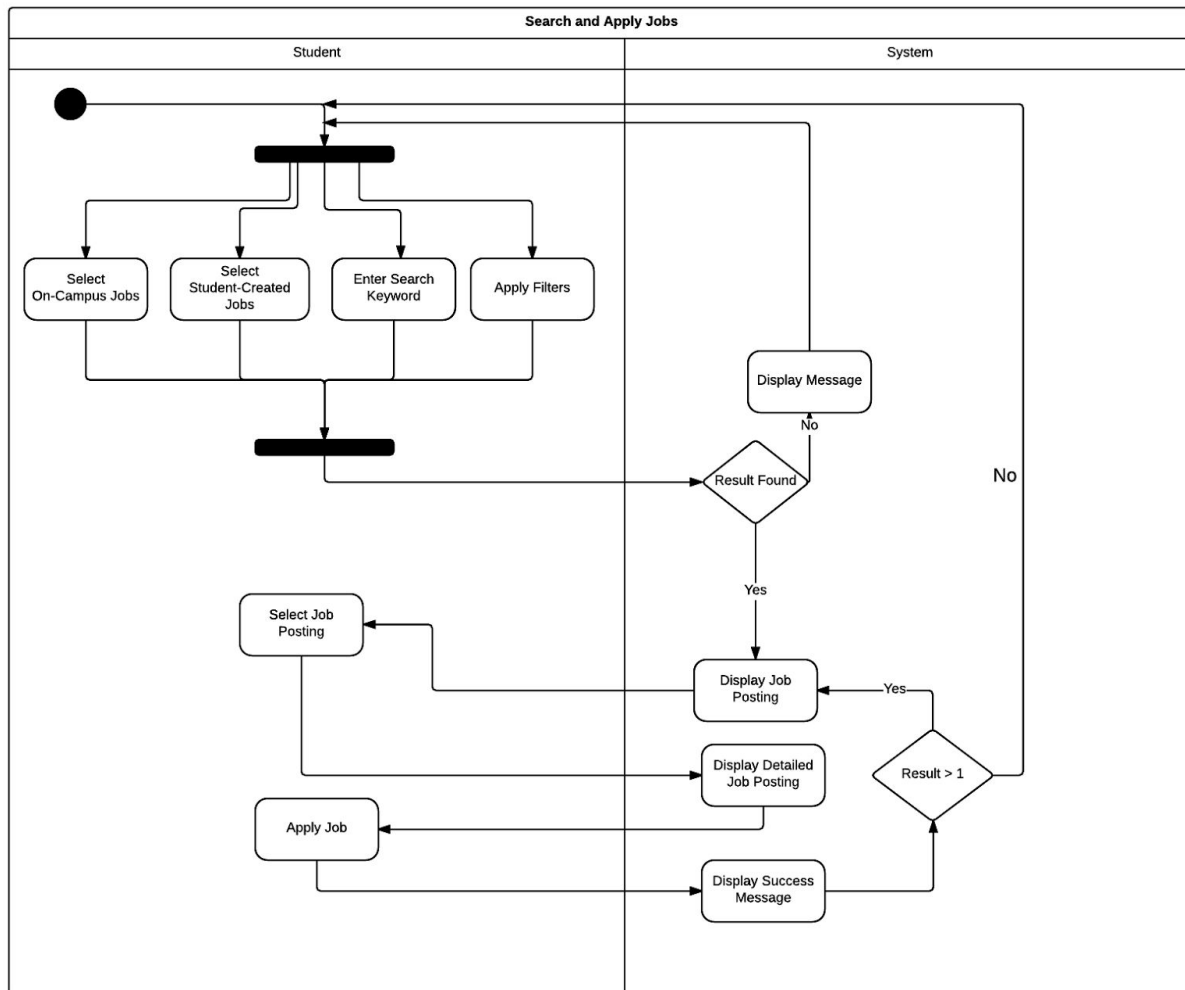
Created by: Narain Yegneswara Sharma



Requirements ID: US-005, 6

Use Case ID : UC-005, 6

Created by : Ranganathan Chidambaranathan



Data Storage:


The admin is responsible for maintaining the database, which stores information about **Jobs** (JobID, JobDescription, JobTitle, JobPoster, DatePosted, JobPay), **Student** (StudentID, Name, Email, Password etc).

We plan to use **SQLite technology** for storing the data.

The classes that are interacting with the Database are:

We have a **DatabaseManager** class, which handles all the interactions with the database such as adding/deleting jobs from the database, handling user profile actions such as update or inserting a resume.

UI Mockups



My CU Opportunities


Email Address

Password

Login

Sign Up

[Forgot Password](#)



First Name

Last Name

Email

Password

Re-Enter Password

Sign Up

Search Keyword

Notifications

Search Jobs

Profile

Applied Jobs

Saved Jobs

Post Job

Posted Jobs

☒ On-Campus Job

☐ Student-Created Opportunity

Min Pay

Max Pay

Search

CU NightRide Driver

\$12 / hour 03/01/16

Not Applied On campus Job

Not Saved

Search Jobs

Grader - CSCI 1234 ...

\$15 / hour 02/04/16

Applied On campus Job

Applied Jobs

Stud. Asst II - Lab Asst.

\$12 / hour 02/01/16

Applied On campus Job

Saved Jobs

Team Member for BigData Project

\$10 / hour 02/04/16

Not Applied Student Created Opportunity

Saved

Post Job

Stud. Asst. I - CAETE

\$10 / hour 02/04/16

Posted Jobs

CU NightRide Driver

\$12 / hour03/01/16

Notifications

Search Jobs

Profile

Applied Jobs

Saved Jobs

Post Job

Posted Jobs

Not Applied

Not Saved

Driver-Dispatchers take calls,coordinate rides, and drives CU Boulder students, staff, and faculty within the City of Boulder.CU NightRide is a student-operated program dedicated to meeting the safety needs of CU students, faculty, and staff by providing night-time transportation to support a safe academic and socially responsible environment both on campus and in the community. Review the cover letter & job description.The application is available at <http://www.colorado.edu/umc/jobs/student>

Posted By:[Elizabeth](#)

Apply

Save

Project Partner Needed

\$0 / hour03/01/16

Notifications

Search Jobs

Profile

Applied Jobs

Saved Jobs

Post Job

Posted Jobs

Not Applied

Not Saved

I am a CS Grad student, currently working on an independent project that involves blah blah...

I am need of a partner who could help me out in building a website for my project.

Posted By:[John](#)

Apply

Save

CU NightRide Driver

\$12 / hour03/01/16

Notifications

Search Jobs

Profile

Applied Jobs

Saved Jobs

Post Job

Posted Jobs

Enter your message here

☐ Attach Resume

Send Application

Notifications

Search Jobs

Profile

Applied Jobs

Saved Jobs

Post Job

Posted Jobs

First Name

Last Name

Degree

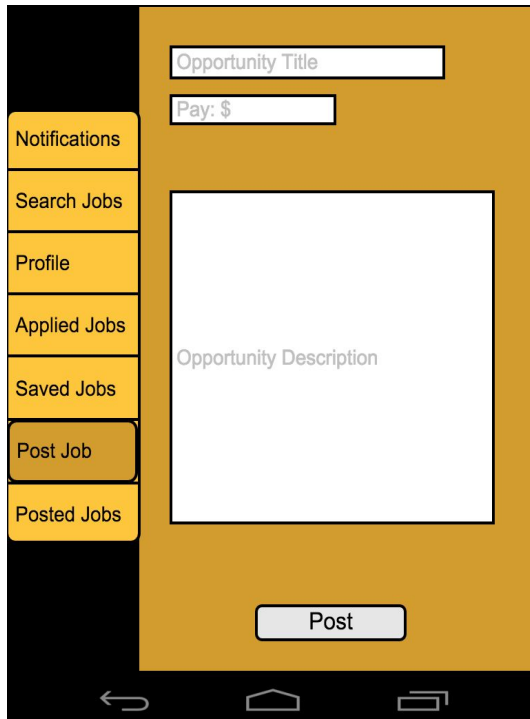
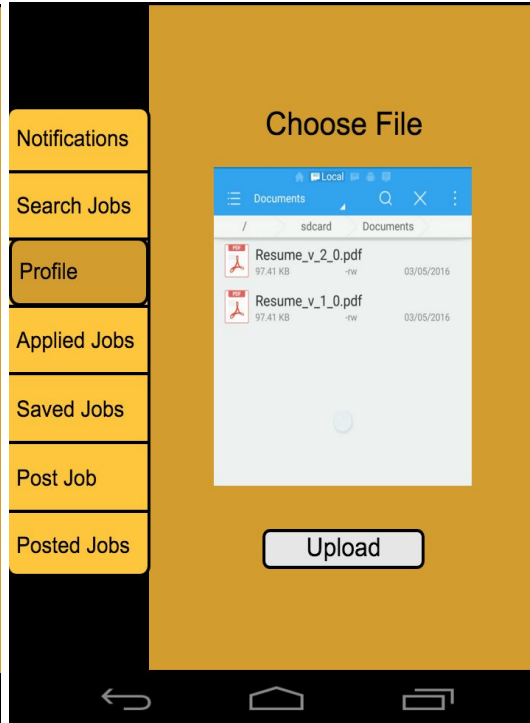
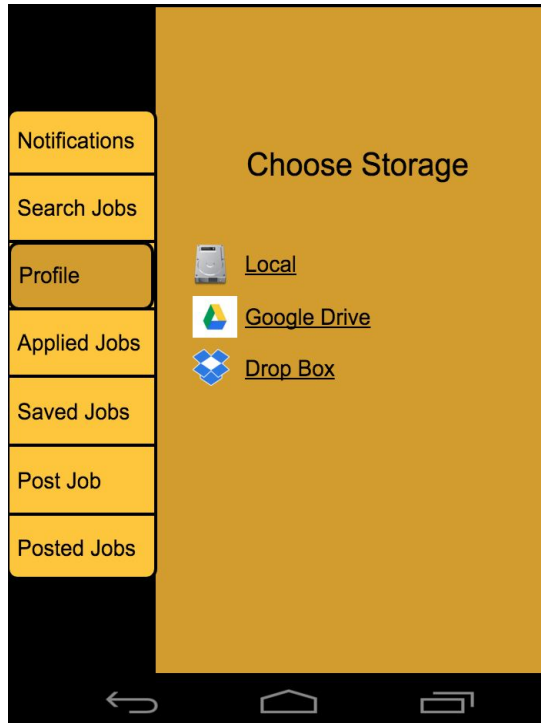
Department

Year

Upload Resume

Change Password

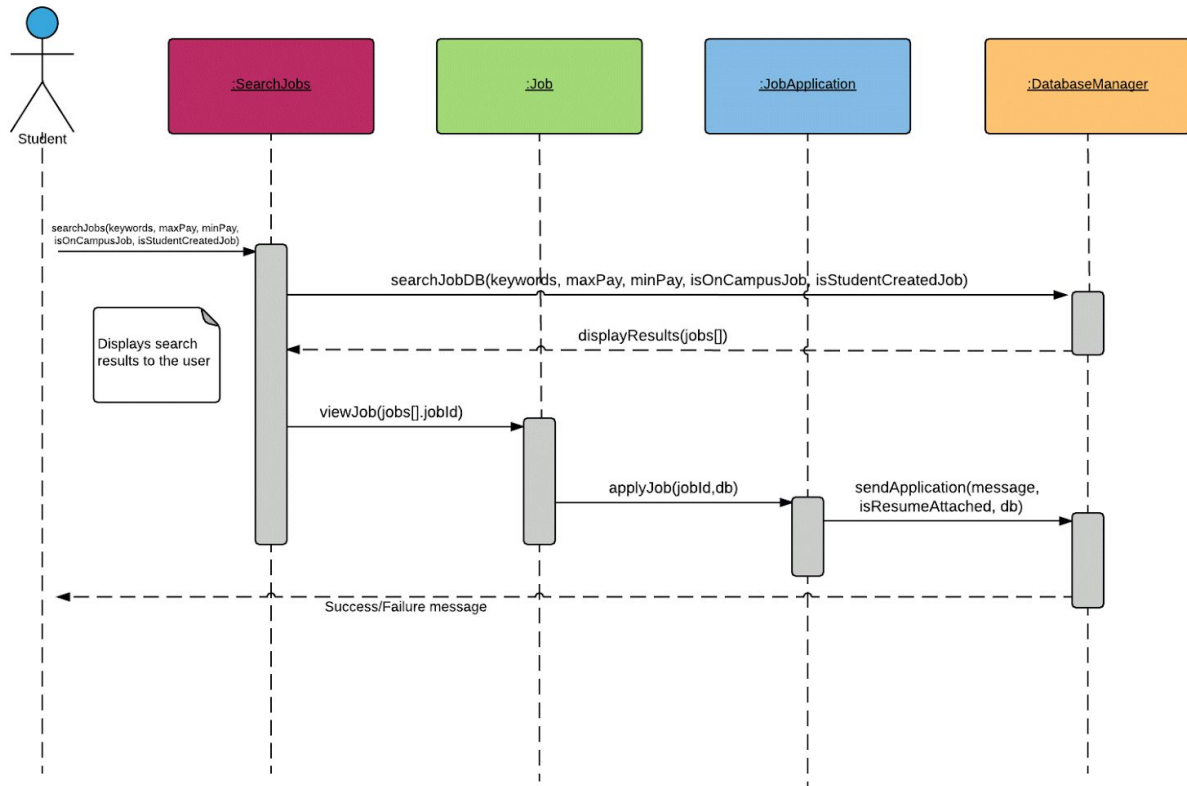
Save



User Interactions:

Requirements ID: US-005, 6

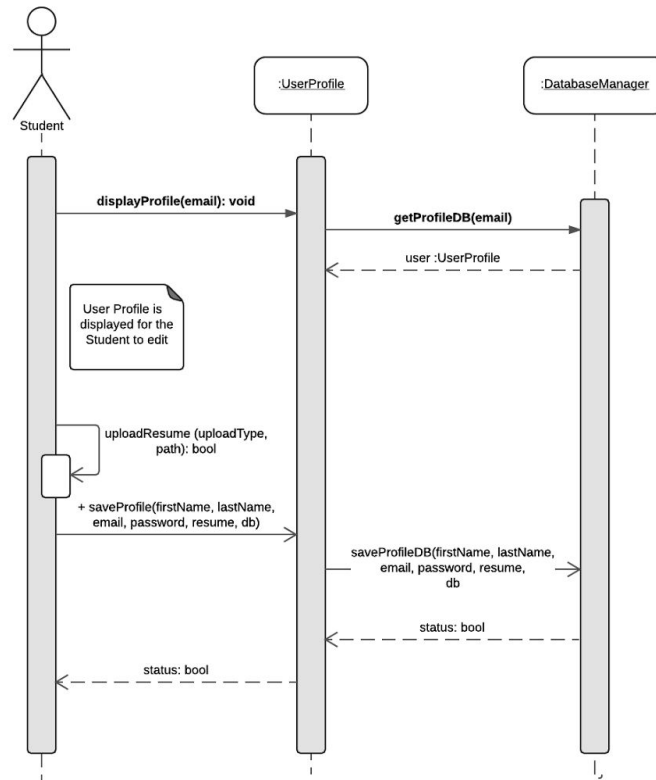
Search and Apply Jobs (Use Case ID : US005, US006)
Created by : Ranganathan Chidambaranathan



Requirements ID: US-003, 4

SEQUENCE - EDIT PROFILE (UPLOAD RESUME)

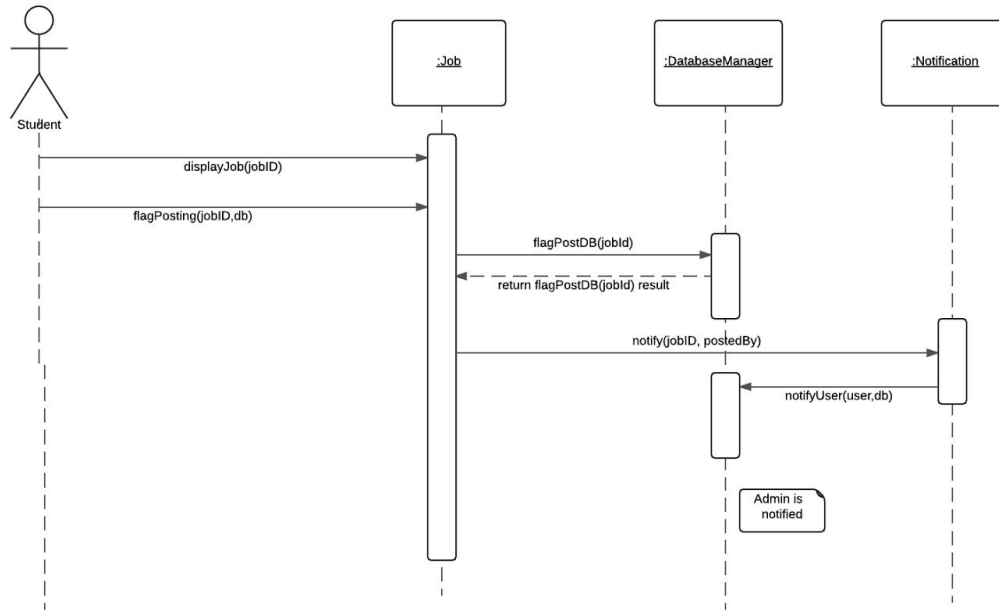
Use Case ID: UC-003, 4
Created By: Ram Das Diwakaran



Requirements ID: US - 008, US - 014
Use case ID: UC-008, UC-013
Use Case Name: Flag Postings, Remove Postings
Created by: Narain Yegneswara Sharma

FLAG POSTING

Narain Yegneswara Sharma | March 9, 2016



Class Diagram:
(a separate legible copy is available in our repository)

