

Software Requirements Specification

Project: Job Listings Portal

Brief Problem Statement:

The objective is to develop a web application that provides flexibility to applicants as well as recruiters by providing the functionalities of searching and advertising open job positions within a single application. This application will provide an effective means for the employers to post job vacancies and then filter candidates based on their needs.

The traditional mode of job advertising are news articles, advertisements, Job Fairs etc.

System Requirements:

Hardware Requirements:

- Processor: Intel Core i5
- RAM: 8GB
- Disk Space: 50GB

Software Requirements:

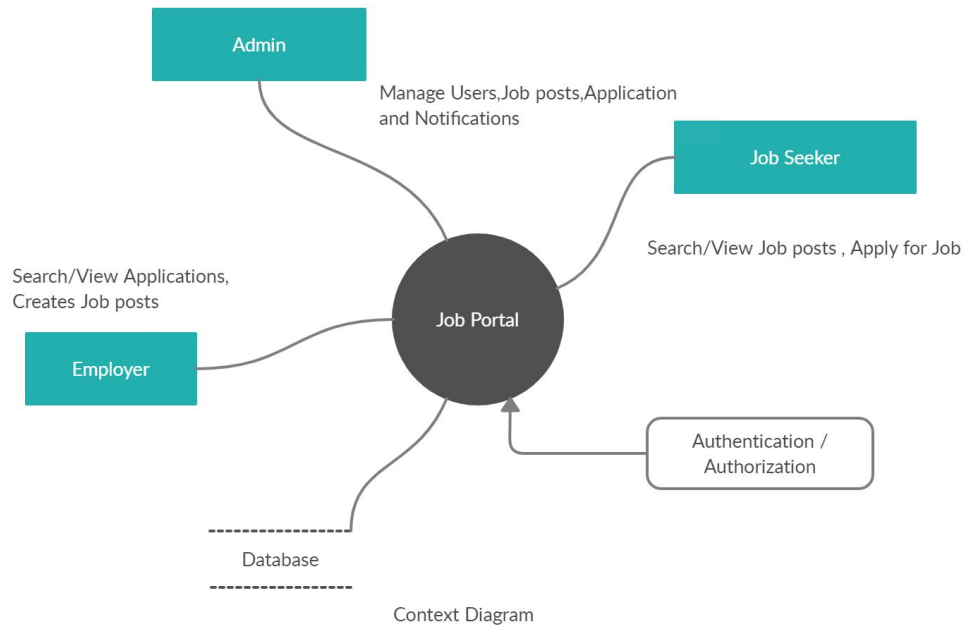
- Operating System: Linux
- IDE: Visual Studio Code
- Frameworks: Django, React
- Database: MongoDB
- Front End: HTML5, CSS3, JavaScript, Bootstrap

User Profiles:

- Unregistered Applicant
- Unregistered Employer
- Registered Applicant
- Registered Employer
- System Admin

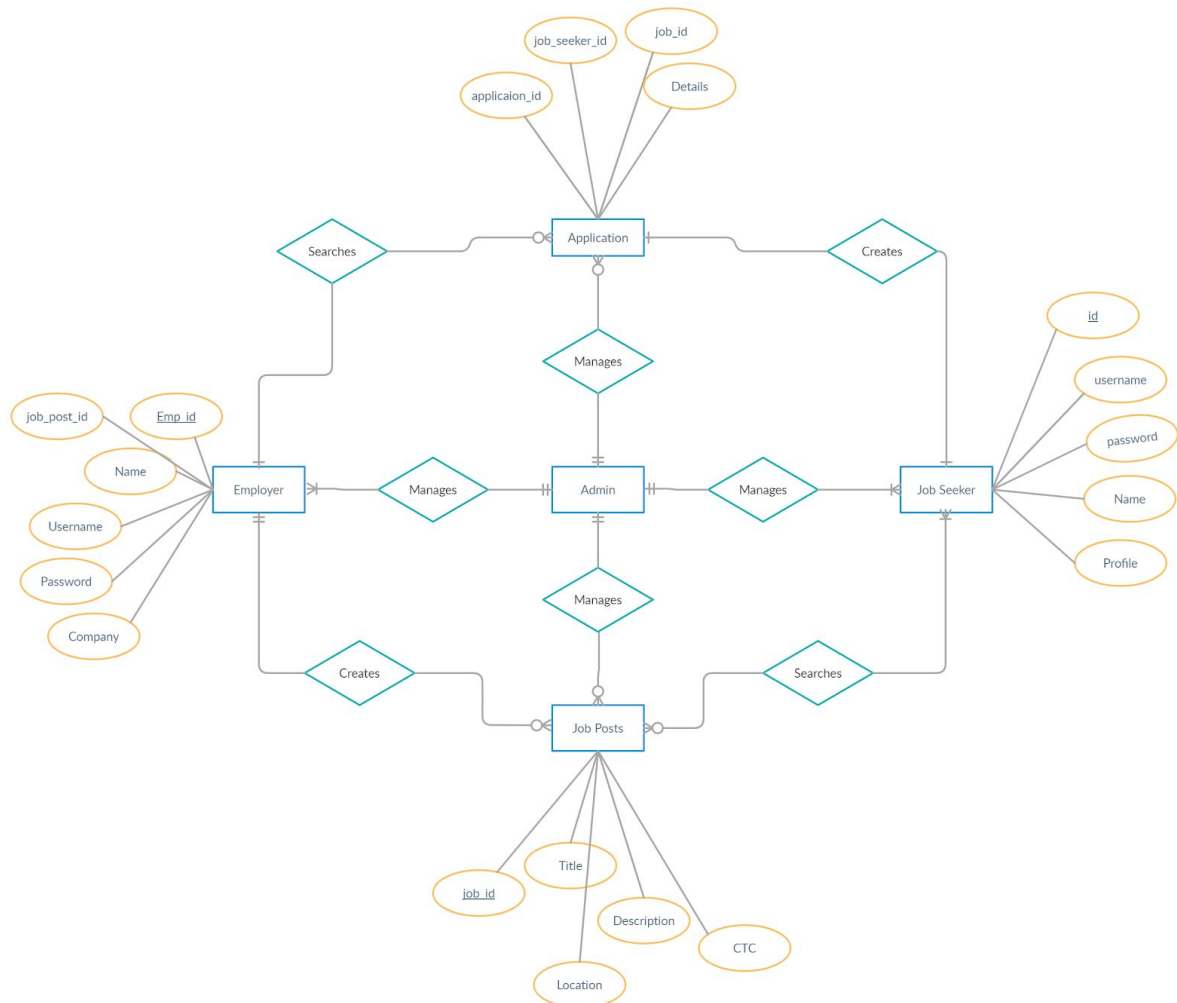
Context Diagram

A high level overview of the system and its interactions with the environment.



E-R Diagram

Diagram representing the various entities involved in the system and their interactions and relationships with each other.

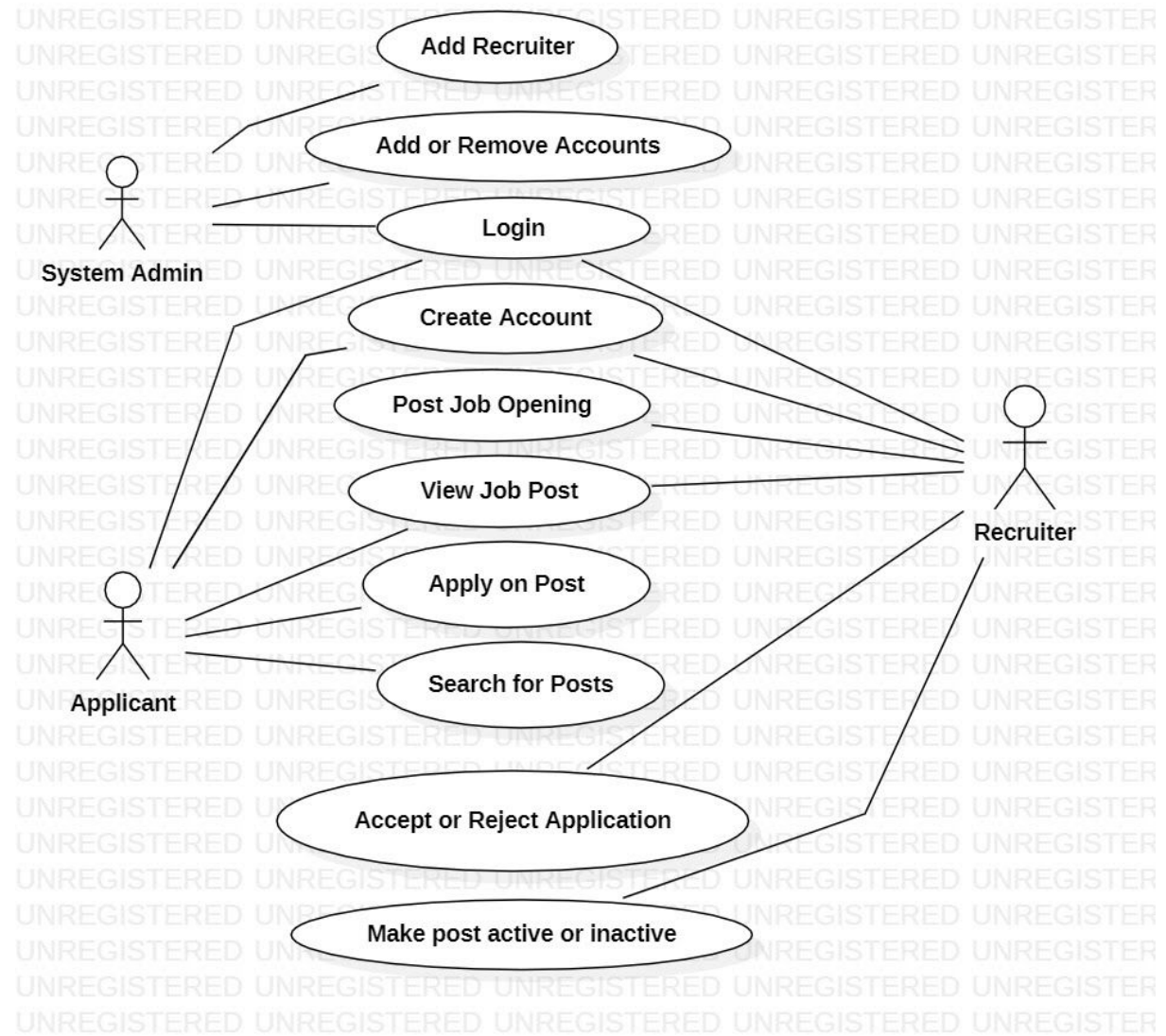


Use Cases

Use Case	Description
Register Account/ Sign-up	This use case denotes a set of actions required for Employer and applicant to register with the application.
Login	This use case denotes a set of actions required for Employer and Job seeker to login into the application.

View Employers	This use case denotes a set of actions required for admin to view the Employers that are registered with the application.
Post New Job	This use case denotes a set of actions required for Employer to post a job.
Change Active Status of Post	This use case denotes a set of actions required for Employer to change the status of the job post from active to inactive and vice versa.
View Job Posts	This use case denotes a set of actions required for Employer to view all the jobs posted by the Employer.
Search Job Listings	This use case denotes a set of actions required for Job Seeker to search available and active jobs.
Apply for Job	This use case denotes a set of actions required for Job Seeker to apply for an available job vacancy.

Use Case Diagram



Functional Requirements:

Use Case Scenarios:

1. User Profile Selection

Purpose	User selects the user profile: Employer, Student or Admin.
User	Anonymous user
Input Data	User Profile Choice
Output Data	Redirection to login page
Basic Flow	User selects one of three options representing the user profiles.

2. User Login

Purpose	User logs in as an employer or student with an existing account.
User	Employer/Student with an existing profile.
Input Data	Username and Password
Output Data	Relevant cookie stored. Redirection to dashboard.
Preconditions	User is not logged in to a profile, input profile exists in database, user password matches profile
Postconditions	Appropriate authentication cookie is stored on the user's computer. The dashboard page with user's information is displayed.
Basic Flow	User inputs username and password. The webpage searches for username in the database and matches the entered password against the stored password. If the password is correct the user is redirected to the dashboard page containing the user's data.
Alternate Flow	If the username/password entered is incorrect, an error message stating so is

	displayed.
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3. Upload Resume

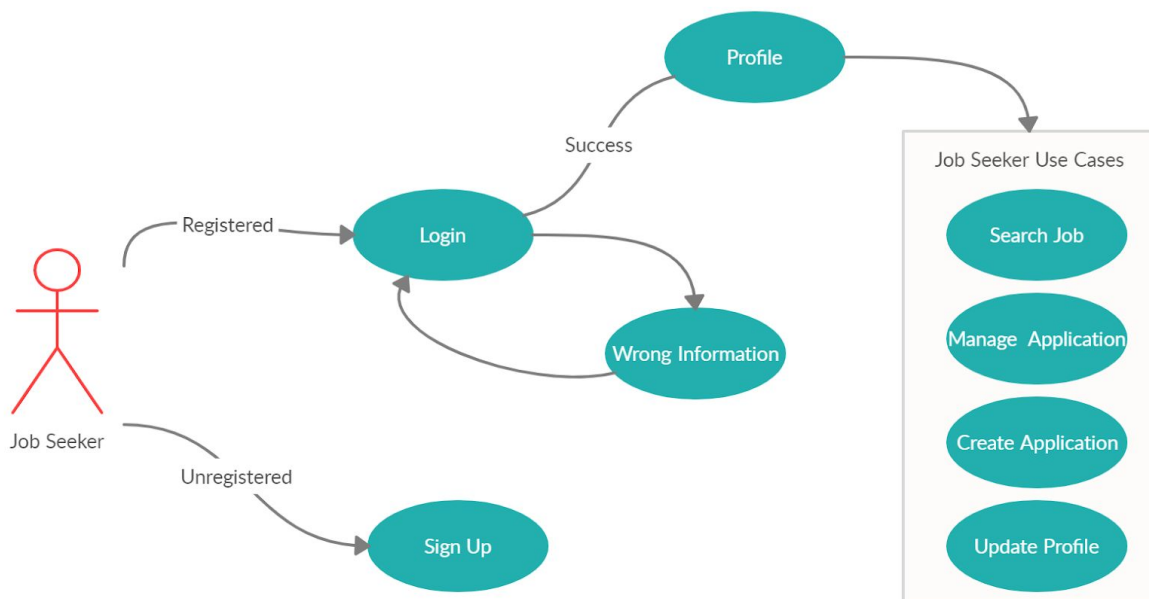
Purpose	Student can upload their resume.
User	A student user logged into the system.
Input Data	Resume in PDF format.
Output Data	Message confirming file upload.
Precondition	User is Logged in; file exists on user's computer.
Postcondition	Resume ready to be attached to applications.
Basic Flow	User clicks "Browse" to navigate to the file on their computer. User selects the required file and clicks on upload. "Successful file upload" message is displayed to the user.
Alternate Flow	If file upload fails, the user is shown the appropriate error.

4. Job Search

Purpose	Student can search for job listings.
User	Logged in student.
Input Data	Key phrase to be searched.
Output Data	A list of matching search results
Precondition	Student should be logged in.
Postcondition	Search results displayed.
Basic Flow	User types a phrase in the search bar. The phrase is matched against database entries. Matching entries are displayed on the webpage.

5. Apply for a position

Purpose	Student can apply on an active job post.
User	Logged in student.
Input Data	Form attributes decided by the employer.
Output Data	Submitted application.
Precondition	Student should be logged in.
PostCondition	Student's application for the post is stored in the database.
Basic Flow	Student clicks on "Apply" button on the job post page. They're redirected to the application form. After filling the form, clicking on enter will result in the submission being recorded.



Job Seeker Use Case Diagram

6. Post Job Listing

Purpose	Employer can post a listing advertising the job.
User	Logged in employer

Input Data	Job details filled in a form.
Output Data	Post with job details.
Precondition	User must be logged in.
Postcondition	A post with job details formatted in a predefined manner is created.
Basic Flow	The user clicks on “New Post” and is redirected to the appropriate webpage. The user fills in the details of the job and clicks on “Create”. The user is then displayed a preview of the post which finally be published by clicking the “Publish” button.

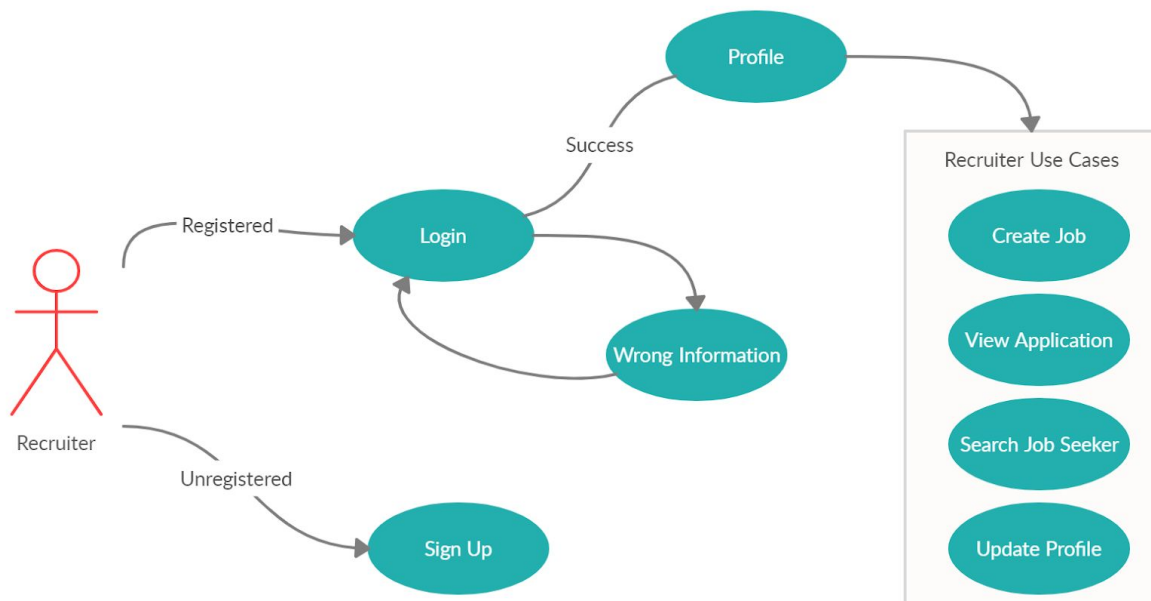
7. View Applications

Purpose	Employer can see applications for a particular post.
User	Logged in employer.
Input Data	None
Output Data	List of Applications for a particular post.
Precondition	Students should have applied for the post.
Postcondition	A list of all applications for the listing.
Basic Flow	User clicks on a job post made by them. They're redirected to a page containing all applications made by students for the post.

8. Select/Reject Application

Purpose	User can select or reject an application submitted for a post.
User	Logged in employer.
Input Data	Student applications.
Output Data	The status of the application.

Precondition	Student applications present in the database.
Postcondition	In case of select, the status of the application is set to selected. In case of reject, the status is set to rejected. The rejected applications are removed from the database.
Basic Flow	The employer selects one of the applications using the "View Applications" flow. Then selects accept or reject from a drop down menu. The action is performed after the user clicks yes on a confirmation message.

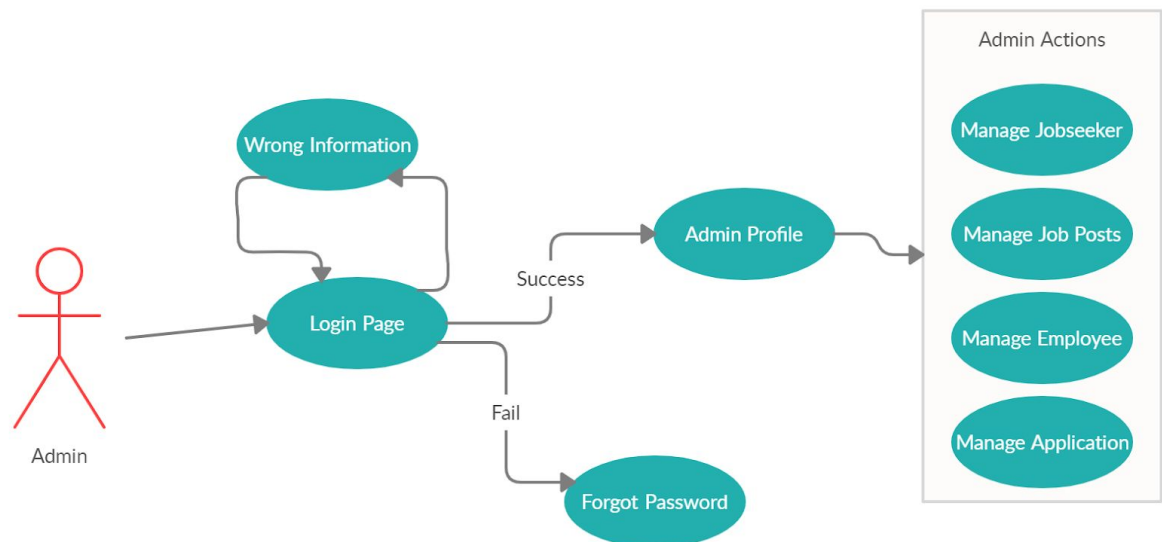


Recruiter Use Case Diagram

9. Admin

Purpose	Admin should be able to monitor the profiles and listings on the application. This includes recruiters, job seekers, monitoring application of job application and validation of posted jobs.
User	Admin
Basic Flow	Admin can select a Recruiter's or Job seeker profile if there are some rule

	violations. In case of any violation of policy such as invalid job posting, or inappropriate content, the admin can mark the job post or the application as inactive, remove it or deactivate the profile.
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Admin Use Case Diagram

List of APIs:

1. /admin,/emp,/student.
2. /emp
 - a. /Dashboard
 - b. /createPost
 - c. /viewPost
 - d. /viewPost/:id
 - e. /viewApplications
 - f. /viewApplication/:id
 - g. /View Resume
3. /student
 - a. /dashboard
 - b. /apply/:id
 - c. /viewApplications
 - d. /viewApplication/:id
 - e. /uploadResume
4. User
 - a. /user/username
 - b. /index

5. Jobs

- a. Jobs(All jobs)
- b. /viewJobs
- c. /viewJob/:id