

RECRUITMENT SYSTEM

1. M HARSHIT CYRIL	-	22BD1A6723
2. N SAI SRIMAYI	-	22BD1A6741
3. P SRI HARSHA	-	22BD1A6742
4. T AMOGH	-	22BD1A6758
5. T RUTHVIK	-	22BD1A6759

Problem Statement :

The Recruitment System provides online help to the users all over the world. Earlier recruitment was done manually and it was a time-consuming activity. Now it is possible in a fraction of second. The development of the system has been designed to do a whole lot more than just reduce paperwork. It can make a significant contribution to a company's marketing and sales activities, since ultimately the employees hired, work on the final product or service that defines the profit-loss trajectory of a company. An efficient recruitment system makes it possible for managers to access information that is crucial to managing their staff, which they can use for human resources management, staffing and planning activities, and much more.

Our proposed website aims to simplify the recruitment process. The system has facilities where prospective candidates can upload their CV and apply for jobs suited to them. It also makes it possible for organizations to post their staffing requirements and view profiles of interested candidates.

The project efficiently addresses the critical challenge of assembling a skilled and cohesive team. A well-designed recruitment system streamlines the hiring process, enabling organizations to identify and hire the most qualified individuals promptly.

Software Requirement Specification for Recruitment System

This system not only helps in mitigating project delays due to staffing gaps but also ensures that the team possesses the diverse skill sets and collaborative spirit necessary to tackle complex software development challenges effectively. Furthermore, it promotes a structured approach to workforce planning, aligning recruitment efforts with project goals and timelines, ultimately enhancing the overall project's chances of success.

Software Requirement Specification

For

Recruitment System

Version 1.0

Prepared by:

- | | | |
|--------------------|---|------------|
| 1. M HARSHIT CYRIL | - | 22BD1A6723 |
| 2. N SAI SRIMAYI | - | 22BD1A6741 |
| 3. P SRI HARSHA | - | 22BD1A6742 |
| 4. T AMOGH | - | 22BD1A6758 |
| 5. T RUTHVIK | - | 22BD1A6759 |

Keshav Memorial Institute of Technology

19-10-2024

TABLE OF CONTENTS:

1.Introduction

1.1 Purpose	1
1.2 Document Conventions	1
1.3 Intended Audience and Reading Suggestions	1
1.4 Product Scope	2
1.5 References	2

2.Overall Description

2.1 Product Perspective	2
2.2 Product Functions	3
2.3 User Classes and Characteristics	4
2.4 Operating Environment	4
2.5 Design and Implementation Constraints	4
2.6 Assumptions and Dependencies	5

3.External Interface Requirements

3.1 User Interfaces	5
3.2 Hardware Interfaces	6
3.3 Software Interfaces	6
3.4 Communications Interfaces	7

4.System Features

4.1 Recruiter System	7
4.2 Application Management	7

5.Other Nonfunctional Requirements

5.1 Performance Requirements	8
5.2 Safety Requirements	9
5.3 Security Requirements	10
5.4 Software Quality Attributes	10
5.5 Business Rules	11

6.Other Requirements

Appendix A: Glossary	11
Appendix B: Analysis Models	15
Appendix C: To Be Determined List	23

Revision History:

Name	Date	Reason for changes	Version
Week - 1	26/09/2024	SRS creation (Introduction)	1.0
Week - 2	18/10/2024	SRS Document - UML Diagrams	2.0
Week - 3	24/10/2024	Final SRS Document..	3.0

1. Introduction:

This Software Requirements Specification (SRS) outlines the agreement between the customer and developer regarding the features and specifications of the **Recruitment System**. It provides a clear understanding of customer needs and serves as a reference for the system's development.

1.1 Purpose :

The primary purpose to develop this system is to optimize the recruitment process for an organization. Our project deals with recruitment processes involved in the software engineering domain. The website shows the recruitment process of a candidate. We thus make the entire recruitment process user friendly and easy to implement.

1.2 Document Conventions :

Heading:

Font-Size:16 , Bold, Times New Roman

Subheading:

Font-Size:14, Bold, Times New Roman

Content:

Font-Size:12, Times New Roman

1.3 Intended Audience and Reading Suggestions :

,,,,,,This document serves as a prototype for the Recruitment System, and it offers valuable insights to a diverse range of stakeholders. Developers can utilize it as a blueprint to create and implement the system effectively. Companies can utilize this system to sort applicants based on

their qualifications and company requirements, speeding the process and efficiency while maintaining a structured approach to workforce planning.

1.4 Product Scope

Our multi-platform solution enables users to have the typical recruitment facilities at their disposal. Our primary objective is to reduce the workload involved in the recruitment process making it easier for the companies to hire employees since the recruitment process is online. The proposed website structure in this paper focuses mainly on the Computer Science and Engineering domain, however other domains can be explored as well using the same structure.

1.5 References:

- <https://www.slideshare.net/krupalshah1/employee-recruitment-system-srs>
- <https://www.scribd.com/doc/237022826/SRS-for-Online-Campus-Recruitment-System>

2. Overall Description:

2.1 Product Overview

The project aims to develop an online recruitment system that simplifies the hiring process by connecting job seekers with employers through a digital platform. The system will streamline the recruitment workflow, allowing candidates to submit their resumes and apply for jobs, while enabling employers to post job openings and evaluate potential candidates. The platform will enhance hiring efficiency, reduce paperwork, and offer a user-friendly experience accessible via both desktop and mobile devices.

2.2 Product Features :

2.2.1 Recruiter Portal :

- - Job Posting Management: Recruiters can post job openings, update job descriptions, and specify hiring requirements.
- - Candidate Screening: Recruiters can browse candidate profiles, filter applications based on skills or experience, and shortlist candidates for interviews.
- - Interview and Selection: Recruiters can schedule interviews with shortlisted candidates and manage the final selection process.
- Candidate Database: Recruiters have access to a searchable database of potential candidates, categorized by skill set, experience, and location.
- Notifications and Alerts: Employers will receive real-time alerts when candidates apply for jobs, or when a match is found based on their job requirements.

2.2.2 Applicant Portal :

- Profile Management: Candidates can create and update their profiles, including uploading resumes, personal information, and work experience.

- Job Search and Application: Candidates can search for jobs based on various filters like location, industry, or role, and apply directly from the platform.
- Application Tracking: Candidates can track the status of their applications in real time, knowing if they've been shortlisted, scheduled for an interview, or rejected.
- Job Recommendations: The system will suggest job opportunities based on the candidate's profile and preferences.
- Notifications and Alerts: Candidates will receive notifications for important updates such as job matching, interview requests, or application status changes.

2.3 Operational Environment

- The online banking system will be cross-platform and support modern browsers such as Google Chrome, Mozilla Firefox, and Microsoft Edge. Additionally, it will provide a mobile-optimized version compatible with iOS and Android.
- The system will be developed to run smoothly on operating systems such as Windows, macOS, and Linux with minimal hardware requirements.

2.4 User Types

- Recruiter: Companies or recruitment agencies that post job openings, review candidate applications, and manage hiring processes.
- Applicants: Individuals looking for jobs who create profiles, submit applications, and track their job application progress through the system.
- The platform assumes that both employers and candidates are familiar with basic web and mobile applications.

2.5 Design and Implementation Considerations

- Security: The system will employ robust security measures, including encrypted communication and secure authentication (multi-factor authentication if needed), to protect sensitive data such as candidate information and employer job postings.

- 24/7 Availability: The recruitment platform will be available 24/7, ensuring that both employers and candidates can access the system at any time, regardless of their location.
- Responsiveness: The platform will be fully responsive, offering an optimized experience across all devices, including desktops, tablets, and smartphones.

2.6 Assumptions and Dependencies

- Stable Internet Access: Users will need stable internet connectivity and compatible devices to use the recruitment platform.
- Backend Systems: The system will rely on a secure backend database to store candidate profiles, job postings, and application data.
- High Traffic Handling: The platform will need to handle high volumes of traffic during peak recruitment seasons and ensure fast load times even during busy periods.

3 . External Interface Requirements:

3.1 User Interfaces The recruitment system will provide:

- A user-friendly dashboard for Recruiters, Applicants, and Admins to manage job postings, applications, and user profiles.
- An intuitive interface for applicants to submit and track their job applications.
- A reports section for Admins and Recruiters with printable and exportable formats (PDF/Excel) to analyze recruitment metrics and candidate data.

3.2 Hardware Interfaces The system will interface with:

- Scanners for document verification during the candidate onboarding process.
- Hardware systems for secure login, such as biometric or smart card readers for authorized recruiter access.

3.3 Software Interfaces The recruitment system will integrate with:

- Applicant tracking systems (ATS) to streamline the candidate application and evaluation process.
- External job boards (e.g., LinkedIn, Indeed) for posting job opportunities and receiving candidate applications.
- Payroll and HR systems for seamless candidate onboarding and employee management.

3.4 Communications Interfaces The system will communicate through:

- Email notifications for job application confirmations, interview schedules, and recruitment updates.
- SMS gateway for alerting candidates on application status, interview timings, and other notifications.
- Integration with social media platforms for sharing job postings and connecting with candidates

4. System Features :

These requirements include the development of search tools, sorting, filtering, navigation, as well as the visual components of the site, which can be maintained by the bank staff or administrators.

4.1 Recruiter/Management Staff:

Requirement ID : RI.01.01
Title : Database Management
Description : Control the entire database containing records of applicants and Interview details. If there is any problem in the database(whether it is for Accessing or updating) will be solved as soon as possible without delay.
Priority : 2

Requirement ID : RI.01.02
Title : Contact and giving permission to company
Description: : Contact with the company and give permission to use the site for recruitment purposes.
Priority : 1

Requirement ID : RI.01.03
Title : View all details
Description : Able to view the details of all users application and control the whole site.

Requirement ID : RI.01.04
Title : Allot Interviews
Description : Able to allot interview slots for selected applications.
Priority : 2

4.2 Applicant :

Requirement ID : R1.02.01

Title : Applicant Registration

Description : New applicants should sign up by creating login credentials.

Priority : 1

Requirement ID : R1.02.02

Title : Applicant Login

Description : Applicants must have a valid credentials (registered at the time of registration) to enter into the recruitment system.

Priority : 1

Requirement ID : R1.02.03

Title : View and Edit Personal Details

Description : Users must be able to view and edit their personal details.

Priority : 2

Requirement ID : R1.02.04

Title : Apply for Available jobs

Description : Users must be able to view and apply for the jobs available.

Priority : 2

Requirement ID : R1.02.05

Title : Provide Feedback on Recruitment system.

Description : Users must be able to provide feedback on Recruitment System.

Priority : 2

5. Other Non-Functional Requirements for Recruitment System:

5.1 Performance Requirements

- **Response Time:** Transactions such as loading applications , allotting interviews and must complete within 2-5 seconds. Account details and applications should load within 1 second under normal load conditions.
- **Concurrent Users:** The system must handle up to 5000 concurrent users without significant degradation in performance. The system should scale to accommodate peak traffic, especially during working hours and end-of-month transactions.
- **Database Transactions:** Each transaction should commit to the database within 1 second, ensuring data consistency and atomicity (ACID compliance) to avoid transactional errors.
- **Backup Speed:** Automated backups of sensitive data should occur within off-peak hours and must not impact system availability. The system must recover within 15 minutes in the event of failure.

5.2 Safety Requirements

- **Data Loss Prevention:** In case of a system crash or unexpected shutdown, all pending transactions must be either rolled back or stored securely to prevent any loss. The system must log any discrepancies and alert the administrators immediately.
- **Physical Safety:** The system must ensure that physical access to critical server components is restricted to authorized personnel only. No sensitive operations should be allowed unless the user has the correct level of access.
- **Transaction Safety:** To prevent incorrect transactions, the system must perform thorough checks, including available balance verification and approval workflows for high-value transactions. Any failed transactions should trigger automated rollback mechanisms and alert the customer.

- **Fraud Detection:** The system should have a built-in fraud detection mechanism to alert and block suspicious or unauthorized activities based on user behavior analysis and transaction patterns.

5.3 Security Requirements

- **User Authentication:** All users, whether customers, bank staff, or admins, must authenticate via a secure two-factor authentication (2FA) system before accessing the platform. Passwords should adhere to the latest encryption standards and be stored using cryptographic hashing (e.g., SHA-256).
- **Data Encryption:** Sensitive data like passwords, transaction details, and personal information must be encrypted in transit and at rest using at least 256-bit AES encryption.
- **Access Control:** Different levels of access should be enforced:
 - **Applicant:** Can only access personal details, applications, and search for jobs.
 - **Recruiter:** Can access applicant records and perform some admin tasks.
 - **Admin:** Can modify system-wide configurations, grant permissions, and access logs.

5.4 Software Quality Attributes

- **Availability:** The system must be available 99.99% of the time, ensuring minimal downtime, particularly during critical financial operations like payroll processing.
- **Reliability:** Transactions must be processed reliably, without any duplication or data loss. Fail-safe mechanisms should prevent incomplete transactions.
- **Scalability:** The system must be able to scale horizontally, supporting additional users and accounts without performance degradation as the number of customers grows.
- **Maintainability:** The codebase should be modular and easy to maintain, allowing for quick fixes and updates. Routine maintenance must be conducted without affecting system availability.

- **Portability:** The system should support deployment across various platforms and cloud services to allow for distributed operations and disaster recovery.
- **Interoperability:** The system must be able to integrate with third-party services like payment gateways (UPI, credit cards, internet banking) and notification services (SMS, email).
- **Usability:** The user interface must be intuitive and easy to use, ensuring a smooth banking experience for all customer demographics.
- **Testability:** All features must be easily testable with automated scripts, especially for security vulnerabilities, performance benchmarks, and functional testing.

5.5 Business Rules

- **Applicant Permissions:** Applicants can only access their own account details, manage their application, and apply for jobs . No applicant can access another applicant's account details.
- **Recruiter Permissions:** Recruiter can approve or reject applications, allot interview slots, and oversee all the applications . Permissions are role-specific.
- **Administrator Permissions:** Admins can override any system settings, including enabling or disabling recruitment services, modifying job details , and managing staff permissions.
- **Alerts & notifications:** The applicant must receive alerts as soon as the recruiter allots an interview slot and as well as the status of his application.

6 . Other Requirements :

Appendix A: Glossary

Applicant: An individual seeking a job who registers on the recruitment system, submits applications, and tracks their recruitment process.

Candidate Database: A repository of candidate profiles where recruiters can search, filter, and review potential candidates for job positions.

CV/Resume: A document uploaded by applicants detailing their qualifications, work experience, and skills, used by recruiters to assess their suitability for a job.

Encryption: The process of securing sensitive data such as user credentials, application details, and personal information. Data is encrypted in transit and at rest to ensure privacy and security.

Job Posting: A job opportunity published by recruiters, which includes job descriptions, required qualifications, and other hiring details.

Recruiter: An individual or organization using the recruitment system to post jobs, review applications, and manage the hiring process.

Recruitment Process: The end-to-end workflow that involves job posting, candidate application, screening, interviewing, and final selection.

Database System:

A structured system for storing, managing, and retrieving data efficiently. In this context, SQL (Structured Query Language) and NoSQL databases are mentioned, which are two different types of database systems used to handle customer data.

Misrepresentation:

The act of providing incorrect or misleading information, which in the context of online banking, can lead to customer confusion or incorrect decision-making.

Multi-Factor Authentication (MFA):

A security process where users are required to provide two or more verification factors (e.g., password, OTP) before accessing their account, making the system more secure against unauthorized access.

NoSQL:

A non-relational database system that allows for more flexible data storage, typically used for handling large volumes of unstructured or semi-structured data.

Personalization:

The practice of customizing the banking platform's content and services based on a customer's preferences, behavior, and previous interactions, ensuring a tailored experience.

Real-Time Updates:

A system feature that ensures that any changes made to the account or system (such as processed transactions or new services) are reflected immediately and accurately without delay.

Responsive User Interface (UI):

A design approach where the interface automatically adjusts to various device screen sizes, ensuring that the platform is easy to use on both desktop and mobile devices.

Search Engine:

A feature within the banking platform that allows customers to search for specific products, services, or information by entering keywords, making navigation more efficient.

SQL:

A relational database management system used for structured data storage, which allows for querying, updating, and managing data using a standard language.

User Interface (UI):

The visual part of the banking platform that allows users to interact with the system, including menus, buttons, and forms.

Availability:

The system's ability to remain operational and accessible 24/7, ensuring customers can perform transactions or access account information at any time.

Cross-Platform:

A software feature that ensures the system works seamlessly across multiple operating systems and devices, such as desktops, tablets, and smartphones.

Customer Oversight:

The process by which bank staff manage customer profiles, monitor their account activity, and resolve any issues related to their accounts.

Mobile-Optimized:

A feature of the banking platform that ensures a smooth and responsive user experience on mobile devices, adjusting the interface to fit smaller screens.

Operational Environment:

The technical ecosystem in which the online banking system operates, including the supported browsers (e.g., Chrome, Firefox) and operating systems (e.g., Windows, macOS).

Real-Time Notifications:

Immediate alerts provided to users about updates, transactions, or actions on their account without delay.

Responsiveness:

The system's ability to adjust its layout and performance based on the user's device (desktop or mobile), providing an optimized user experience regardless of screen size.

Scheduled Maintenance:

Regularly planned downtime where system updates or improvements are implemented, ensuring system performance and security are maintained.

User Assistance:

An intuitive help or support system integrated into the platform to guide customers through the banking process, ensuring ease of use.

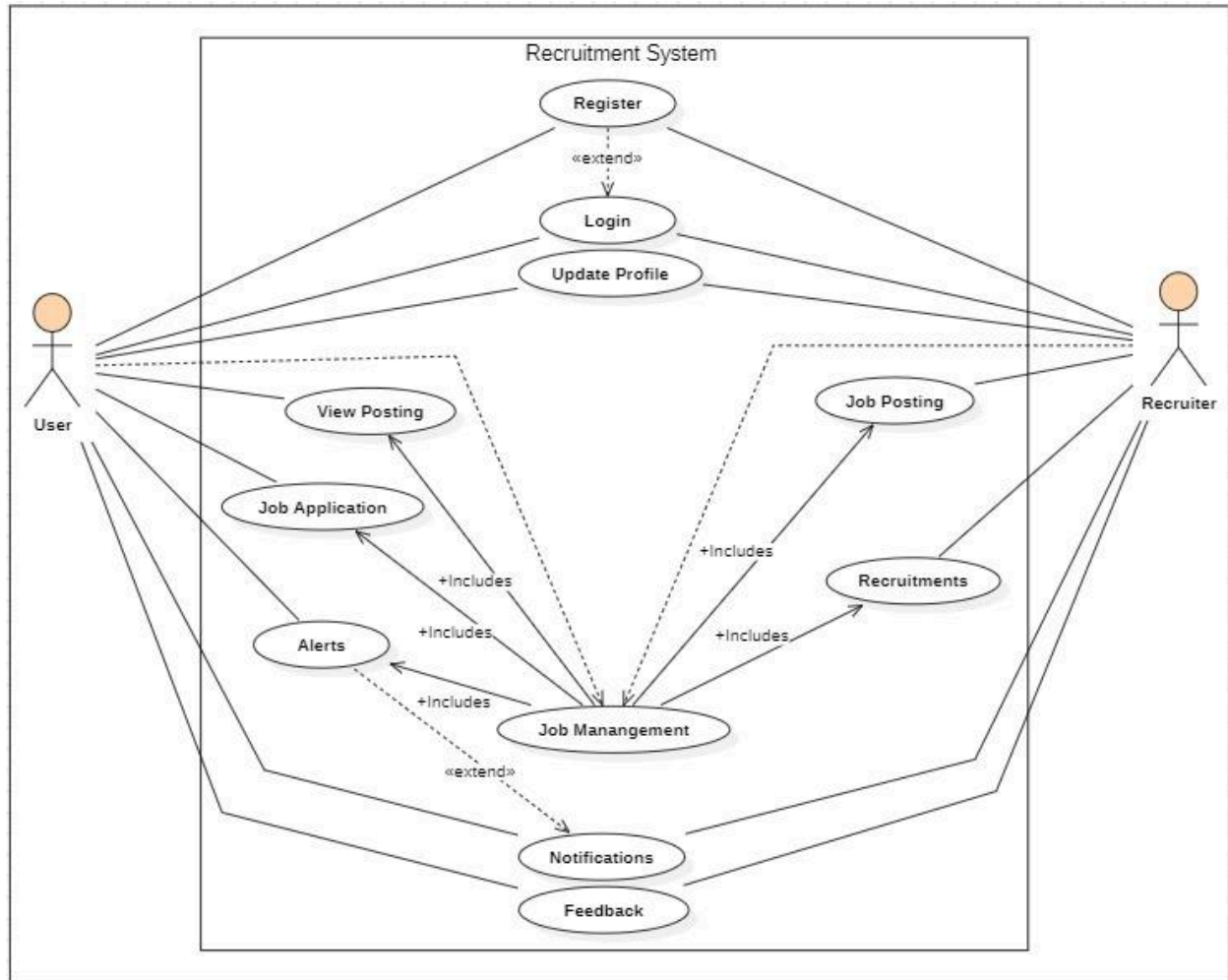
Appendix B: Analysis Models

Use Case Template:

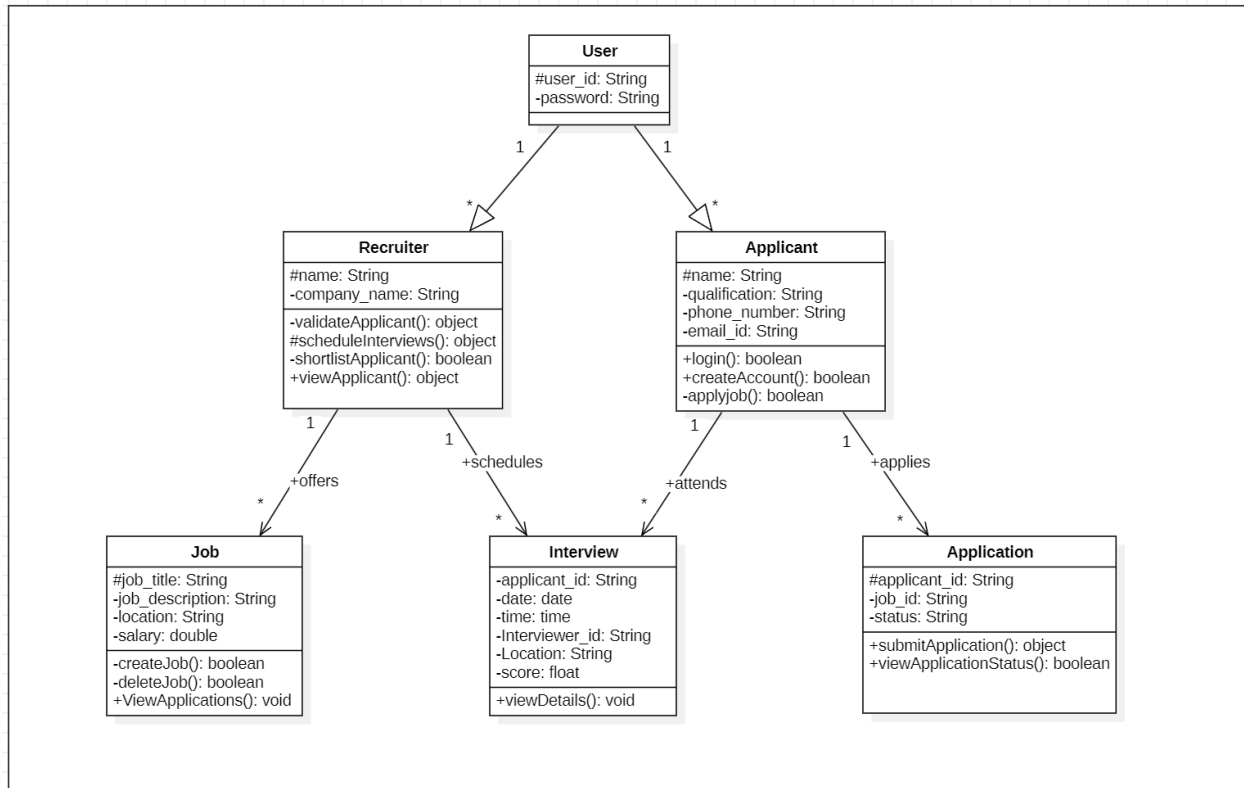
Use Case ID:		1	
Use Case Name:		Recruitment System	
End Objective:		Make the recruitment process smooth	
Created By:	1. M Harshit Cyril	On (date):	October 18,2024
	2. P Sri Harsha		
	3. N Sai Srimayi		
	4. T Ruthvik		
	5. T Amogh		
User/Actor:		Recruiter and Applicant	
Trigger:		Applicant being recruited by Recruiter	
Basic/Normal Flows:			
User Actions		System Actions	
The user logs into the recruitment system by entering valid credentials.		The login page prompts the user for a valid username and password.	
The user views account information , according to their status (Recruiter or Applicant).		The system retrieves and displays the user's account details as per their status.	
The applicant applies for a job and the recruiter views applications.		The system provides a recruiter to access and validate applications and the applicant receives an alert.	
The applicant views and edits their personal details, such as address and application preferences.		The system allows the applicant to view and update personal information. Any changes made are updated in the database.	
The user completes the application process (e.g., getting the interview details).		The system processes the request, updates the interview status, and provides a confirmation message	
Exception Flows			

User Actions	System Actions
The user attempts to log in but doesn't have an account.	The system prompts the user to register for an account through the registration page.
The user enters incorrect login credentials	The system displays an error message: "Please check the username or password entered" and prompts the user to re-enter the correct details.
The applicant tries to apply for a filled job which is not yet updated.	The system displays a message: "Job is already filled" and does not proceed with the application.
The recruiter tries to delete an upcoming interview .	The system displays an error message: "Interview still in process , alert the applicant to process" .

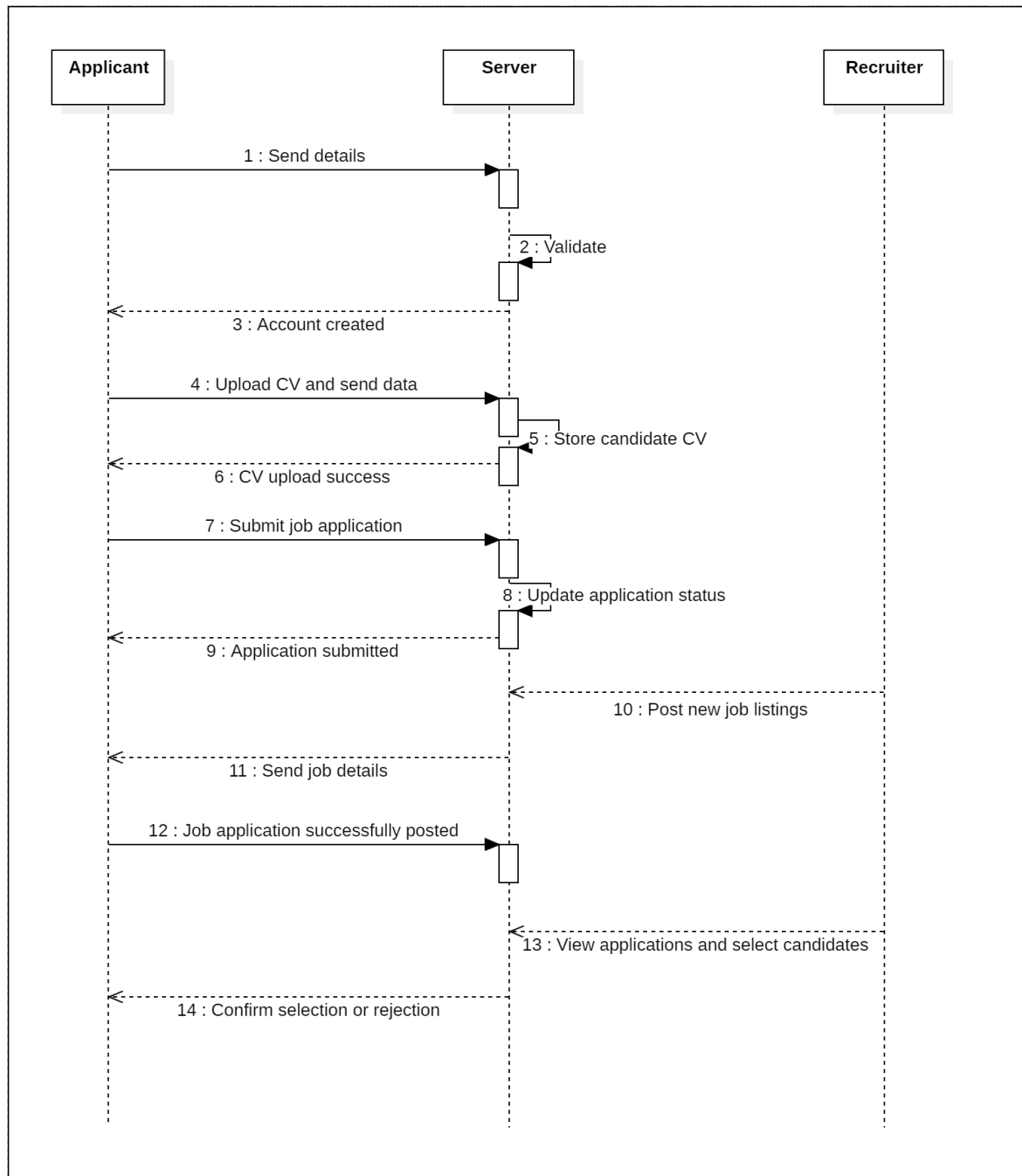
Use-Case Diagram:



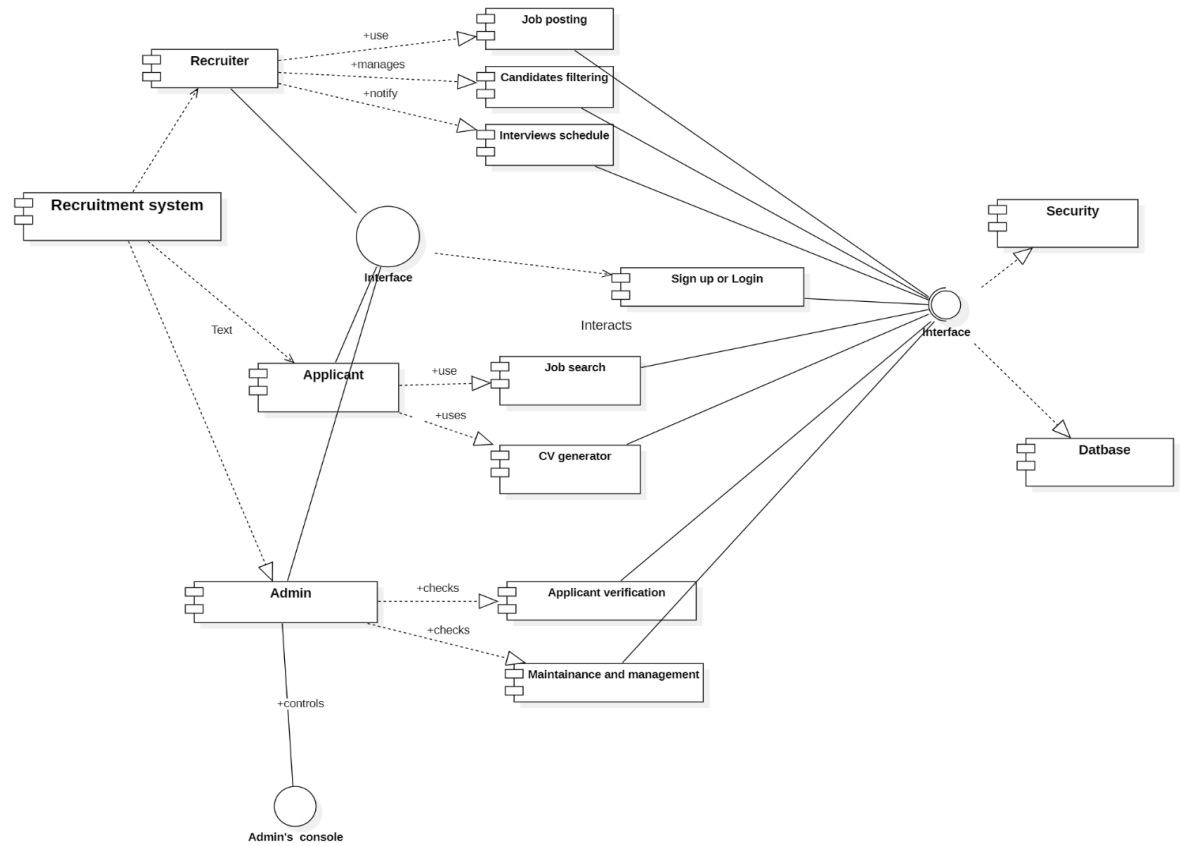
Class Diagram:



Sequence Diagram:



Component Diagram:



Appendix C : To be Determined (TBD) List

This appendix lists items that need further clarification or finalization during project's development. These items will be addressed as the project evolves, and final decisions will be made during subsequent stages.

- **Third-Party Job Boards and Platforms:** The specific external job boards (e.g., LinkedIn, Indeed, Glassdoor) to be integrated for job postings and applicant sourcing are still under evaluation.
- **Finalized User Roles and Permissions:** Detailed user roles and permissions, particularly for Recruiters, Hiring Managers, and Administrators, need further definition. This will include permissions for tasks such as creating job posts, reviewing applications, managing candidate pipelines, and generating recruitment reports.
- **Candidate Application Statuses and Categories:** The finalization of specific application statuses (e.g., Applied, Interviewed, Offered, Hired) and candidate categories (e.g., internal referrals, external applicants, contract, full-time) that the system will support.