

Software Requirements Specification

for

Campus Recruitment System

Prepared by:

1. Lakshay Sharma
(2021UCS1534) 2.Aman Rohi
(2021UCS1543) 3.Aakshat Malhotra
(2021UCS1557) 4.Arpit
(2021UCS1593)

Problem Statement

The campus recruitment process is a crucial step for students seeking employment opportunities and for companies looking to find talented individuals. However, the current system in most colleges can be inefficient and time-consuming for all parties involved. This is due to the lack of a centralized system to manage and organize applicant information, resulting in poor job matches as companies struggle to find candidates with the required skills and qualifications. Additionally, communication between students, companies, and the placement office can be complex and lead to misunderstandings and delays.

To address these challenges, a campus recruitment management system is necessary. The system should allow companies to register and post job openings, manage applicant information, and analyze candidate qualifications based on their requirements. Likewise, students should be able to register, create profiles, and apply for job openings while tracking the status of their applications. The system should facilitate seamless communication between students, companies, and the placement office to ensure efficient collaboration.

An efficient campus recruitment management system can streamline the recruitment process, leading to better job matches for students and a more efficient process for companies. With a centralized platform to manage all aspects of the recruitment process, the system can automate resume screening and matching, interview scheduling, and communication between students, companies, and the placement office. The system can also provide valuable data analytics and reporting features to track the effectiveness of recruitment efforts, identify areas for improvement, and monitor progress towards hiring goals.

In summary, a well-designed campus recruitment management system can significantly enhance the efficiency and effectiveness of the recruitment process, leading to better job matches for students and more successful hiring outcomes for companies.

System Features

System Feature and Priority Matrix

Following given is the system features and their priority matrix:

Sr. No.	Feature	Priority
1.	Create an Account	High
2.	Log in	High
3.	Apply for Jobs	Medium
4.	View job status	Low
5.	Search jobs	Low
6.	Change Password	Low
7.	Manage student	High
8.	Manage Company	High
9.	Post jobs	High
10.	View Application	Medium
11.	Call for Interview	Medium

Functional Requirements

Following table describes the functional requirement:

Feature	Remark
Update Information	This functionality will update the information of the student.
Change Password	This functionality is used to change the password of account.
Sign Up	This Functionality is used to sign up for student, admin and company.
Log In	This functionality is used to Login for admin, student and company.

Apply For Jobs	This functionality is used for students to apply for jobs.
Post Jobs / Add Job Details	This functionality is used by the company to post jobs.
View Job Status	This functionality is used to view job status by the student.
Search Jobs	This is the functionality which is used to search for jobs.
Manage Student	This functionality is used by the admin to manage student.
Manage Company	This functionality is used by the admin to manage company.
View Student Application	This functionality is used to view student student application.

Other Nonfunctional

Requirements Performance

Requirements

1. The completely separate business logic at admin side from the student interface ensures good performance.
2. The system exhibits high performance because it is well optimized. The business logic is clearly separate from the UI.
3. System should be able to scale to many users concurrently.
4. The response time of processes is as follows:
 - Student Registration max 10 seconds
 - Company Registration max 15 seconds
 - Company Job posting max 15 seconds
 - Student applying for job max 20 seconds
5. System is available 24 by 7.

Safety Requirements

1. Errors will be minimized and an appropriate error message that guides the user from an error will be provided.
2. Validation of users input is highly essential.
3. The time taken to recover from the error is less than 10 second.

Security Requirements

1. The system is provided a high level of security and integrity of the data held by the system.
2. only authorized personnel such as admin can gain access to the to the private data and only the user with valid username and password is allowed to view its user page.

Software Quality Attributes

1. The key software quality attributes are Availability, Reliability and usability.
2. As the system is expected to be 24/7 working. High availability is important.
3. A simple but quality user interface is developed to make it easy to understand and required less training.
4. The error message displayed is more descriptive and can be easily understood.

Business Rules

1. System shall be available only for the particular college.
2. All the users shall access the system using a login/user-id and password. The login-id/password will be managed in a secured manner.
3. Each student can get recruitment only in one company.
4. Once company selected the candidate, it cannot be rejected otherwise company will be blacklisted.
5. Each student can have only one account.

External Interface Requirements

User Interfaces

The user interface section defines the way various stakeholders interact with the system. All the screens will be developed to work on android mobile. Error messages will appear as a popup on the screen. The maximum size of error message will be 40 characters. Buttons will there to make the navigation simpler.

A first time user of the mobile should see the login screen when he/she will open the android application. If the user has not registered to the, then he/she should be able to redirect to the sign up page from login screen. Every user should have the profile where he/she can apply for the job. After the creation of account the user can login to the application and will be able to apply for the jobs.

Similarly, here will be the same option for the login of the company where the company can signup and login. An Admin should also be log in to the web portal where he/she can administer the system by managing the student and company using the application. After performing login the user will be able to see the side menu as shown in the figure below. After performing login by the company the company will be able to see side menu shown in the second figure below.

After performing login by the admin the admin will be able to see side menu shown in the figure below.

User can select the particular section and can perform the respective task. There is an option to add the jobs for the company where the companies can add the vacancies for their companies they have.

Hardware Interfaces

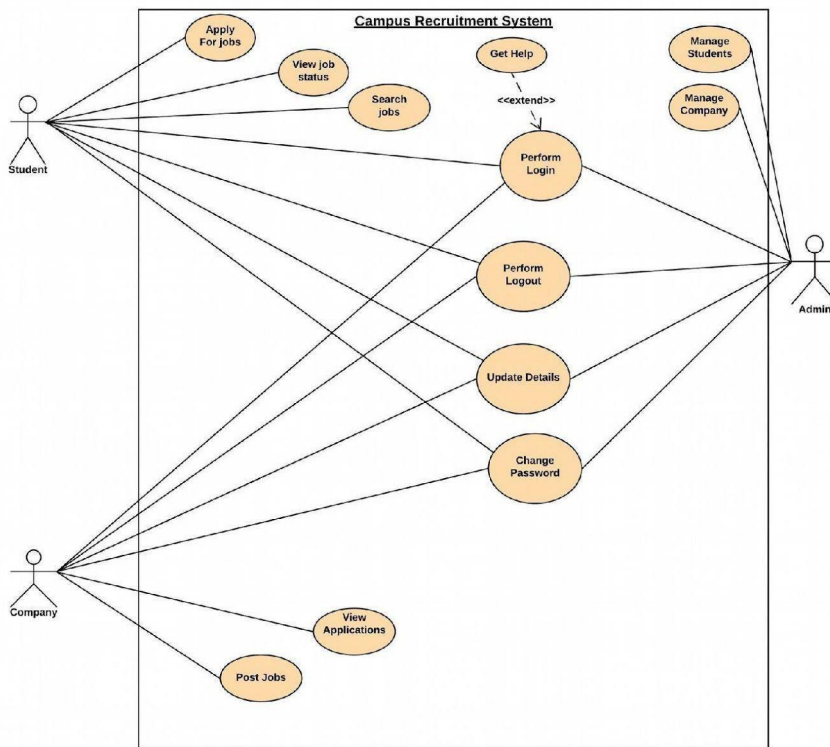
Since the mobile application does not have designated hardware, it does not have any hardware interface. The hardware connection between the database server and application is managed by the underlying operating system on the mobile phone.

Software Interfaces

The system is self-contained and no data is supposed to share with the third party. The communication of the mobile application between the database consist of both reading and modifying the data, while the communication between the database and the mobile application consists of only reading operation.

User Classes and Characteristics

The actors and use cases are clearly shown in below **use-case** diagram.



In **software** and **systems engineering**, a **use case** is a list of actions or event steps typically defining the interactions between a role (known in the **Unified Modeling Language** as an **actor**) and a system to achieve a goal. The actor can be a human or other external system. In systems engineering use cases are used at a higher level than within **software engineering** often representing missions or **stakeholder** goals.

The following are the actors who perform the use cases as stated above:

S.No	Actor Name	Description / Actor's Role
01	ADMIN	Manage students & companies.
02	STUDENT	Apply for jobs, view job status & search jobs.
03	COMPANY	Post jobs & view applications of students.

The following section describes the Use Cases with Pre and Post Conditions:

S.No	Use case Name	Description	Pre-condition	Post condition
01	Perform Login	User(admin,student or company) can perform login.	User having account	Login successful
02	Perform Logout	User(admin, student or company) can perform logout.	User logged in	Successfully logged out
03	Update Details	User(admin, student or company) can update their details.	User logged in	View details
04	Change Password	User(admin, student or company) can change passwords.	User having password.	Password is reset.
05	Manage Company	Admin can manage companies	Existing admin & atleast one company	Validated by admin & company can continue with it's account
06	Manage Students	Admin can manage students	Existing admin & at least one student	Validated by admin & student can continue with it's account
07	Apply for jobs	Student can apply for job	Job should be there posted by company & student must be eligible for job	Applied for job successfully & wait for response from company
08	View Job Status	Student can view job status	Student must have successfully applied for job.	Viewed job status & can accept job if selected else can apply for other job.
09	Search jobs	Student can search for job	Student must have account & logged in.	Can find a job or not.
10	Post Jobs	Company can post jobs	Company must have account & logged in.	Student can now apply for jobs.
11	View Applications	Company can view applications of students.	Atleast one student must have applied.	Company can react to applications.

12	Get Help	User can get help for login	User should have tried for it or just get help if does not know how to login	User will now login using this help.
----	----------	-----------------------------	--	--------------------------------------

Design and Implementation Constraints

The following Design and Implementation Constraints are applicable for the Campus Recruitment System:

1. The system is designed to be the cross platform supportable. The system is supported on a wide range of hardware and any android platform which is having any version of android built into the system. This application is being developed using android studio; hence it is extremely portable
2. To prevent multiple students of the same speciality to log-in onto same company portal.
Request, a workflow system needs to be designed which routes the company vacancy Requests to students.
3. System is expected to store maximum 64GB of data.
4. Initially system will be available on android system with versions greater than 5.1. Then the system will be available for even ios mobiles and even on PCs and Laptops.
5. In order to assist students for selecting a company and preparing for interview for that company , a machine learning algorithm will be designed and trained on a training data-set to predict which skills will be required for students and also if student is eligible for company, this algorithm will continue to be trained on previous recorded data sets of students to improve the quality of predictions.
6. The database shall be maintained by admin and who have not logged in for last 1 year would get archived onto a parallel database. Restoring of students data is beyond the scope of the project and would need to be managed by admin.
7. As the system is supposed to be used by students and company as well, care needs to be taken from a usability perspective in terms of font sizes and ease of system usage.
8. Also UI is made with particular animations so that company can find it good for uploading jobs and interact with students. Even more and more companies and students use this app is the aim.

User Documentation

The following documents shall be prepared:

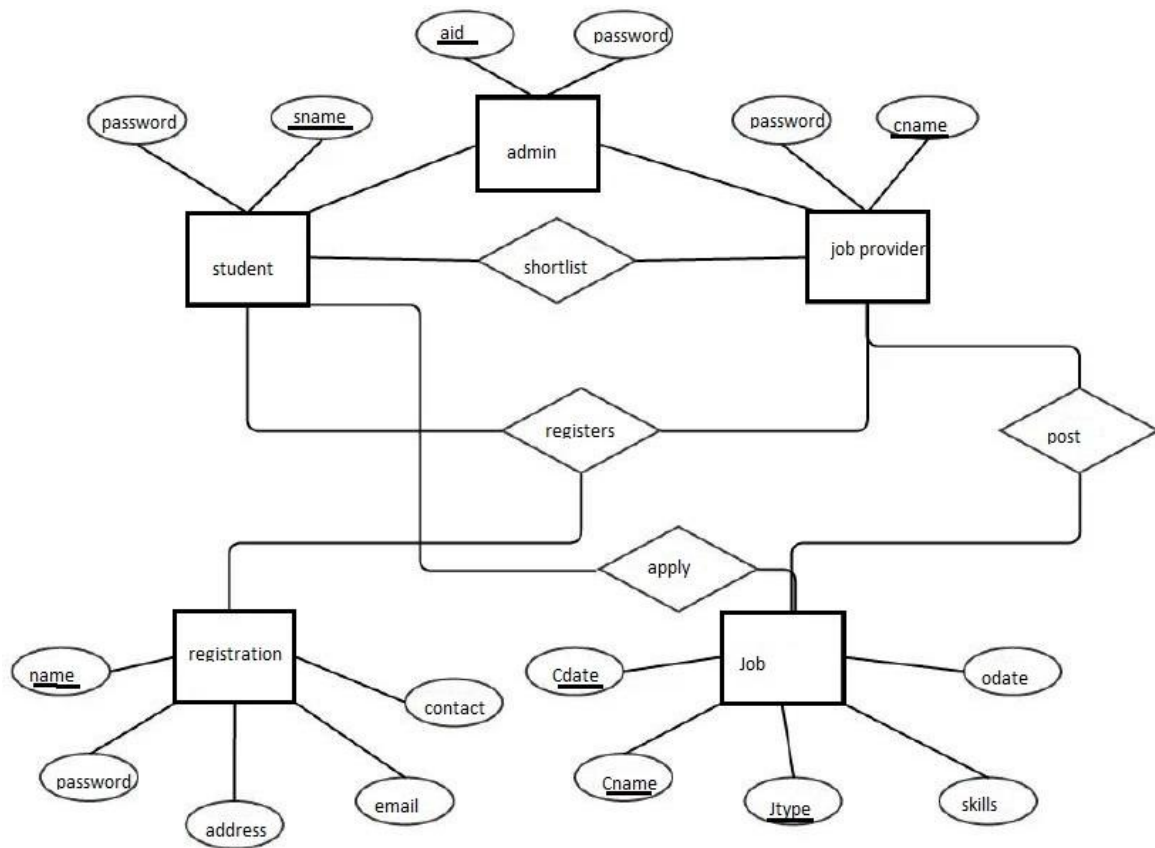
1. Installation Guide
2. User Manual for end users

Assumptions and Dependencies

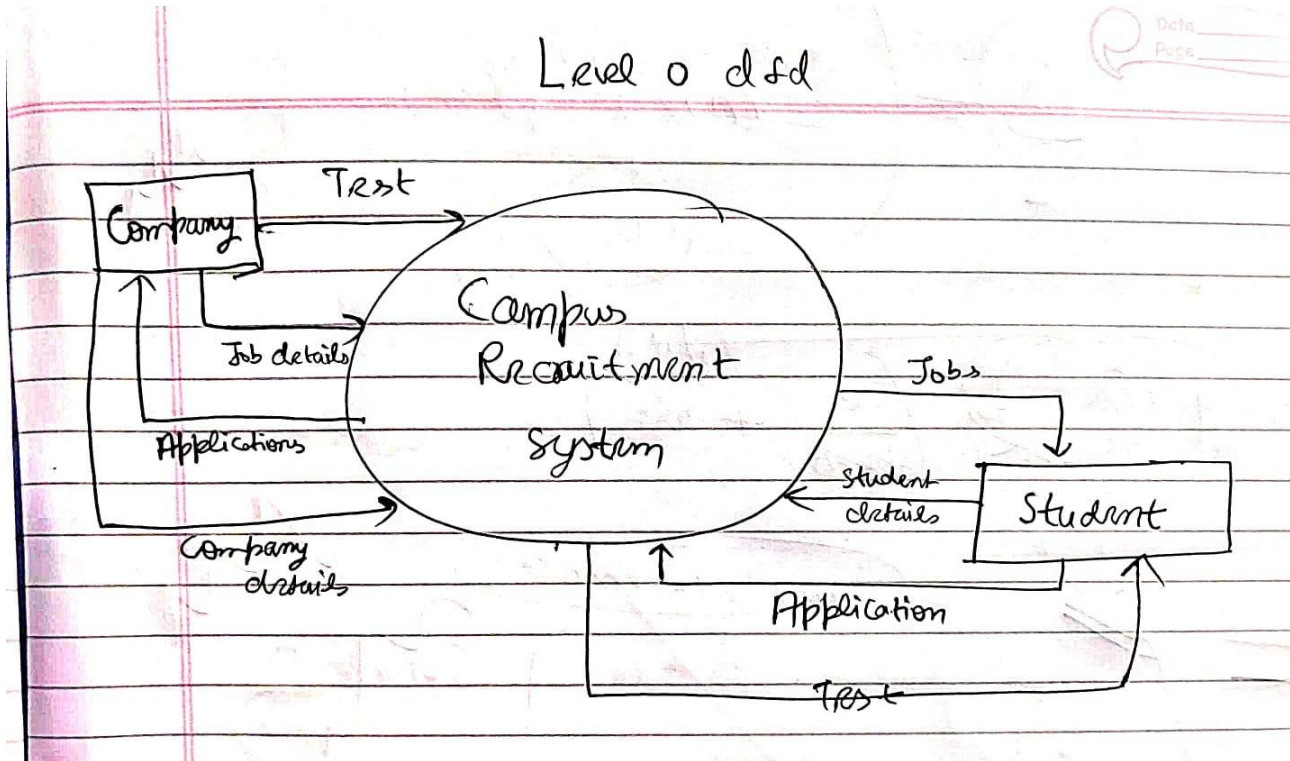
The Key Assumptions are:

1. The services is offered for only NSUT students. So right now whole system is designed

ER Diagram



Product Functions (Data Flow Diagram)

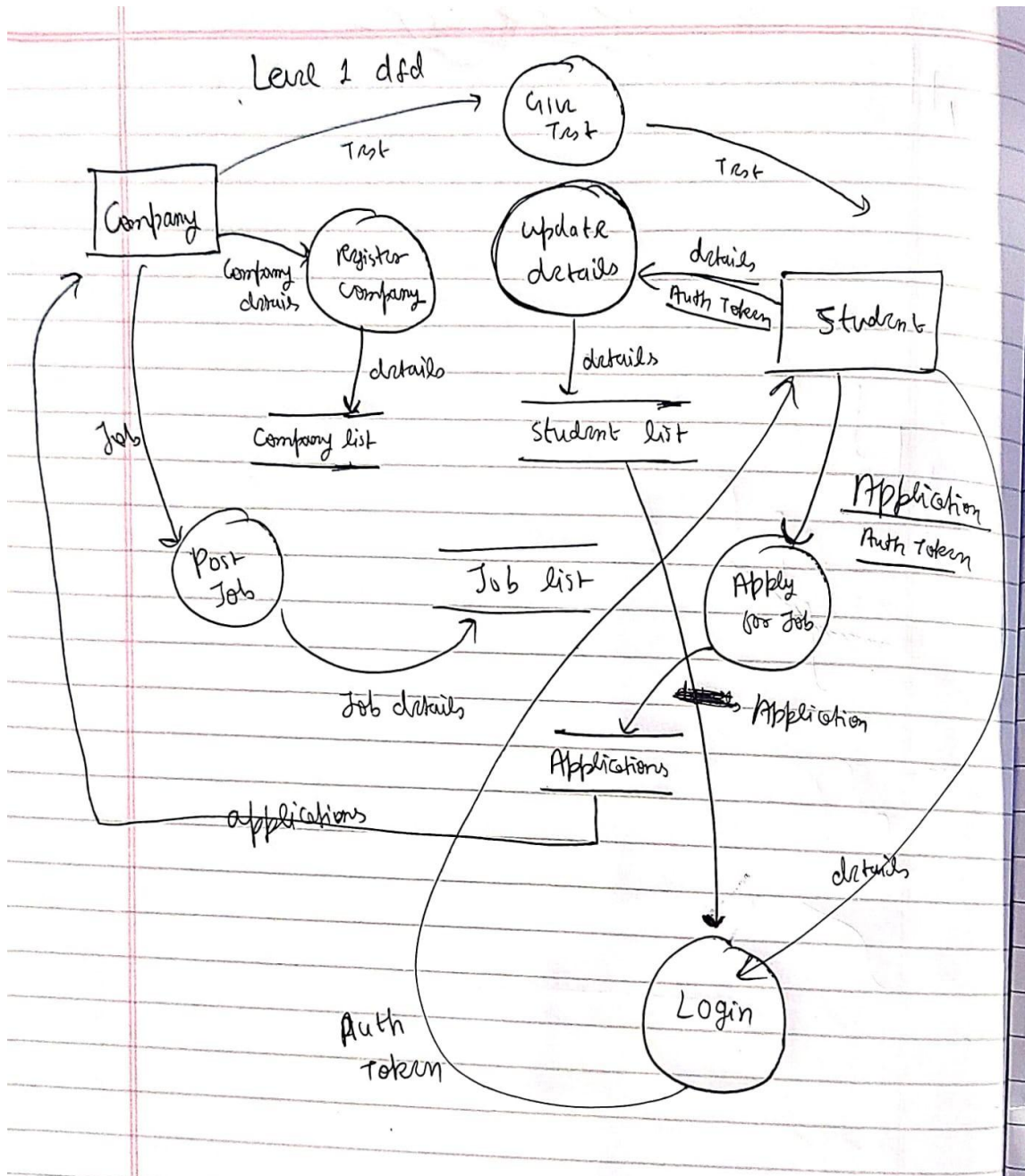


The student can create the account . If the account is already present then he/she can search for the available jobs, can view the jobs and also apply for the jobs. Further he/she can update the details, can change the password etc.

The company can create the account. If the company already have an account then the company can post the job and can also view how many candidates have applied for the jobs of that company.

The admin can manage the student and the company . Admin validates the account of the student . Admin validates the account of the company. Admin can also remove company and the student if found any discrepancy. Admin manages all activities of company and student.

Level 1 DFD



State Transition Diagram

