DHIRUBHAI AMBANI INSTITUTE OF INFORMATION AND COMMUNICATION TECHNOLOGY

IT314 – SOFTWARE ENGINEERING

GROUP - 13

JOB MATCHING PLATFORM
- CAREERXPERT -

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INTRODUCTION

Technology evolves rapidly. What we consider normal today would have seemed like science fiction just 50 years ago. To make systems more efficient and effective, we need technologies that minimize the chances of errors. In this group assignment, we are tasked with creating a web-based Job Matching Platform. During this time of recession, when both experienced professionals and freshers are actively seeking jobs, such a platform can be extremely beneficial. It allows users to upload their resumes and search for jobs based on criteria like qualifications, location, and more.

Each user will have a unique login to access the platform and can apply for multiple jobs simultaneously. The job management system includes features such as Job Seeker Registration and Profiles, Job Search, Recruiter Registration and Profiles, and more. Recruiters can create profiles and post job openings, while job seekers can search for jobs by geographic area, qualifications, company, or timeframe.

Purpose

The purpose of creating the online job platform is to provide job seekers with a platform to find suitable and satisfying jobs based on their qualifications. It allows job seekers to upload their resumes and apply for job postings, while recruiters can choose the best candidates from the available applicants. This platform serves as a connection point where job seekers apply for jobs, and recruiters post openings and select potential candidates.

The job portal is designed to offer a wide range of job categories and assist users in finding various types of employment. Its primary purpose is to provide job seekers with an easy and quick way to secure jobs. It allows applicants to search for jobs conveniently while helping employers find suitable candidates efficiently.

Objective

The objective of the application is to create a system that facilitates communication between job seekers and recruiters. This online job portal allows job seekers to register on the platform and search for jobs that match their qualifications and preferences. Similarly, employers can register on the portal and post details about job vacancies.

Modules

The application comprises the following major modules:

Job Seeker Module

This module offers features designed for job seekers. Applicants can upload their resumes, including personal and professional details, and update them whenever necessary. They can browse current job vacancies and also receive notifications when employers select their resumes.

Recruiter Module

This module is designed for recruiters. Employers can post job vacancy details and update them as needed. They can browse through applications and resumes, and have the option to accept or reject candidates based on their requirements.

CURRENT SYSTEM

The current system requires applicants to search through print and visual media for job opportunities. Applicants need to apply for jobs using conventional methods and appear for interview on a specified date at a specified location. In the current manual system job seekers have to send resumes and cover letters by mail, or deliver them in person and then wait for an interview request. Employers need to advertise the vacancies and sort all applicant details, conduct selection procedures and complete the formalities. This approach is tedious and requires much effort and

- Non availability of data when required.
- Resume sent manually, it is a waste of papers and consumes a lot of time
- No database/system to keep track of resume of candidate
- Difficulty to search for required job vacancy. It takes a long time for job seeker.
- Inviting applications through post takes a lot of time.

PROPOSED SYSTEM

The proposed system is a web based application which allows applicants and employers to register their details. Applicants can browse through the vacancy details that are posted and can apply for the jobs online. Employers can browse through the posted resumes and select suitable candidates.

- Filter, Search facility for job seekers according to their required vacancy.
- Sending resume saves effort, time and cost of job seeker
- All vacancies are available on a single interface
- Job seeker can apply for jobs according to their needs
- Most recent and related jobs are displayed on the home page

USER STORIES

Job Seekers

Front Card:
• User Story: As a job seeker, I want to register on the platform so that I can start applying for jobs.

Back Card (Acceptance Criteria):
• Registration forms should require fields like name, email, and password.
• The user should receive a verification email upon registration.
• The registration should be successful only after email verification.
• The user should be redirected to the profile creation page after successful registration.

Front Card:
• User Story: As a job seeker, I want to create a detailed profile on the platform so that recruiters can learn more about my qualifications and experience.

Back Card (Acceptance Criteria):
• The profile creation form should include sections for personal details, education, work experience, skills, and a profile picture.
• The system should validate the input for mandatory fields and proper formats(e.g., date formats for education and work experience).
• Upon completion, the user should be able to see his/her profile.

Front Card:
• User Story: As a job seeker, I want to log in and log out securely to access my account and keep my data safe.

Back Card (Acceptance Criteria):
• The login process should require a valid email and password.
• The user should be logged out from all sessions when clicking on the log-out button.

Front Card:
• User Story: As a job seeker, I want to update my profile information so that I can keep my details current and improve my chances of getting hired.

Back Card (Acceptance Criteria):
• The user should be able to update fields like name, email, phone number, address, and resume etc.
• The system should validate the input for mandatory fields (e.g., name, email) and proper formats (e.g., email, phone number).
• The user should receive a confirmation pop-up upon successfully updating their profile.
• Changes should be reflected immediately in the user's profile.

Front Card:
• User Story: As a job seeker, I want to reset my password if I forget it to regain access to my account.

Back Card (Acceptance Criteria):
• The user should be able to request a password reset via email.
• The email should contain a secure link to reset the password.
• The link should expire after a certain time for security.
• The user should be able to set a new password, which must meet defined complexity criteria.

Front Card:
 User Story: As a job seeker, I want to search for jobs by title
or company name so that I can find opportunities that interest me.

Back Card (Acceptance Criteria):
• The search bar should accept keywords related to job titles and company names.
• Search results should be displayed in real-time as the user types.
• The results should be relevant and clickable, leading to detailed job descriptions.
• The search function should include filters to narrow down results.

Front Card:
• User Story: As a job seeker, I want to apply to jobs with a single click so that I can quickly submit my application.

Back Card (Acceptance Criteria):
• The "Apply" button should be prominent on job listings.
• Clicking "Apply" should submit the resume and cover letter attached to the user's profile.

• A confirmation message should appear after a successful application.
• The applied job should move to an "Applied Jobs" section with tracking status.

Front Card:
• User Story: As a job seeker, I want to track the status of my applications so that I know the progress of my job search.

Back Card (Acceptance Criteria):
• The platform should show statuses such as "Selected", "Under Review," and "Rejected."
• Status updates should trigger notifications to the user.
• Application history should be easily accessible in a dedicated section.

Front Card:
• User Story: As a job seeker, I want to provide feedback on the application process so that I can share my experience with the platform.

Back Card (Acceptance Criteria):
• The feedback should allow users to rate their experience and provide comments.
• Submitted feedback should be stored and visible to the platform admin.
• Users should receive a thank-you message after submitting feedback.
• If user don't want to give feedback, he/she can skip it.

Front Card:
• User Story: As a job seeker, I want to receive a confirmation message after applying for a job so that I know my application was successfully submitted.

Back Card (Acceptance Criteria):
• The confirmation pop-up should appear immediately after the application is submitted.
• An email confirmation should also be sent to the user.
• The confirmation should include details like job title, company name, and application date.
• The applied job should move to the "Applied Jobs" section for tracking.

Recruiters

Front Card:
• User Story: As a recruiter, I want to register on the platform so that I can start posting job listings and finding candidates.

Back Card (Acceptance Criteria):
• Registration forms should require fields like company name, recruiter name, email, and password.
• The user should receive a verification email upon registration.
• Registration should be successful only after email verification.
• The user should be redirected to the company profile creation page after successful registration.

Front Card:
• User Story: As a recruiter, I want to create a company profile on the platform so that job seekers can learn more about our organization and job opportunities.

Back Card (Acceptance Criteria):
• The company profile creation form should include sections for company name, industry, location, size, and a company logo.
• The system should validate the input for mandatory fields and proper formats (e.g., address format, contact information).
• Upon completion, the recruiter should be able to see his/her profile

Front Card:
• User Story: As a recruiter, I want to log in and log out securely to access my account and keep my data safe.

Back Card (Acceptance Criteria):
• The login process should require a valid email and password.
• The user should be logged out from all sessions when clicking on the log-out button.
• Invalid credentials should display an error message without revealing if the email is registered.

Front Card:
• User Story: As a recruiter, I want to post job listings so that I can attract potential candidates.

Back Card (Acceptance Criteria):
• The job posting form should require fields like job title, description, location, and required qualifications etc.
• The system should validate the input for mandatory fields and proper formats (e.g., salary range, location).
• The job listing should be published only after the recruiter confirms the details.
• The recruiter should be able to edit or remove the job listing at any time.

Front Card:
• User Story: As a recruiter, I want to manage job applications so that I can review candidates and progress them through the hiring process.

Back Card (Acceptance Criteria):
• The recruiter should see a list of all applications received for each job posting.
• Applications should be sortable by criteria like date, status, and candidate name.
• The recruiter should be able to update the status of an application (e.g., "Under Review," "Selected," "Rejected").
• Status updates should trigger notifications to the candidate.

Front Card:
• User Story: As a recruiter, I want to view detailed candidate profiles so that I can assess their suitability for open positions.

Back Card (Acceptance Criteria):
• The candidate profile should include sections like resume, skills, education, and experience.
• Recruiters should be able to bookmark or save candidate profiles for later review.
• Profiles should be updated in real-time with any changes made by the candidate.

Front Card:
• User Story: As a recruiter, I want to delete a job listing if it is no longer needed so that I can manage my job postings efficiently.

Back Card (Acceptance Criteria):
• The delete option should require recruiter confirmation to prevent accidental deletions.
• The job listing should be removed from the platform immediately upon deletion.
• Any ongoing applications for the deleted listing should be marked as closed.

Front Card:
• User Story: As a recruiter, I want to update job postings so that I can keep the information accurate and attract the right candidates.

Back Card (Acceptance Criteria):
• The recruiter should be able to edit fields like job title, description, location, salary, and qualifications.
• The system should validate the updated input for mandatory fields and proper formats (e.g., salary range, location).• Changes to the job posting should be saved immediately and reflected on the platform.
• The recruiter should receive a confirmation pop-up upon successfully updating the job posting.

REQUIREMENTS

Functional Requirements

⇒ Authentication and Registration
⇒ Profile and Management
⇒ Job Posting
⇒ Job Searching
⇒ Application Process
⇒ Application Tracking
⇒ Resume Builder

Non-Functional Requirements

⇒ Performance
⇒ Scalability
⇒ Security
⇒ Usability
⇒ Reliability
⇒ Compatibility

Requirements Not Completed

We were unable to implement resume builder which was one of the functional requirement we had mentioned. We could not implement admin module. Other than this, we could successfully implement the requirements.
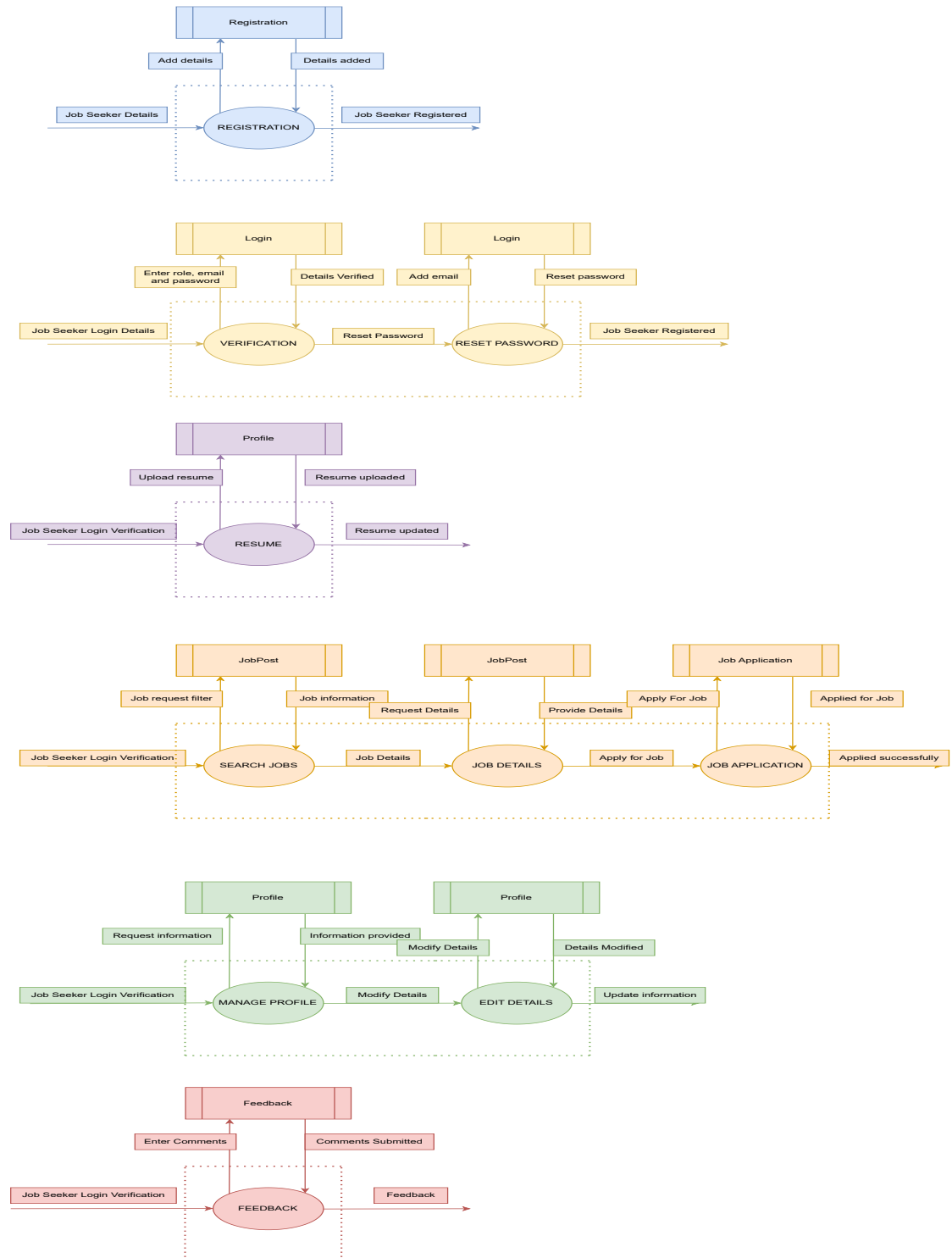
DESIGN

System Design

Systems design is the process or art of defining the architecture, components, modules and data for a system to satisfy specified requirements. Object-oriented analysis and design (OOAD) methods are becoming the most widely used methods for computer system design. System design includes choosing certain trade-offs such as functionality vs. usability, consistency vs availability etc. Our system design takes care of the coupling and coherence as it includes high cohesion and less coupling. We have used data flow diagrams to show how the data flows within the information systems which can be understood by both technical and non – technical users.
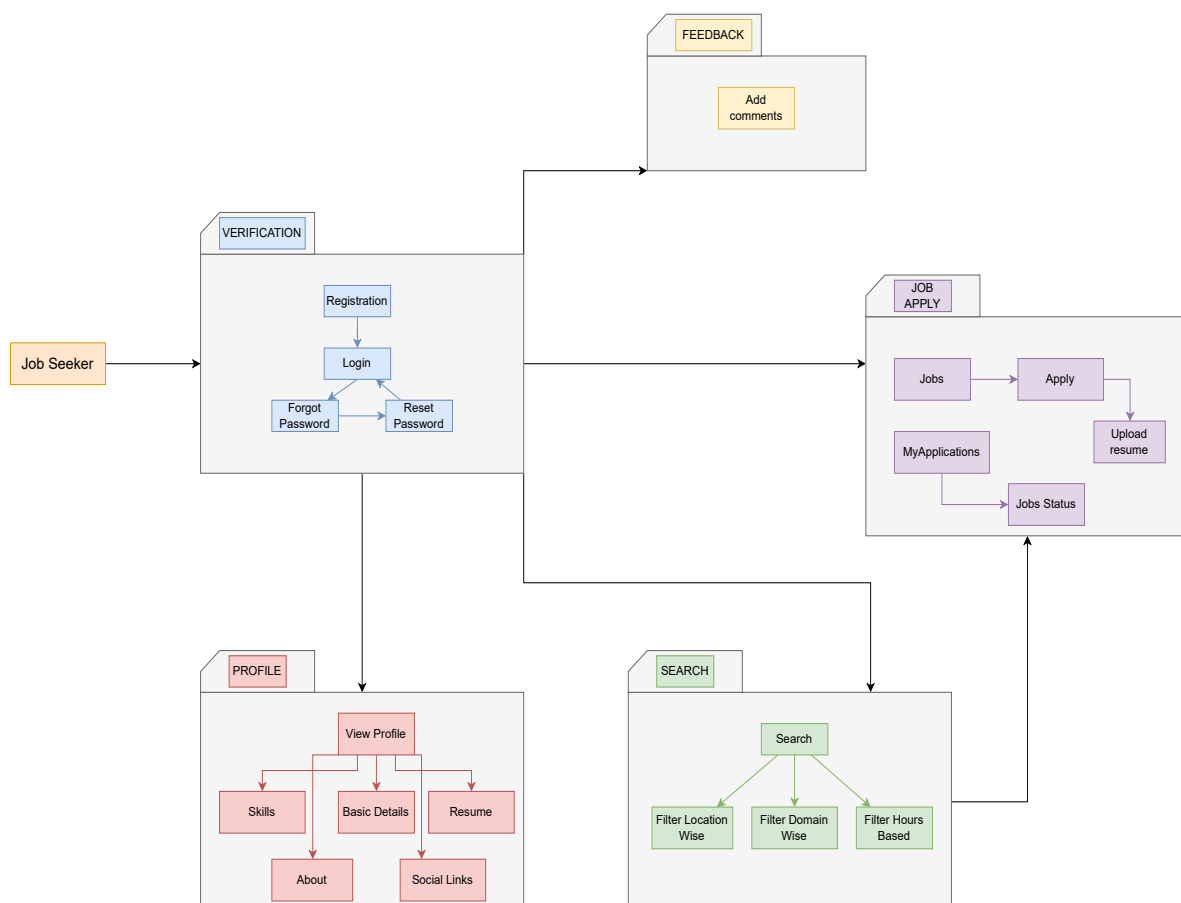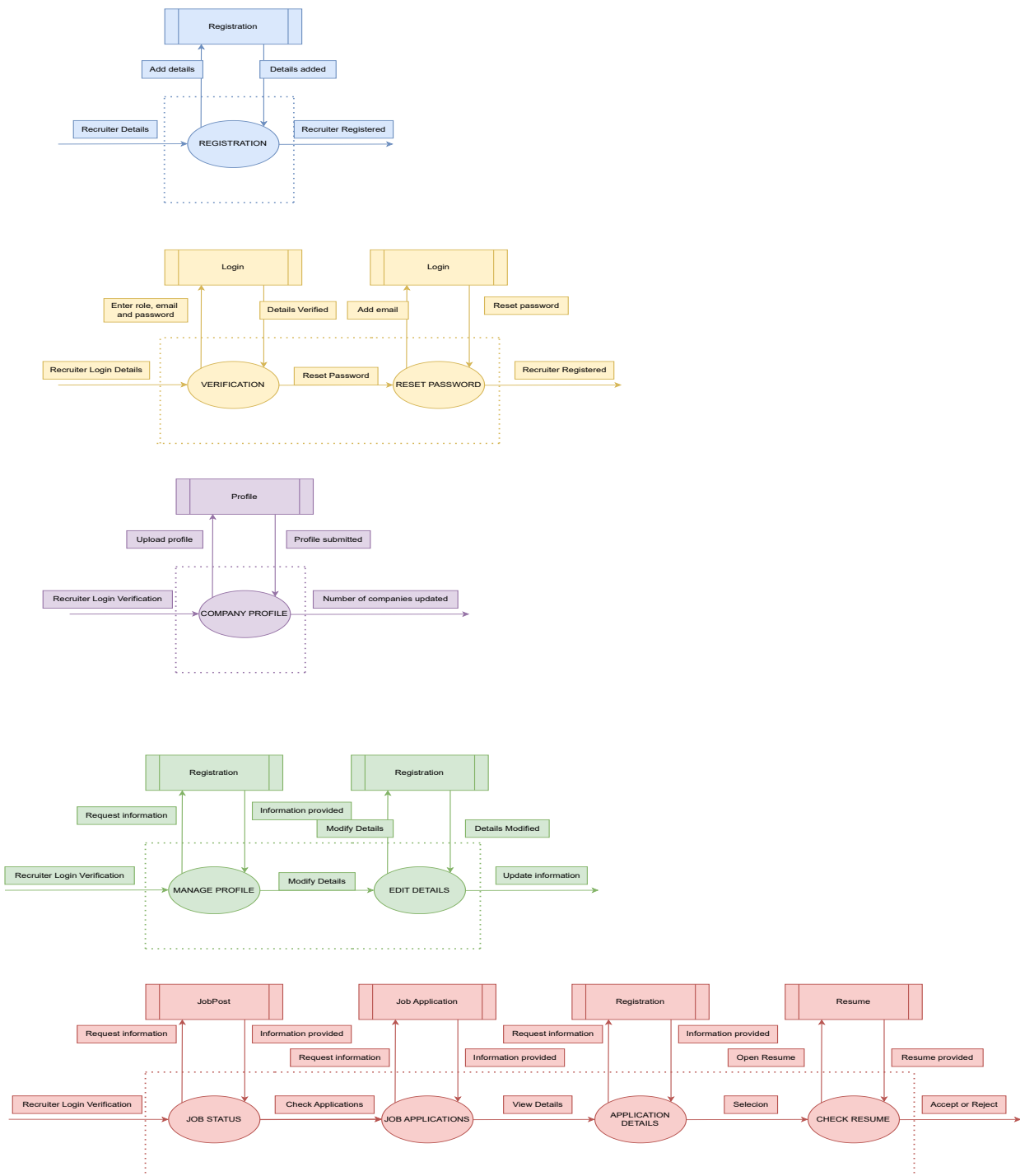
Data Flow Diagram
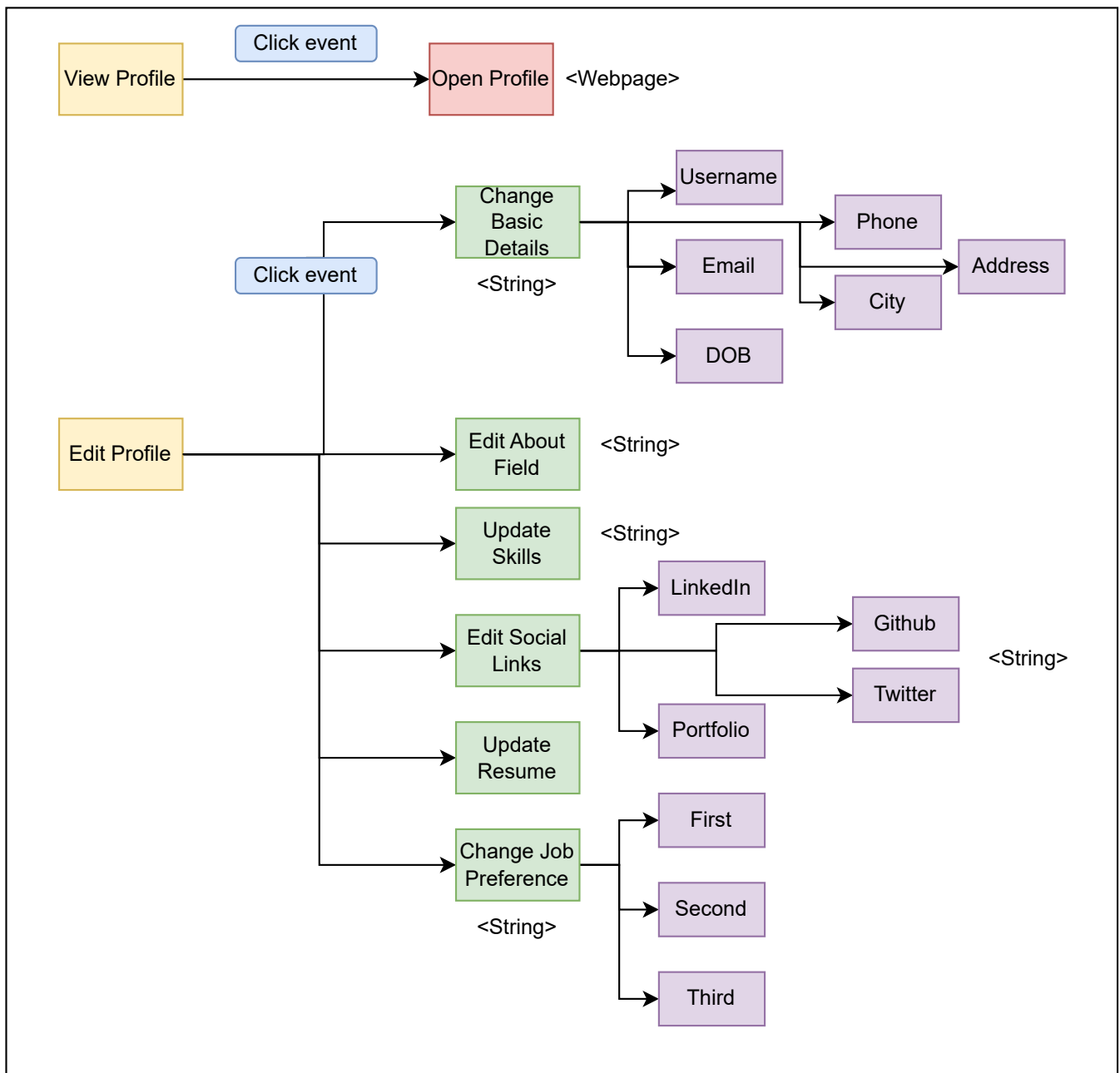
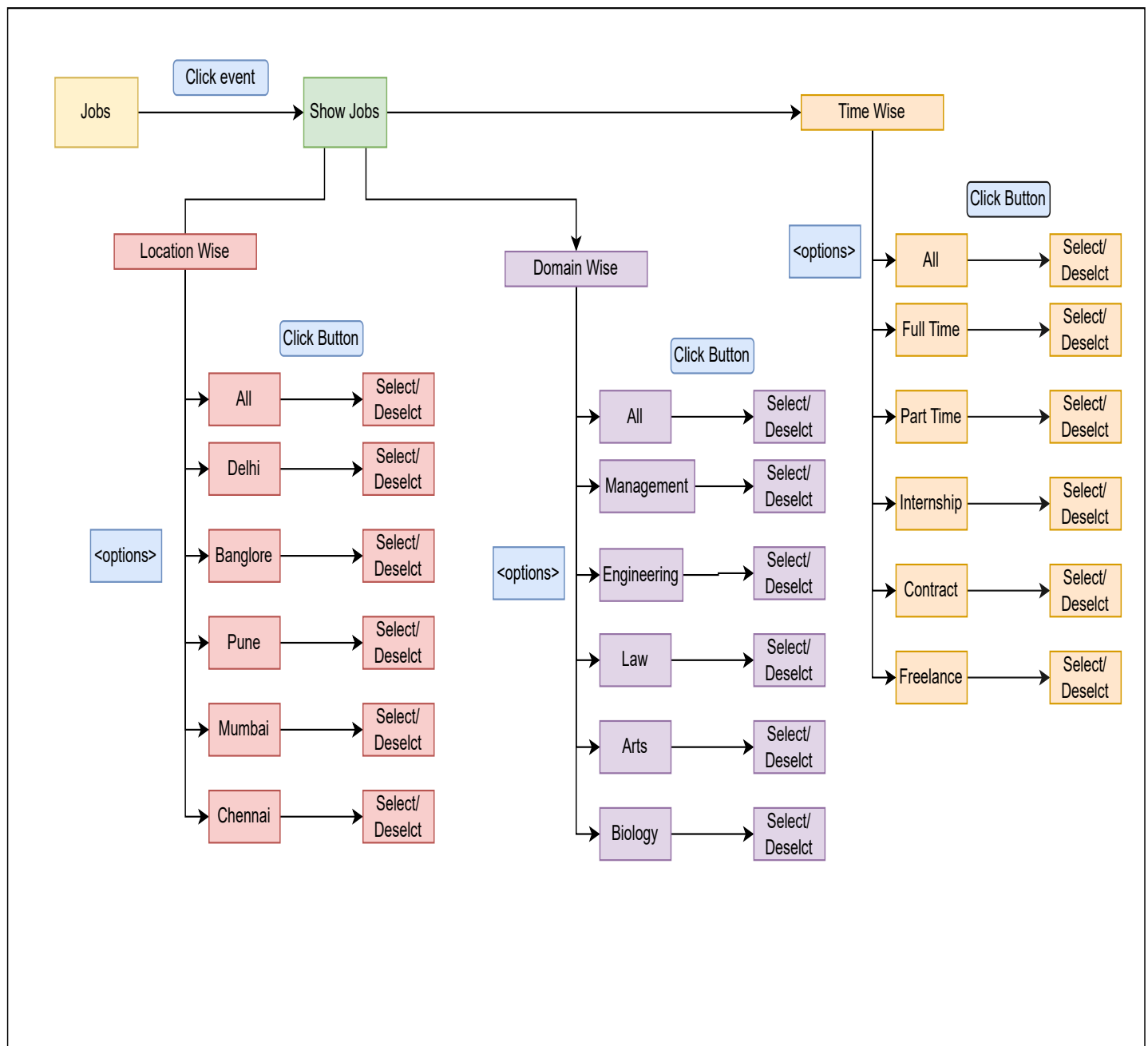## Job Seeker

Recruiter

Object Design

Object design is concerned with the detailed design of the objects and their interactions. Object design is particularly concerned with the specification of attribute types, how operations function, and how objects are linked to other objects. Given below is the object design for Profile Management and Search Management subsystems.
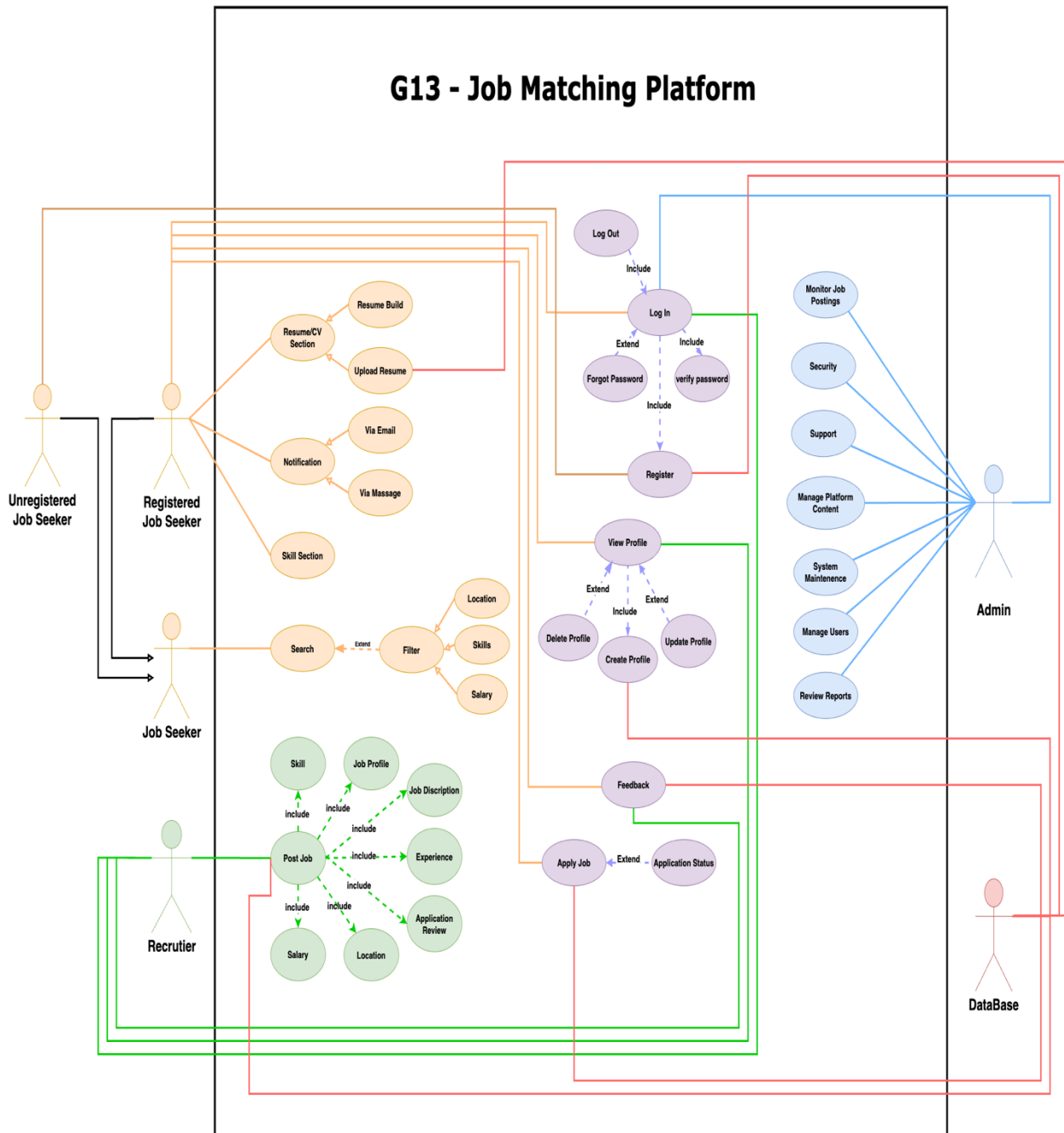
Profile Subsystem

Search Subsystem

Jobs → Click event → Show Jobs → Time Wise

Location Wise

Click Button

<options>

All	Select/ Deselct
Delhi	Select/ Deselct
Banglore	Select/ Deselct
Pune	Select/ Deselct
Mumbai	Select/ Deselct
Chennai	Select/ Deselct

Domain Wise

Click Button

<options>

All	Select/ Deselct
Management	Select/ Deselct
Engineering	Select/ Deselct
Law	Select/ Deselct
Arts	Select/ Deselct
Biology	Select/ Deselct

Time Wise

Click Button

<options>

All	Select/ Deselct
Full Time	Select/ Deselct
Part Time	Select/ Deselct
Internship	Select/ Deselct
Contract	Select/ Deselct
Freelance	Select/ Deselct

DIAGRAMS

Use case diagram

CONCLUSION

At last it can be concluded that the Job Management System was a real learning experience. The principles of software production were well implemented throughout the system. The whole project undergoes with full of enthusiasm and with full of joyous moments. The project has been made as per as the given specification. The system has been made as user friendly as possible.

Working on the Project was really a learning experience and we have come a long way in building our concepts of Software engineering. During the course of this project we have gone through many obstacles which made us to research which increased our knowledge. After applying all the data modelling, object modelling and process modelling techniques now we are very well clear with all these concepts and fundamentals which will be going to help us in the future.