

Software Requirements Specification for JobPortal.lk



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06/07/2024

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Bachelor of Software Engineering
EEY4189 Software Design in Group

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1 Introduction

1.1 Purpose

The purpose of this SRS document is to identify requirements for JobPortal.lk, a centralized job portal that is designed to connect job seekers and employers in Sri Lanka. This document details the functional and non-functional requirements, scope, assumptions, and impacts on other systems.

1.2 Summary

JobPortal.LK is designed to provide a comprehensive job search platform that allows users to find job opportunities across various sectors without the need to sign up. Registered users can save jobs and access a resume builder guide. Employers can post job vacancies for free and manage their profiles. The platform includes a scam detection mechanism to ensure trust and safety.

1.3 Company Overview

JobPortal.LK is developed by a team of students from the Bachelor of Software Engineering at The Open University of Sri Lanka. The team members are:

- S. Nihushagan (222517415)
- H.L.H.B. Thathsarani (121424685)
- K.G.T.U. Ariyarathna (321435427)
- R.J. Mishel (422517118)

1.4 Project Overview

The project aims to create a user-friendly, centralized job portal that addresses the limitations of existing job portals in Sri Lanka by including all job categories, improving usability, and implementing safety features.

1.5 Scope

The scope of the project includes the development of the job portal with functionalities such as job search, job filtering, profile management for employers, job posting, scam detection, and a resume builder guide.

- **Job Search and Filtering:**

- **Keyword-Based Search:**

- Users can search for jobs using specific keywords relevant to job titles, or industry.

- **Advanced Filters:**

- Users can refine their job search results using filters such as location, industry, job type (full-time, part-time, contract).

- **Real-Time Search Results:**

- The platform will provide real-time search results, ensuring users receive the most up-to-date job listings.

- **Profile Management for Employers:**

- **Employer Registration:**

- Employers can create accounts by providing their details, contact information, and relevant information.

- **Profile Customization:**

- Employers can customize their profiles by adding descriptions, and other relevant information to enhance their credibility and attract potential candidates.

- **Dashboard for Job Management:**

- Employers will have access to a dashboard where they can manage their job postings.

- **Job Posting:**

- **Create and Post Jobs:**

- Employers can create detailed job postings, including job descriptions, requirements, benefits, and application deadlines.

- **Edit and Update Postings:**

- Employers can edit and update their job postings as needed to reflect any changes in job requirements or other details.

- **Scam Detection and Reporting:**

- **User Reporting:**

- Users can report suspected scam postings, which will be reviewed by the platform administrators for further action.

- **Verification Process:**
 - A thorough verification process will be in place for employer registrations to ensure only legitimate businesses can post jobs.
- **Resume Builder Guide:**
 - **Step-by-Step Guidance:**
 - Users will have access to a comprehensive resume builder guide that provides step-by-step instructions on creating a professional resume.
 - **Tips and Best Practices:**
 - The guide will include tips and best practices for resume writing, including how to highlight key skills, experiences, and achievements.
- **User Authentication:**
 - **Secure Registration and Login:**
 - Users can register and log in securely using their email addresses and passwords, with validation checks to ensure data accuracy.
 - **Password Management:**
 - The platform will enforce strong password creation policies and offer password reset functionalities for users who forget their passwords.

1.6 Assumptions

- Employers will adhere to the guidelines and terms of service of the platform.

1.7 Definitions, Acronyms and Terminology

UI	User Interface
UX	User Experience
API	Application Programming Interface
AI	Artificial Intelligence
Job seeker	People who searching for a job opportunity
Employer	People who provide job opportunities (Companies)

1.8 References (Optional)

2 Project Scope and Impact

2.1 Scope Inclusions

- Job search and filtering without user authentication
- User registration and profile management
- Employer profile creation and job posting
- Scam detection and reporting mechanism
- Resume builder guide for registered users

2.2 Scope Exclusions

- Integration with third-party job portals
- Multilingual support

2.3 Impact on other systems

2.3.1 Affected by Other Systems

Changes or downtime in third-party services (like authentication, email notifications, etc.) integrated with our platform can disrupt functionalities and affect user experience.

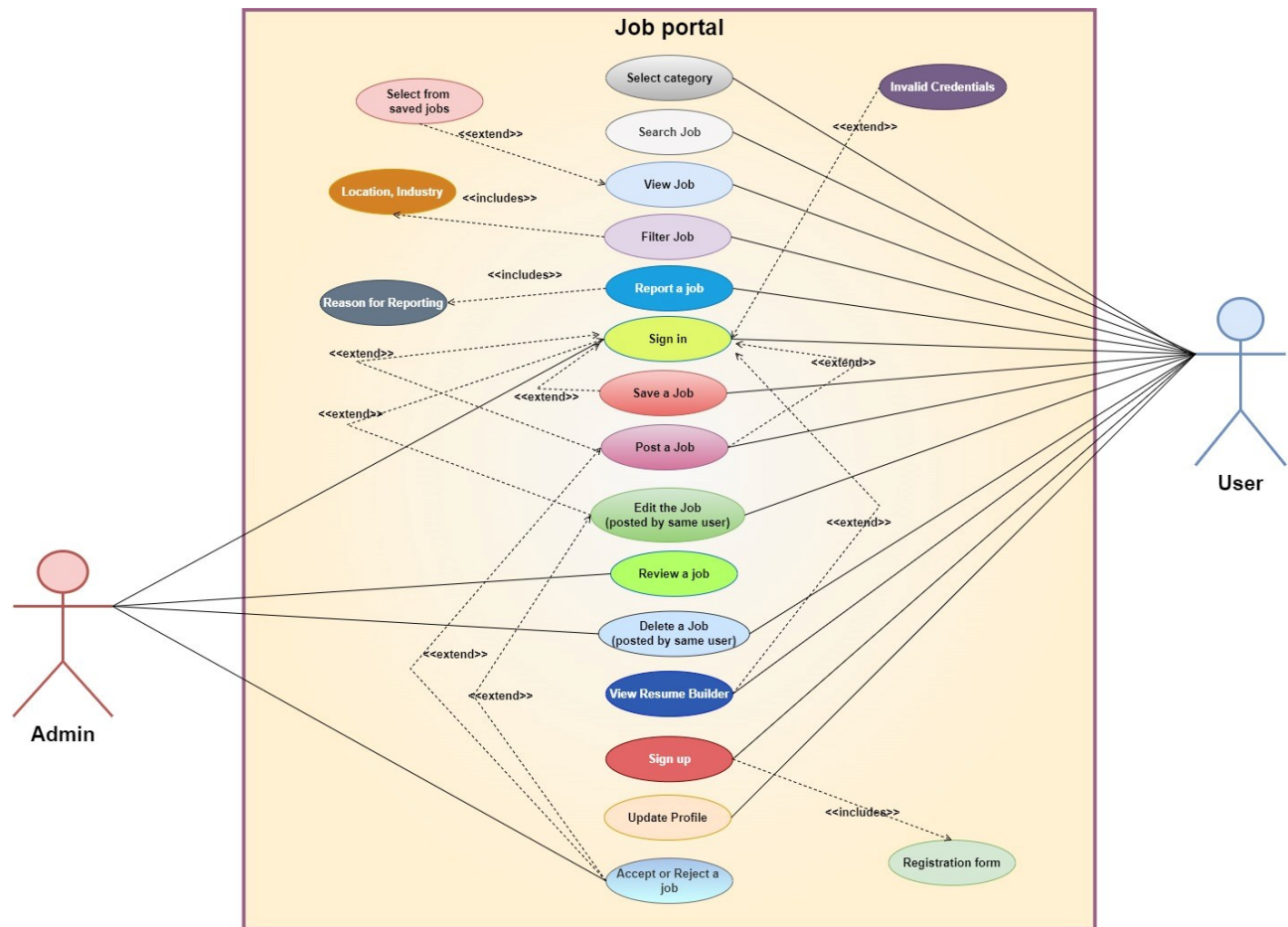
Shifts in user expectations due to advancements in existing job portals' features and interfaces may require our platform to continuously innovate and improve to meet these new standards.

2.3.2 Affects on Other Systems

By providing a centralized job portal with diverse job listings and advanced features like scam detection and resume guidance, our platform may attract users away from existing job portals.

Our platform's robust scam detection and reporting mechanism can set a higher standard for trust and security in the job portal market, potentially prompting other job portals to enhance their security features to remain competitive.

3 Functional Requirements



3.1.1.1 Job Search and Filtering

Description: Users can search for jobs using keywords, location, and job category filters without needing to log in.

Process Flow:

- User accesses the job search page.
- User enters keywords or selects filters (job title, location, category, company).
- The system retrieves job listings based on the search criteria.
- The system displays the filtered job listings to the user.
- User can view job details by clicking on a job listing.

Screen Layout:

- Search Bar (for keywords)
- Filters Section (dropdowns or checkboxes for job title, location, category)
- Job Listings Section (list of jobs matching the search criteria)
- Job Details Page (display detailed job information when a listing is clicked)

Functionality:

- Keyword search
- Filter application
- Job listing retrieval and display
- Job details view

Error Handling:

- Display a message if no jobs are found matching the criteria.

3.1.1.2 User Registration and Profile Management

Users can register on the JobPortal.LK platform by providing their email address, password, and profile information (name, contact details, location). Users can also update their profile information after registration.

Process Flow:

- User accesses the registration page.
- User enters their email address, password, and profile information.
- The system validates the input (email format, password strength).
- The system checks for existing registrations with the same email.
- If the registration is successful, the user receives a confirmation email.
- Registered users can log in and access their profile page.
- Users can update their profile information on the profile page.

Screen Layout:

- Registration Page:
 - Email Input Field
 - Password Input Field
 - Profile Information Fields (name, contact details, location)
 - Register Button
 - Validation Messages (e.g., invalid email, password strength, email already registered)

- Profile Page:
 - Editable Fields (name, contact details, location)
 - Save Button
 - Validation Messages

Functionality:

- User registration
- Input validation
- Duplicate email check
- Account creation
- Profile information editing
- Profile updating

Error Handling:

- Display appropriate error messages for validation failures and duplicate registrations.

3.1.1.3 Job Posting and Management

Description: Employers can post job vacancies and manage their job listings on the JobPortal.LK platform. This includes creating, editing, and deleting job postings.

Process Flow:

- Employer logs in and accesses the job posting page.
- Employer enters job details (title, description, location, category, company).
- The system validates the job details.
- If valid, the job posting is created and added to the job listings.
- Employer can view, edit, or delete their job postings from their dashboard.

Screen Layout:

- Job Posting Page:
 - Job Title Input Field
 - Location Dropdown
 - Category Dropdown
 - Company Input Field
 - Post Job Button
 - Validation Messages
- Employer Dashboard:
 - List of Job Postings (with edit and delete options)
 - Edit the Job Posting Page (same as the Job Posting Page)
 - Delete Confirmation Dialog

Functionality:

- Job posting creation
- Input validation
- Job listing management (view, edit, delete)

Error Handling:

- Display appropriate error messages for validation failures.

3.1.1.4 Scam Detection and Reporting

Description: The system includes mechanisms to detect and report scam job postings. Users can report suspicious jobs, and the system uses a manual review process to handle these reports.

Process Flow:

- The user encounters a suspicious job posting.
- User clicks the "Report Scam" button on the job details page.
- The system records the report and flags the job posting for review.
- An administrator reviews flagged job postings and takes appropriate actions (e.g., removal, investigation).

Screen Layout:

- Job Details Page:
 - Report Scam Button
 - Confirmation Dialog (confirming the report)
 - Scam Report Form (optional details from the user)
- Admin Dashboard:
 - List of Reported Job Postings
 - Review Actions (approve, reject, investigate)

Functionality:

- Scam reporting by users
- Admin review and action
- Scam reporting form and submission

3.1.1.5 User Authentication

Description: Users can authenticate themselves by logging in with their registered email address and password. The system includes features for password resets and strong password enforcement.

Process Flow:

- User accesses the login page.
- User enters their registered email address and password.
- The system verifies the credentials.
- If valid, the user is logged in and redirected to their dashboard.
- If the user forgets their password, they can request a reset.
- User enters their email address on the password reset page.
- The system verifies the email and sends reset instructions.
- User follows the instructions to reset their password.

Screen Layout:

- Login Page:
 - Email Input Field
 - Password Input Field
 - Login Button
 - Forgot Password Link
 - Validation Messages (e.g., incorrect email or password)
- Password Reset Page:
 - Email Input Field
 - Submit Button
 - Validation Messages (e.g., email not found)

Functionality:

- User login
- Credential verification
- Password reset request
- Email verification
- Password reset instructions sending
- Password reset process

Error Handling:

- Display error messages for incorrect credentials.

3.1.2 Data Archival and Retention

Description: Manage archival and retention of job listings and user data.

Retention Policy:

- Job listings and user data will be archived after 12 months of inactivity.

Storage:

- Archived data will be stored securely and can be retrieved by administrators if needed.

Compliance:

- Adhere to data protection regulations and organizational policies.

3.1.3 User Profiles, Roles and Privileges

Roles:

- **Guest:** Can search and view jobs without logging in.
- **Registered User:** Can save jobs, access the resume builder guide, post, edit, remove job listings, and manage company profiles.
- **Administrator:** Can oversee platform activities, manage users, and handle reported scams.

Privileges:

- **Guest:** Access to job search and view functionalities.
- **Registered User:** Access to save jobs, create and manage profiles, use a resume builder guide, post jobs and manage listings.
- **Administrator:** Access to all functionalities, including user and job management.

3.1.4 Reporting Requirements

4 Non-Functional Requirements

4.1.1 Performance and Load Requirements

- The system should respond to user interactions (e.g., search queries, page navigation) within 2 seconds under normal load conditions.
- The system should handle at least 100 search queries per minute.
- The system should maintain low latency, with a maximum of 2 seconds for database queries.

4.1.2 Compatibility Requirements

- The system should be compatible with the latest versions of major web browsers, including Google Chrome, Mozilla Firefox, Safari, and Microsoft Edge.
- The system should be fully responsive and accessible on various devices, including desktops, laptops, tablets, and smartphones.
- The system should support a wide range of screen resolutions, from 320x480 pixels (mobile devices) to 1920x1080 pixels (desktop monitors).
- The system should work on major operating systems, including Windows, macOS, Linux, iOS, and Android

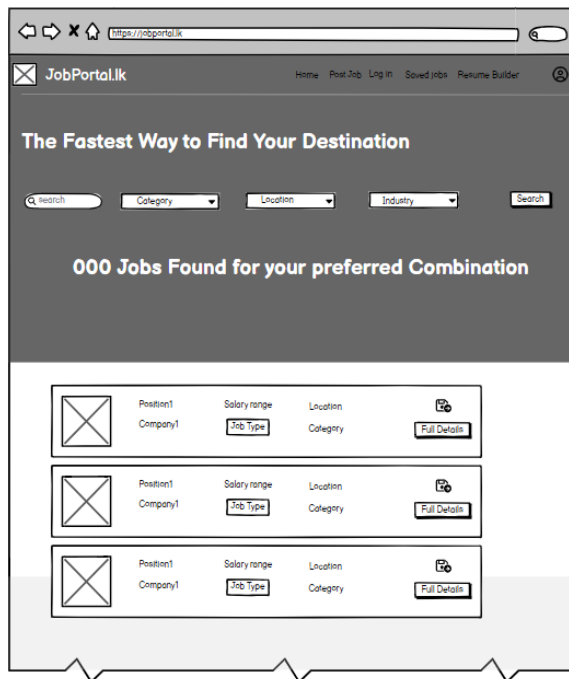
4.1.3 External Interface Requirements

- The system should provide a RESTful API for third-party integrations, allowing external systems to access job listings, user profiles, and other functionalities.
- The system should integrate with email services to send notifications to users and administrators.

4.1.3.1 User Interfaces

Dashboard

Dashboard



The Dashboard UI features a navigation bar with links: Home, Post Job, Log in, Saved jobs, and Resume Builder. The main heading is "The Fastest Way to Find Your Destination". Below this is a search bar with fields for "Search", "Category", "Location", and "Industry", followed by a "Search" button. A message states "000 Jobs Found for your preferred Combination". Below this are three job cards, each containing a placeholder image, "Position1", "Company1", "Salary range", "Job Type", "Location", "Category", and a "Full Details" button.

Log In

Log in



The Log In UI features a navigation bar with links: Home, Post Job, Log in, Saved jobs, and Resume Builder. The main heading is "Log In". Below this are input fields for "Email Address" and "Password", a "Remember Me" checkbox, and a "Log In" button. At the bottom, there is a link "Don't Have an Account?" and a "Sign Up" button.

Sign Up

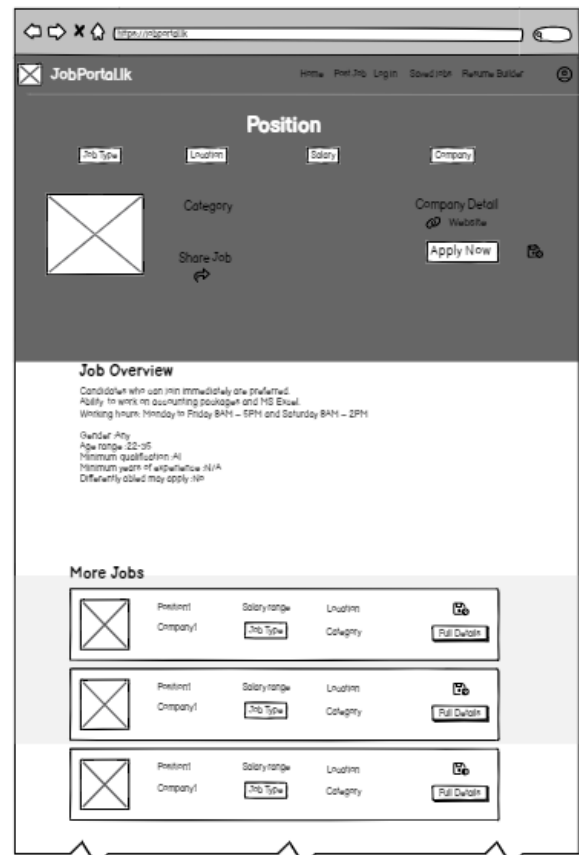
Sign Up



The Sign Up UI features a navigation bar with links: Home, Post Job, Log in, Saved jobs, and Resume Builder. The main heading is "Sign Up". Below this are input fields for "Email Address", "Password", and "Confirm Password", a checkbox for "Agree to our Terms and Conditions", and a "Sign Up" button. At the bottom, there is a link "Already Have an Account?" and a "Log In" button.

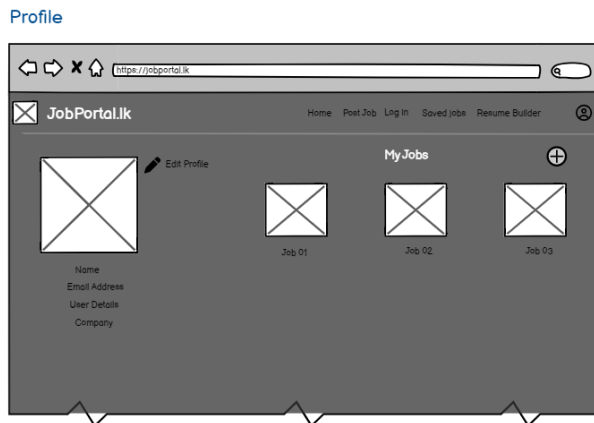
Job

Job

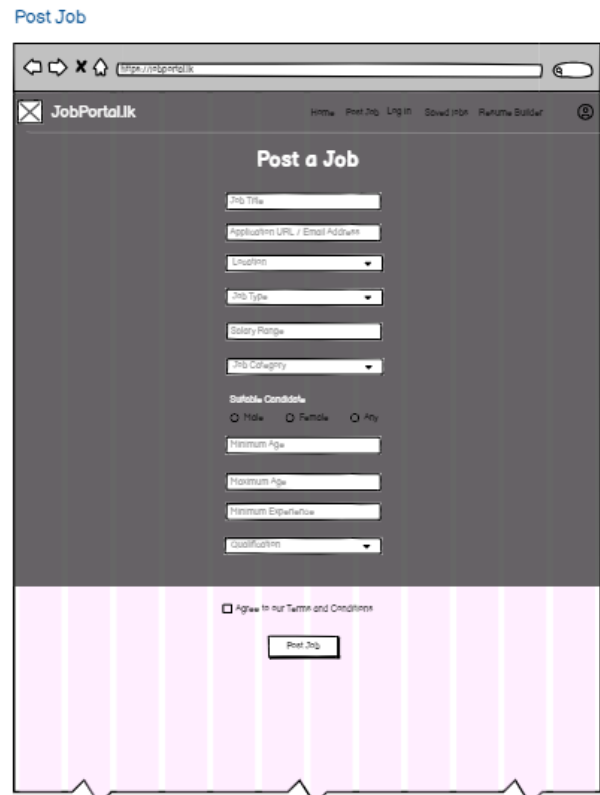


The Job UI features a navigation bar with links: Home, Post Job, Log in, Saved jobs, and Resume Builder. The main heading is "Position". Below this are input fields for "Job Type", "Location", "Salary", and "Company", followed by a "Category" dropdown, a "Share Job" button, and an "Apply Now" button. Below this is a "Job Overview" section with text: "Candidates who can start immediately are preferred. Ability to work on accounting packages and MS Excel. Working hours: Monday to Friday 8AM - 5PM and Saturday 8AM - 2PM. Gender: Any. Age range: 22-35. Minimum qualification: A1. Minimum years of experience: N/A. Differently abled may apply NIP". Below this is a "More Jobs" section with three job cards, each containing a placeholder image, "Position1", "Company1", "Salary range", "Job Type", "Location", "Category", and a "Full Details" button.

Profile



Post a Job



4.1.3.2 Hardware Interfaces

The system should be accessible on various user devices, including desktops and laptops with standard keyboard and mouse interfaces, and tablets and smartphones with touchscreen interfaces.

4.1.3.3 Software Interfaces

4.1.3.4 Communications Interfaces

All communications should be encrypted using HTTPS to ensure data security.

4.1.4 Security and Authentication Requirements

4.1.4.1 Data Storage Security

To protect data stored in the system, several measures will be implemented to ensure database security and data encryption.

The system will use robust database security practices including regular updates, access controls, and monitoring.

4.1.4.2 Data Communication Security

The system will use secure HTTP methods like POST over GET for sensitive data transmission.

4.1.5 Quality Assurance Requirements

4.1.5.1 QA Test Scope

- Unit Testing
- Integration Testing
- System Testing
- Acceptance Testing
- Performance Testing

4.1.5.2 QA Environment

Selenium for automated testing.

JMeter for performance testing.

4.1.5.3 QA Data

Tools like Mockaroo or Faker.

4.1.6 Development Requirements

4.1.6.1 Development Environment

IDE: Visual Studio Code

Version control systems: Git

Project Management tool: Jira

4.1.6.2 Development Data

4.1.6.3 Coding Standards

Google JavaScript Style Guide

Consistent and descriptive naming

4.1.6.4 Implementation Packaging Requirements

Node Package Manager (npm)

4.1.7 Deployment Requirements

4.1.7.1 Installation Packaging Requirements

4.1.7.2 Deployment Requirements

4.1.7.3 Documentation requirements

- Technical Documentation: System architecture, API documentation, developer guides.
- User Documentation: User manuals, quick start guides, FAQs.
- Training Materials: Tutorials for end users and administrators.

4.1.8 Special Documentation Requirements

4.1.9 Applicable Standards

4.1.10 On-line User Documentation and Help System Requirements

The system should include an online help system with tutorials and guides.

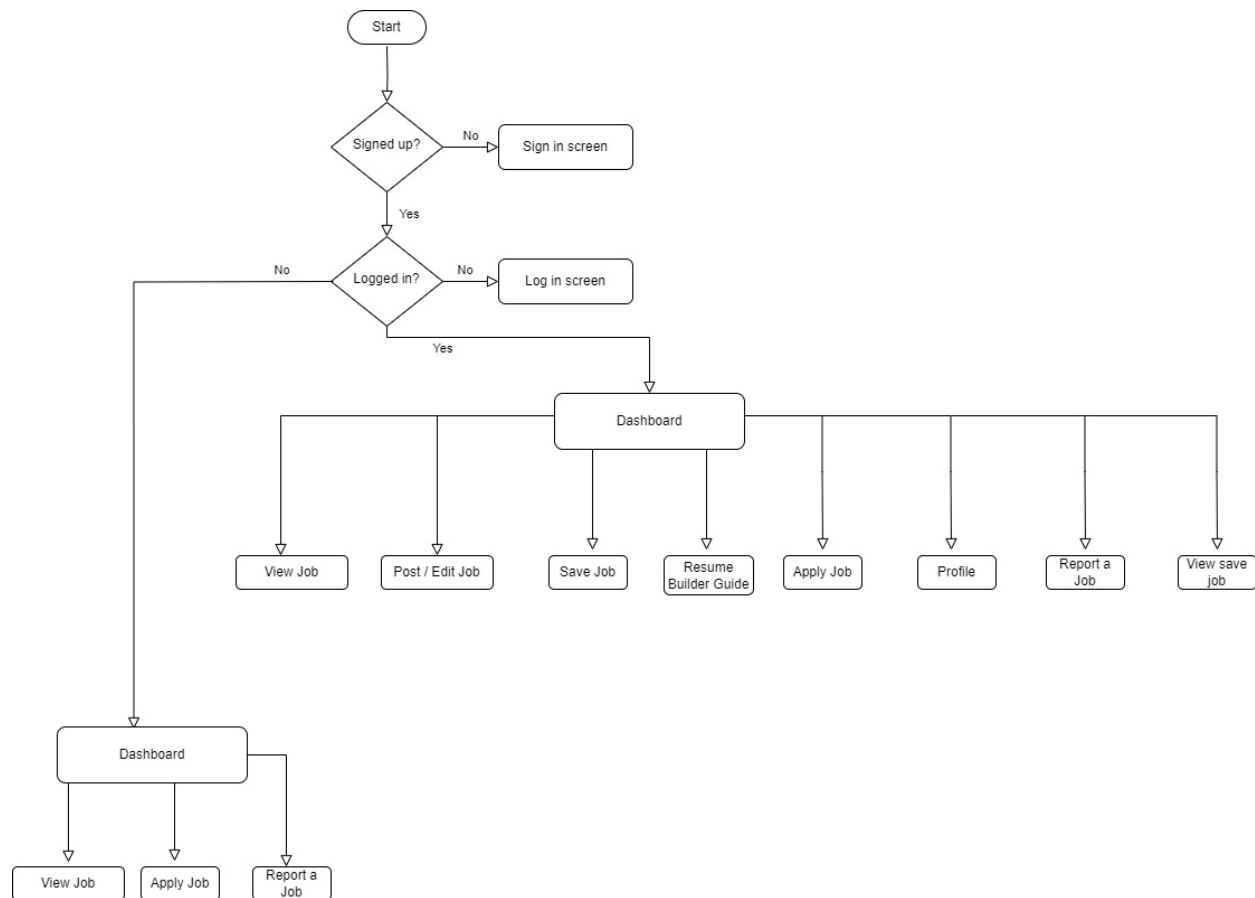
4.1.11 Usability Requirements

- The system should have an intuitive and user-friendly interface that is easy to navigate.
- The user interface should be consistent across different pages and functionalities, with a cohesive design language.
- The system should provide feedback to users for their actions, such as confirmations, error messages, and status updates.

5 Future Requirements (Optional)

- Potential development of a mobile application.
- Advanced AI-based job matching features.
- Integration with third-party job portals and social media platforms.

6 Appendix



Wireframe: <https://balsamiq.cloud/smjmbjg/pljt59b/r3EBE>

Use Case Diagram:

<https://app.diagrams.net/#G1kM5rqz13qcBdRMRepV0n6HGgO6Egkz1g#%7B%22pageId%22%3A%22wXGon1wvoaxwMgm0brwW%22%7D>

Project proposal:

https://drive.google.com/file/d/15PSl0Vgn_zi-4ccGtVZDt_KfOiPm6YoS/view?usp=sharing