



**National University of Computer and Emerging  
Sciences**

## Software Engineering

### **Deliverable 1 - FreeLanceJobPortal**

**STUDENTS NAME and REGISTRATION NUMBERS:**

Laiba	22i-2359
Waseem Zahid	22i-1355
Shayan Salam	21i-2964

**DEGREE PROGRAM:** BS-CS

**Section:** F

**SUBJECT NAME:** Software Engineering

**DATE OF SUBMISSION:**

**SUBMITTED TO:** Ms. Sidra Khalid

#### **A. Project Team Information**

##### **TaskLink**



## Group Picture



## Meet the Team: Profiles and Biographies

### Laiba



### **Github:**

Laiba, a Computer Science student at FAST University, is passionate about coding and technology. Skilled in C++, Python, Java, and databases, she hones her problem-solving skills through Codeforces. Her projects include a Thesis Management System, a Shopping Cart, and a Car Rental System. She is also developing an AI-Based Well-being App for Women. Active in GDSC, NASCON, and MLSA, she contributes to tech literacy and events. She also engages in GDG, Women Techmakers, and DevFest. Her goal is to specialize in AI and software development while expanding her freelancing career on Upwork.

## **Waseem Zahid**



**Github:** <https://github.com/Waseem12wa>

Waseem Zahid, a dedicated Computer Science student at FAST University, currently in 6th semester. With a strong foundation in programming, specialize in Python, C++, and C, with additional experience in Java. His passion lies in machine learning research, particularly in probability theories and modern AI applications. Coming from a pre-engineering background in Battagram, he is driven by a deep curiosity for innovative problem-solving and technological advancements. With a keen focus on industry-oriented solutions, He aspire to contribute to the ever-evolving field of AI and machine learning, making a meaningful impact in the tech world.

## **Shayan Salam**



**Github:** <https://github.com/ShayanSalam/DEP>

As a motivated student of computer science, Shayan has a strong interest in using web development to create engaging user experiences. He is expert in backend development, using my proficiency in Python, C++, and Ruby to create reliable systems. He has experience managing databases using MongoDB, which guarantees smooth data processing. He is prepared to use his abilities and ingenuity to create and

improve the tech environment.

### **Group Member Roles and Responsibilities:**

Member Name	Role
Laiba	Requirement Engineer, Developer, UX/UI Design
Waseem Zahid	Lead, Developer, Scrum Master, Quality Assurance Analyst
Shayan Salam	Developer, Tester, Database Administrator, Documentation Specialist

### **Comprehensive Team Agreement**

#### **Method of Communication:**

We outline the various communication channels utilized within the team, such as email, phone, and WhatsApp.

- **Email:** Formal communication, document sharing, and detailed updates may be conveyed through email.
- **Call/Google Meet:** For urgent matters or real-time discussions, team members can utilize phone calls.
- **WhatsApp:** Utilized for concise messages conveying quick updates or addressing any problems faced by team members. Even small files will be shared.

#### **Communication Response Time:**

To ensure efficient communication within our team, clear guidelines regarding response times have been established.

- **Email:** Responses to emails are expected within **12-24 hours** to ensure timely acknowledgment and action on important matters.
- **Phone/Google Meet:** For urgent matters or real-time discussions, team members should strive to respond promptly, within **1 hour** to facilitate quick decision-making.
- **WhatsApp:** Given the nature of quick updates and issue resolutions, responses on WhatsApp are encouraged within **30 minutes** to maintain the agility of communication.

#### **Meeting Attendance:**

The scheduling of meeting times will be finalized collaboratively, taking into account the availability and preferences of all team members. Once a mutually agreeable time is established, attendance is expected to be punctual unless a team member has a genuine reason for non-participation.

### **Running Meetings:**

All meetings will be conducted using Google Meet, with the sessions recorded for reference. **Shayan Salam** will be responsible for meeting minutes. Additionally, face-to-face meetings may occur occasionally at the university when all members are available and do not have conflicting class schedules.

### **Meeting Preparation:**

To ensure productive and focused discussions, meeting preparation is encouraged. Team members are expected to:

- **Prepare Updates:** If applicable, come prepared to share updates on assigned tasks or projects to keep the team informed about progress.
- **Check Technical Setup:** For virtual meetings, ensure that the necessary technical setup, such as a stable internet connection and functional microphone, is in place beforehand.
- **Time Management:** Be mindful of time constraints and come prepared to contribute efficiently.

### **Contingency Planning:**

- **Team Member Dropout:** In the event of a team member withdrawal, immediate discussions will be initiated to redistribute responsibilities and maintain project momentum.
- **Consistent Meeting Absence:** If a team member misses a meeting without valid reason, team lead (Saman Ahmed) will explore the challenges faced by the member. Adjustments to meeting schedules or additional support will be considered to address the issue.
- **Academic Dishonesty:** It will be addressed transparently, aligning with university policies.

## **B. Development Methodology - Scrum**

### **Sprint Backlog**

ID	User Story	Tasks	Assigned to	Status	Estimated Effort (Hours)	Day 1	Day 2	Day 3
1.1	As a User, I want to register as a freelancer so that I can apply for jobs.	Create a Freelancer Table in the database	Shayan	Completed	1	1	0	0
1.2		Develop Freelancer Registration UI	Waseem	Completed	3	1	2	0
1.3		Implement backend logic for freelancer registration	Waseem	Completed	1	0.5	0	0.5
2.1	As a User, I want to register as a client so that I can post jobs.	Create a Client Table in the database	Laiba	Completed	2	1	1	0
2.2		Develop Client Registration UI	Laiba	Completed	2	0	1	1
3.1	As a User, I want to log in so that I can access my account.	Develop Login UI	Shayan	Completed	7	4	3	0
3.2		Implement authentication backend	Waseem	Completed	7	3	3	1
3.3		Design Job Posting UI	Shayan	Completed	7	2	3	2

## **User Stories**

### **Freelancer User Stories**

1. **As a freelancer, I want to create a profile so that clients can view my skills and hire me.**
  - I should be able to upload a profile picture.
  - I should be able to list my skills and expertise.
  - I should be able to add work experience and portfolio items.
  - I should be able to set my availability status.
2. **As a freelancer, I want to browse available jobs so that I can find suitable opportunities.**
  - I should be able to filter jobs based on category and payment type.
  - I should be able to save jobs for later.
3. **As a freelancer, I want to submit proposals for jobs so that I can get hired.**
  - I should be able to write a customized proposal.
  - I should be able to attach relevant files.

### **Client User Stories**

4. **As a client, I want to register and create a job posting so that freelancers can apply.**
  - I should be able to describe job details and requirements.
  - I should be able to set a budget and deadline.
  - I should be able to manage submitted proposals.
5. **As a client, I want to browse freelancer profiles so that I can invite suitable candidates to apply.**
  - I should be able to search for freelancers by skills.
  - I should be able to directly send job invitations.
6. **As a client, I want to hire and pay freelancers securely so that I can complete my project.**
  - I should be able to manage contracts and payments.
  - I should be able to release payments upon task completion.

## **C. Deliverable 1 Document**

### **Introduction**

The Freelance Job Portal is an online platform that connects clients with freelancers, enabling smooth collaboration on various projects. Our system ensures a streamlined registration process, job postings, and efficient profile management.

## Project Vision

To build a user-friendly, efficient, and secure freelance job portal where clients and freelancers can interact, negotiate, and complete projects seamlessly.

## Intended Use of the System

- **Who will use the system?** Clients and freelancers.
- **How will it be used?** Clients post jobs, freelancers apply, and transactions occur via the platform.

## Stakeholders and Their Needs

- **Freelancers:** Need a way to showcase skills and apply for jobs.
- **Clients:** Need a reliable platform to find skilled freelancers.
- **Administrators:** Need tools to monitor and manage user activities.

## Features & Functionality

1. User Registration & Login
2. Profile Creation & Editing
3. Job Posting & Search
4. Application Submission & Messaging
5. Payment Integration & Security
6. Review & Rating System

## User Stories & Structured Specifications

### 1. User Story: Freelancer Profile Creation

**As a** freelancer, **I want to** create a profile **so that I can** showcase my skills.

**Pre-condition:** User must register.

**Flow:** User enters details, uploads a profile picture.

**Post-condition:** Profile saved in the database.



## 2. User Story: Job Posting by Employers

**As an** employer, **I want to** post jobs **so that** freelancers can apply.

**Pre-condition:** Employer must register.

**Flow:** Employer fills job details, sets budget, and posts job.

**Post-condition:** Job is visible to freelancers.

## 3. User Story: Job Search and Application

**As a** freelancer, **I want to** search for jobs **so that I can** apply for relevant opportunities.

**Pre-condition:** Freelancer must be registered and logged in.

**Flow:** Freelancer searches for jobs using filters and applies to selected jobs.

**Post-condition:** Application is submitted to the employer.

## 4. User Story: Freelancer Profile Review

**As an** employer, **I want to** review freelancer profiles **so that I can** hire the best candidate.

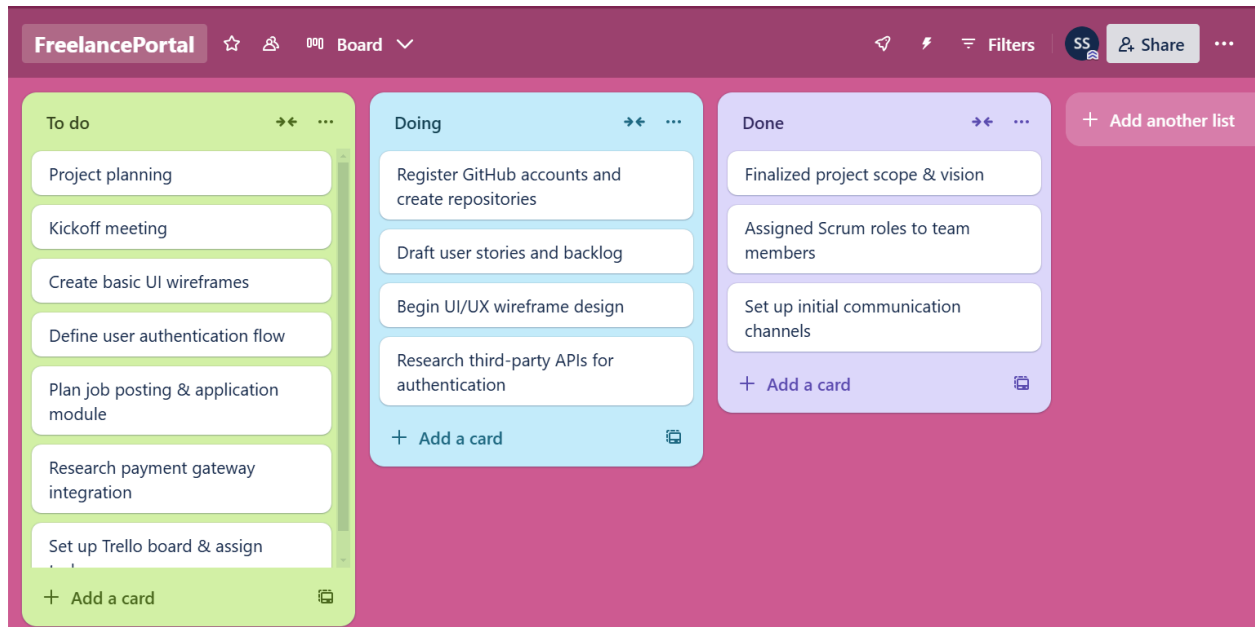
**Pre-condition:** Employer must be registered and logged in.

**Flow:** Employer browses freelancer profiles, views ratings and reviews.

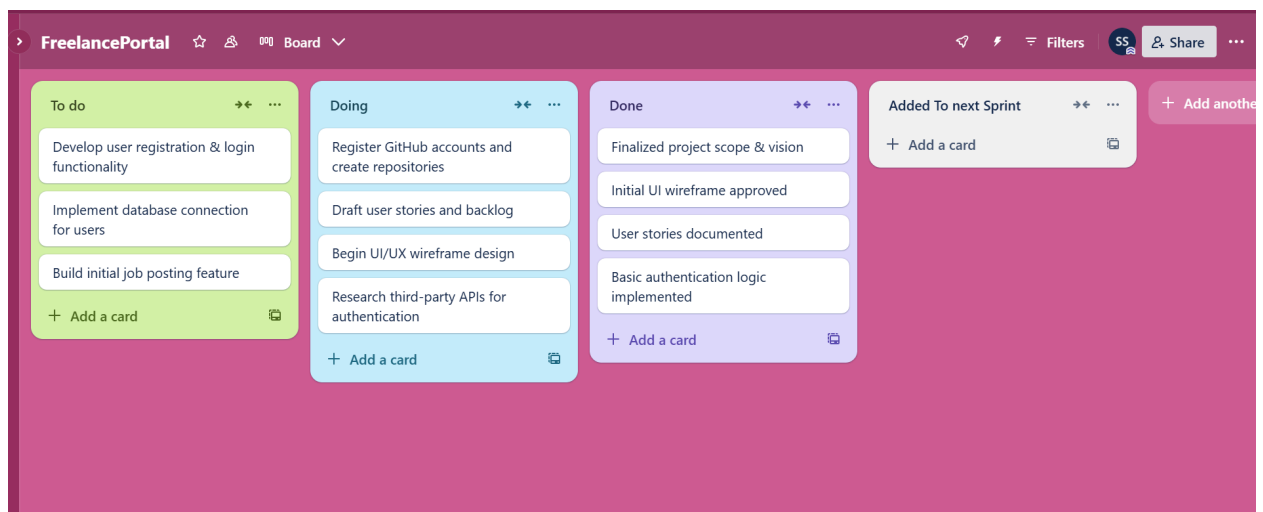
**Post-condition:** Employers can shortlist or contact freelancers for further discussion.

# Scrum Board

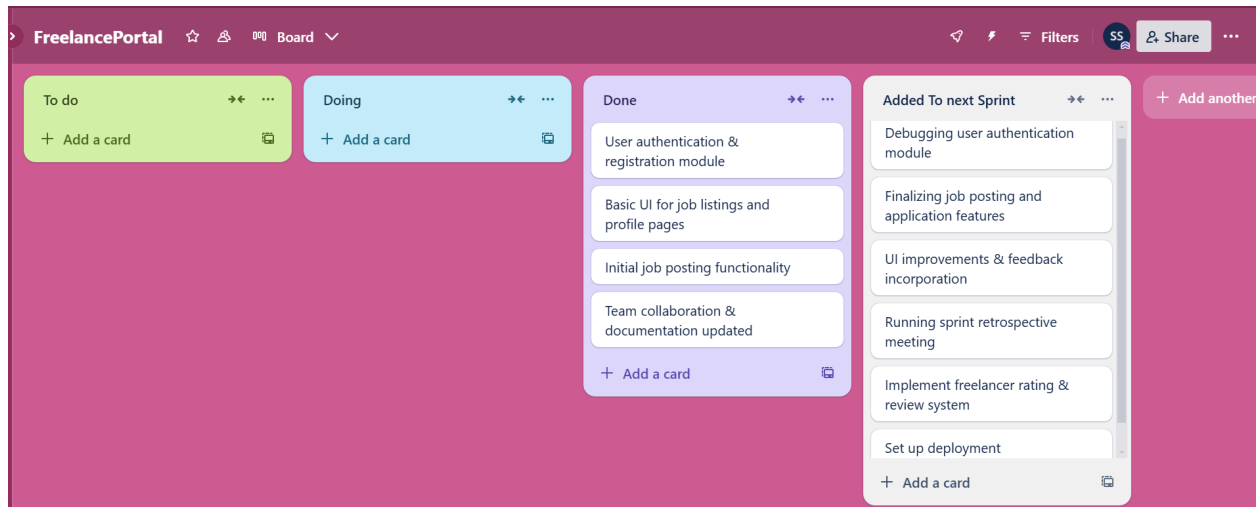
### Snapshot1: Beginning of the sprint



### Snapshot: Middle of the sprint



### Snapshot3: End of the sprint



## Non-Functional Requirements (NFRs)

- **Security:** The system shall use end-to-end encryption for all communications, multi-factor authentication for user logins, and periodic security audits.
- **Performance:** The system shall load within 2 seconds for 95% of user requests, and response times shall not exceed 1 second for common operations.
- **Scalability:** The platform shall support up to 100,000 active users concurrently and ensure database optimization for handling large volumes of data.
- **Usability:** The system shall comply with WCAG 2.1 accessibility guidelines and maintain an intuitive UI/UX design to enhance user engagement.
- **Reliability:** The system shall ensure 99.9% uptime through server redundancy and failover mechanisms.
- **Maintainability:** The codebase shall follow modular programming principles and be documented to facilitate future updates.
- **Compliance:** The system shall adhere to GDPR and other relevant data protection regulations.

## BurnDown Chart



## Work Division

### **Laiba: Requirement Engineer, Developer, UX/UI Designer**

- Gather and analyze system requirements.
- Design and develop the user interface (UI) for the job portal.
- Ensure a user-friendly experience and responsive design.
- Assist in frontend development.

### **Waseem Zahid: Lead, Developer, Scrum Master, Quality Assurance Analyst**

- Act as the **Team Lead** and oversee project progress.
- Manage Scrum activities, sprint planning, and backlog organization.
- Develop core features of the system.
- Perform quality assurance testing and ensure system reliability.

### **Shayan Salam: Developer, Tester, Database Administrator, Documentation Specialist**

- Develop backend functionalities and implement business logic.
- Conduct software testing (unit, integration, and system testing).
- Manage the database, ensuring data security and optimization.
- Prepare and maintain technical documentation.