Software Requirements Specification (SRS)

Project Title: SkillBridge – Bridging Education and Industry

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1. Introduction

1.1 Purpose

The purpose of this document is to specify the functional and non-functional requirements for SkillBridge, **a digital ecosystem designed to connect universities, industries, students, and individual learners to reduce the gap between academic learning and industry expectations.**

1.2 Scope

The system will offer a platform where companies can provide real-world tasks, universities can integrate those tasks into academic curricula, and students (or independent learners) can attempt and complete those tasks either online or offline. The solution includes dashboards for five types of users: Super Admin, Industry, University, University Student, and Individual Skill Gainer.

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2. Overall Description

2.1 User Classes and Characteristics

User Role	Characteristics
Super Admin	Manages and verifies all new user registrations (company, university and individual skill gainer) and has full control over the ecosystem.

Industry (Company)	Posts tasks, views submissions, evaluates students, and associates with universities.
University	Selects industry tasks, creates semester-based courses, assigns them to students, and manages student registrations.
University Student	Attempts tasks, completes online/offline challenges, and earns points.
Individual Skill Gainer	Self-learning users not tied to a university who can directly select and attempt tasks.

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3. Functional Requirements

3.1 Super Admin Dashboard

[SA-1] Approve/Reject **company registration** requests.

[SA-2] Approve/Reject **university registration** requests.

[SA-3] Approve/Reject **individual skill gainer registration** requests.

[SA-4] **Manage Subscription Packages**:

- [SA-4.1] Create subscription packages with:
    - Name
    - Credit limit
    - Duration (e.g., monthly, quarterly)
    - Price
    - Description

- [SA-4.2] Modify existing subscription packages.
- [SA-4.3] Delete subscription packages.

[SA-5] View analytics (optional future scope):

- Active subscriptions
- Credit usage by universities

3.2 Industry Dashboard

- [IN-1] Create tasks with:
    - Difficulty level
    - Points
    - Applicable departments (e.g., CSE, EEE, Civil)
    - Price credit (0 = Free, >0 = Paid)
- [IN-2] View associated universities and students.
- [IN-3] View task submissions and solutions.
- [IN-4] Evaluate student solutions and assign points.
- [IN-5] Mark tasks as completed (especially for offline tasks).

3.3 University Dashboard

- [UN-1] View all available companies and their tasks.

- [UN-2] Create semester-wise courses by selecting tasks from industries.
- [UN-3] Assign courses to university students.
- [UN-4] Manage student registration requests (approve/reject).
- [UN-5] Buy subscriptions to access paid tasks using university credits.

Note: Universities cannot create or evaluate tasks.

3.4 University Student Dashboard

- [STU-1] View assigned courses and their included tasks.
- [STU-2] Attempt tasks:
    - **Online Tasks:**
        - Secure mode (screen share, prevent tab switching, time limits).
    - **Offline Tasks:**
        - Participate physically in field tasks.
        - Await company feedback/evaluation.
- [STU-3] View earned points, badges, and certificates.

3.5 Individual Skill Gainer Dashboard

- [ISK-1] Access all available tasks directly (bypassing university control).
- [ISK-2] Attempt tasks similar to university students.
- [ISK-3] View performance records and earned points.

3.6 Global Features

- [GL-1] Global Rankings:
    - Top Students (based on points earned)
    - Top Universities (based on student success rate and activity)
    - Top Companies (based on tasks created and student engagement)

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4. Non-Functional Requirements

4.1 Security

- All user roles should be authenticated and authorized via a secure token system.
- Online task environments must prevent cheating (proctoring features, screen monitoring).

4.2 Scalability

- The system should support multiple universities, companies, and thousands of students concurrently.

4.3 Availability

- The platform should maintain at least 99.5% uptime.

4.4 Performance

- Tasks and dashboard actions should load in under 3 seconds.

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5. System Models

5.1 Use Case Diagram (Textual Description)

Super Admin:

- Approve User Requests → [Company, University, Skill Gainer]
- Subscription Management

Industry:

- Create Task → View Submissions → Evaluate Student

University:

- Create Course (Select Tasks) → Assign Course
- Verify Student

Student / Skill Gainer:

- Attempt Task (Online/Offline) → Earn Points → View Leaderboards

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6. Future Scope

- Integration with job portals.
- AI-based task suggestion engine.