Name	DEEPAKKUMAR M
Roll no	7376221CD106
Seat no	203
Project ID	3
Problem Statement	PLACEMENT RECORD

Technology Stack:

Frontend -React

Backend - Spring Boot

Database - Mysql

API -RESTFUL Services

Phase Notes :

Stage 1 : Planning and Requirement gathering

Stage 2 : Design and Prototype

Stage 3 :DB Designing

Stage 4 : Backend Implementation

Stage 5 : Testing & Implementation

PROBLEM STATEMENT:

The current system faces challenges in managing student's placement records efficiently. This results in inconvenience due to unorganized data. To streamline this process, a centralized forum is needed for students to upload their internship and job offer letters, ensuring easy access and management of placement records.

- **Inconsistent Record-Keeping**: Different departments manage placement offers without a unified system, leading to duplication of records and inconsistent data management.

- **Information Overload:** The placement team and students face difficulties due to the sheer volume of documentation and communication required for each placement offer, which often results in important details being overlooked or lost.

- **Fragmented Access to Information:** Critical data about student placements is scattered across different departments, making it challenging for Placement team to access and utilize the information efficiently.

- **Administrative Overhead:** The current system requires extensive manual effort to manage and verify placement data, imposing a significant burden on administrative staff and detracting from their ability to perform other critical tasks.

Proposed Features:

Centralized Data Repository: Create a single, comprehensive database for all placement records that can be accessed by all departments yet managed centrally to maintain consistency and integrity.

Data Entry and Verification: Implement tools that allow for the automated submission and initial verification of placement offers using data extraction technologies to reduce manual data entry and errors.

Enhanced Accessibility: Develop a user-friendly interface that allows students and staff easy access to placement records and reports, tailored to meet the needs of different users.

Real-Time Reporting and Analytics: Equip the system with real-time analytics features to track placement trends, performance metrics, and other critical data that can assist in strategic decision-making and reporting to accrediting bodies.

1. Introduction:

The Placement Record system is designed to streamline the process of managing student's placement records at the college. It provides a centralized platform for students, the placement team (admin), and auditing officers(e.g., NBA) to manage and access placement-related information efficiently.

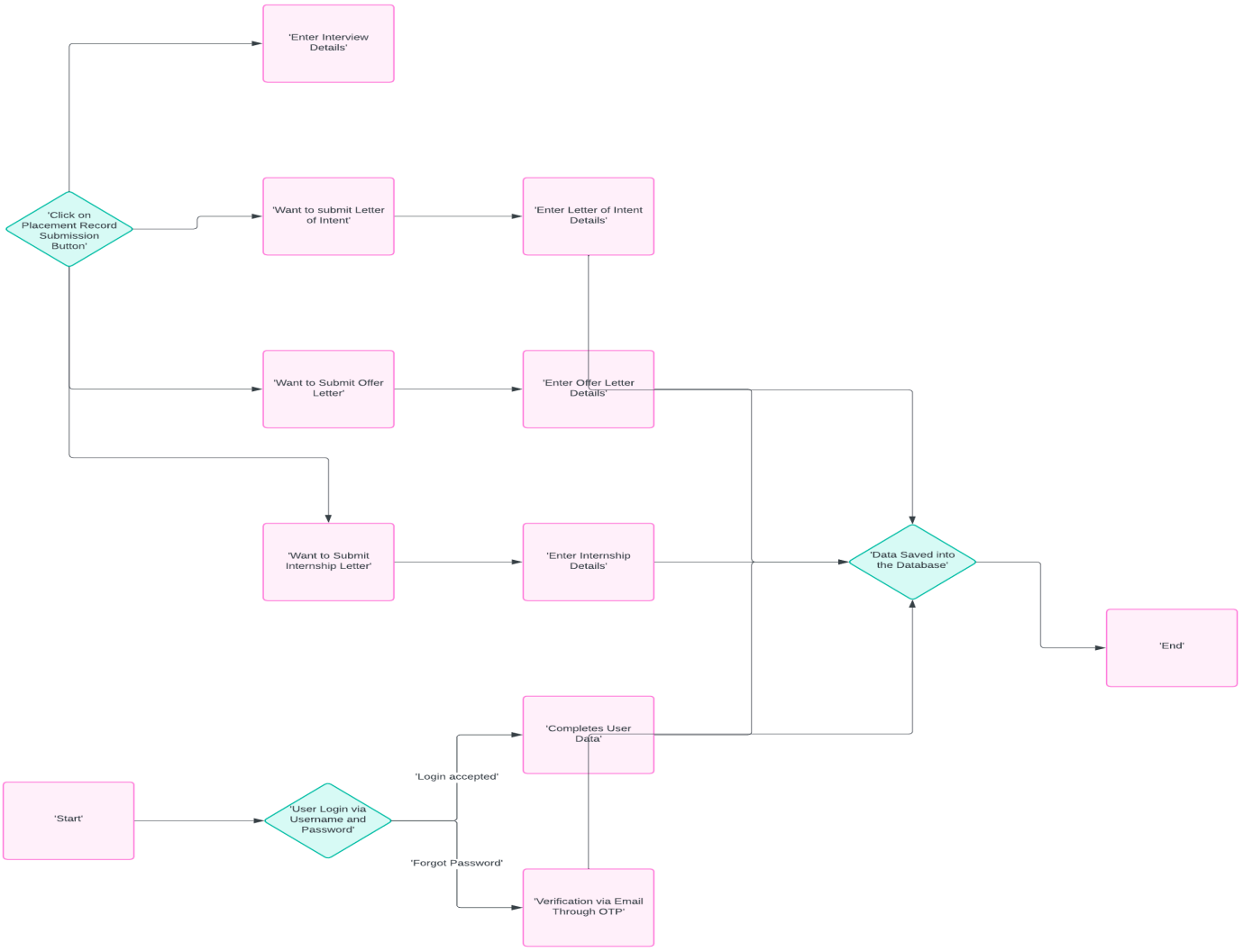
2. Stakeholders:

- **Users (Students):** Can log in, update personal data, submit placement records (internship/job offer letters, letter of intent), and retrieve forgotten passwords via email verification.

- **Admin (Placement Team):** Approves or rejects submitted records, views dashboard with placement statistics, and downloads placement-related documents.
- **Auditing Officer (e.g. NBA):** Views dashboard with placement statistics and downloads placement-related documents.

3. User Features:

- **Login:** Users log in using their college-provided username and password.
- **Personal Data Update:** Users can update personal information such as register number, name, degree, branch, email, year of passing, date of birth, gender, contact number, and native place. They can also change their password.
- **Placement Record Submission**: Users can submit details of interviews attended, company information (name, type, organizer, location), and related documents (internship/job offer letters/letter of intent).

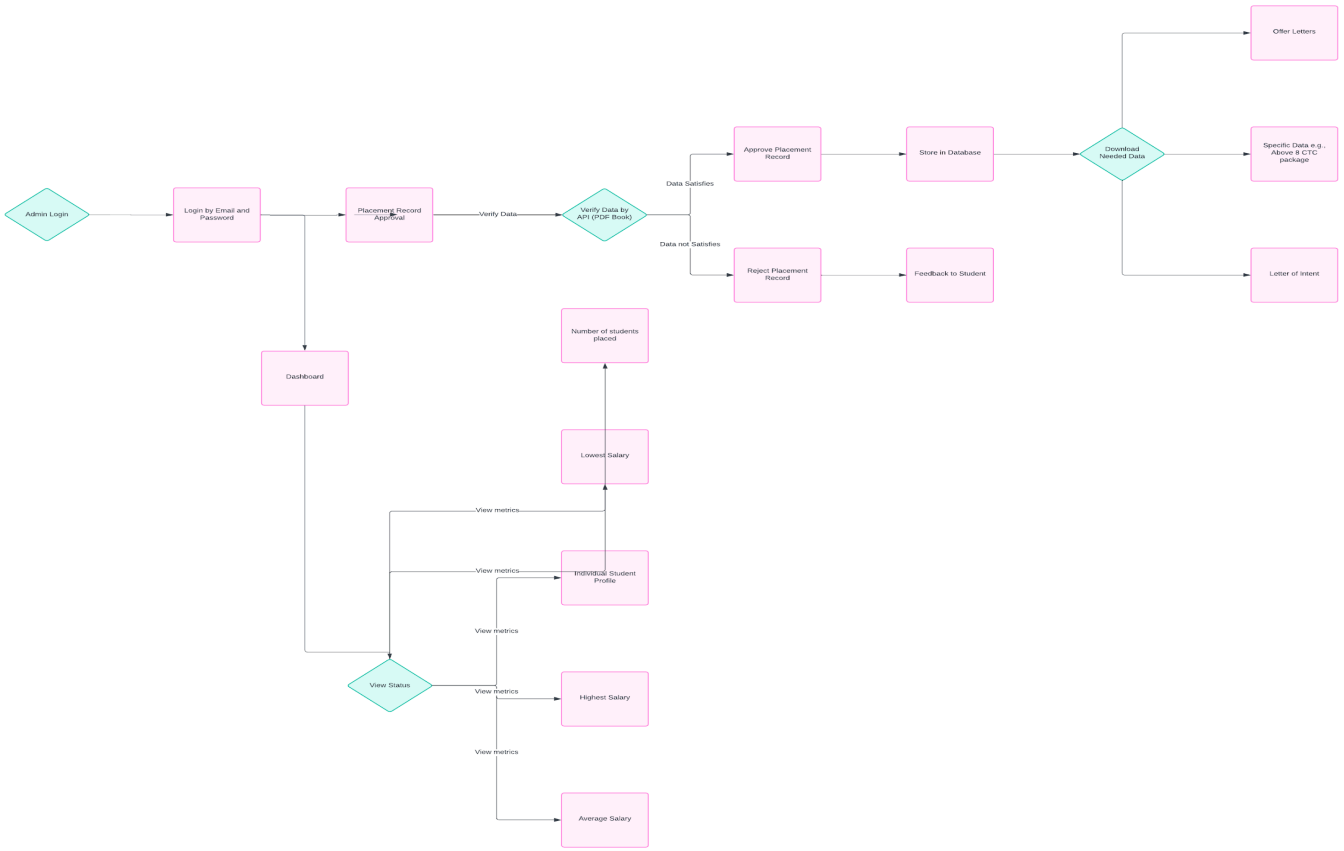


4 . Forgot Password Process:

- **User Completion of Profile:** The "Forgot Password" feature is accessible to users only after they have completed their profile information. This ensures that the user's email address is verified and linked to their account.
- **Password Retrieval**: If a user forgets their password, they can request a password reset by clicking on the "Forgot Password" link on the login page. They will be prompted to enter their registered email address.
- **Email Verification**: An email containing a unique OTP (One-Time Password) is sent to the user's registered email address. The user enters this OTP on the website to verify their identity.
- **Password Reset**: After successfully verifying their email address, the user is redirected to a page where they can reset their password by entering a new password and confirming it.

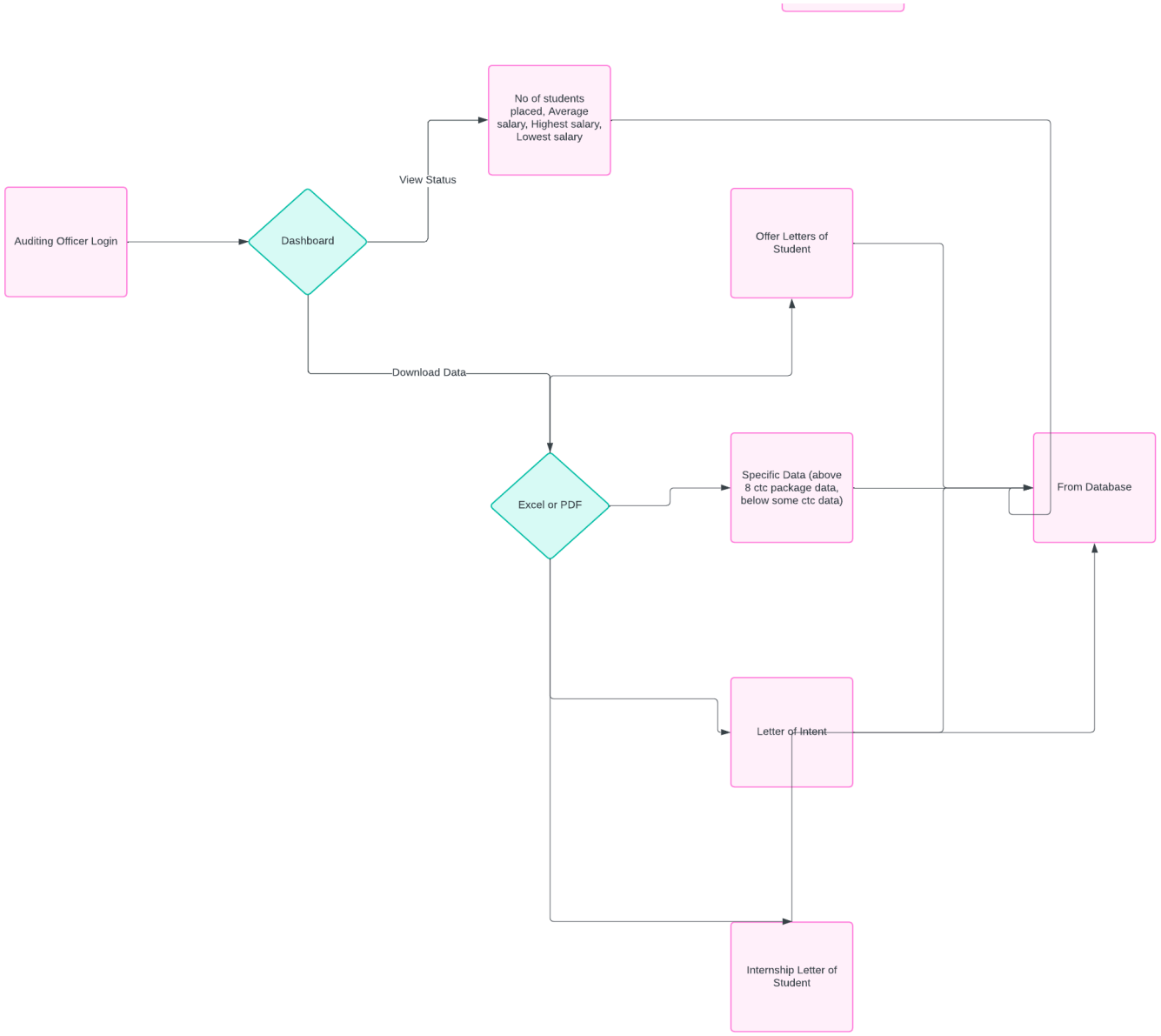
5. Admin Features:

- **Login:** Admin logs in using their email and password.
- **Placement Record Approval**: Admin can verify submitted records using an API (PDF Book) to automate verification. Approved records are saved to the database.
- **Dashboard**: Admin can view statistics such as the number of students placed, average salary, highest salary, lowest salary, and individual student profiles,etc. They can also download placement-related documents such as offer letters,students list with particular package.



6. Auditing Officer Features:

- **Login**: Auditing officer logs in using their provided username and password.
- **Dashboard:** Auditing officer can view statistics similar to the admin dashboard and download placement-related documents such as offer letters,etc.



7. Database Process:

- **Database Design**: The system uses MySQL as the database to store user information and placement records. The database is designed with tables for users, placement records, and authentication tokens.
- **Data Push by Users:** When a user submits their placement record or updates their personal information, the data is inserted or updated in the MySQL database using SQL queries.

- **Data Retrieval:** Admin and auditing officers can retrieve data from the database using SQL queries to fetch placement records, user information, and statistics for display on the dashboard.

Workflow:

- User Login: Users and admin log in using their provided credentials.
- User Registration: Users register with their details.
- Profile Completion: Users must complete their profile update before proceeding.
- Data Submission: Users submit placement records, including internship/job offer letters or a letter of intent.
- Admin Approval: Admin approves or rejects the submitted records after verification.
- Data Visualization: Admin and auditing officers can view statistics and download placement-related documents from the dashboard.

Dependencies:

- Users have access to a reliable internet connection to access the web application.
- Users have basic computer literacy skills to navigate the application.
- The MySQL database server is available and accessible to the application for storing and retrieving data.
- The PDF Book API for verification is available and can be integrated into the application.
- Users will provide accurate and valid information during registration and data submission.
- The application will be deployed on a secure server environment to protect user data.

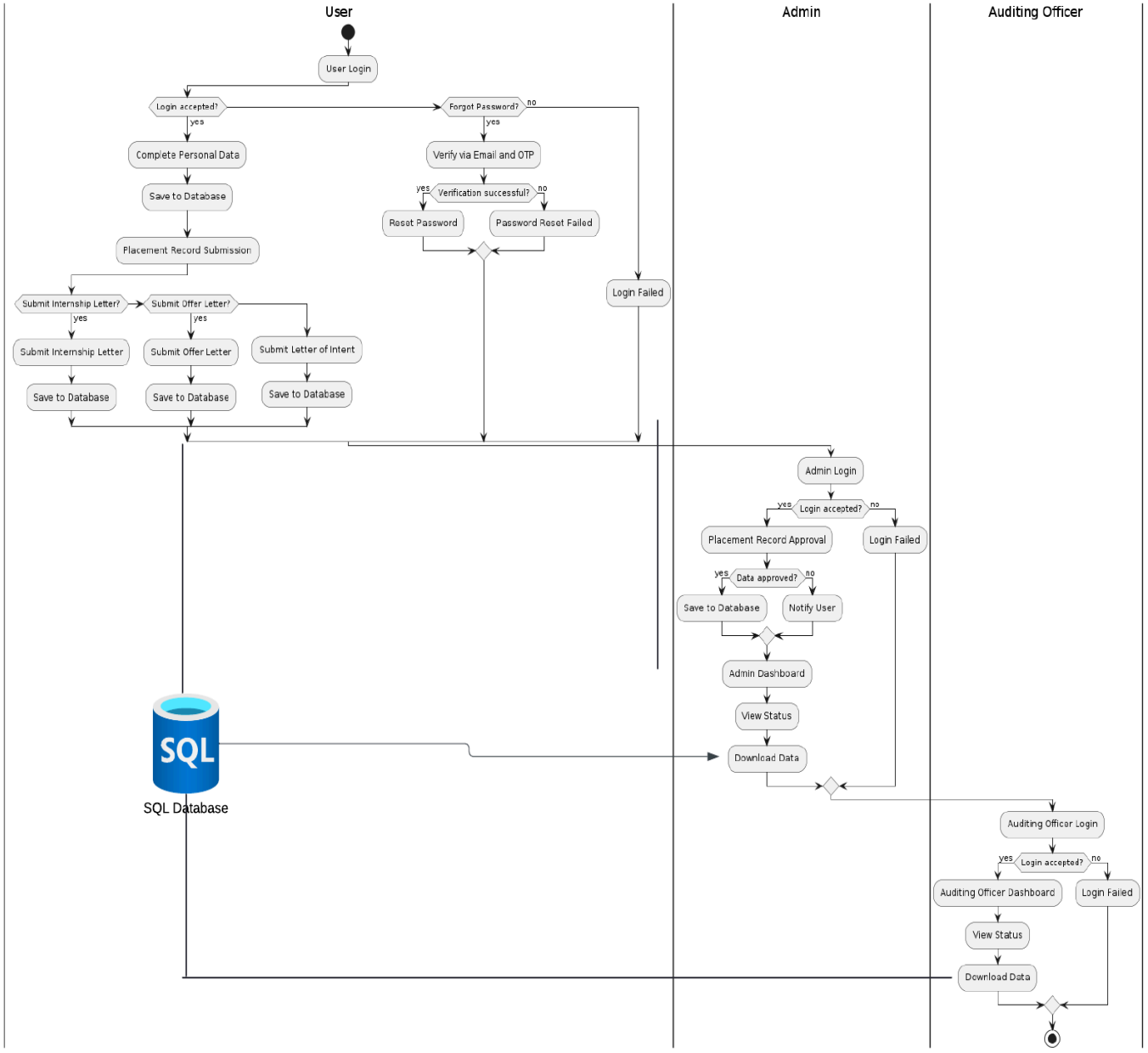
Non-Functional Requirements:

- **Performance:** The system must respond to user actions within 2 seconds to ensure efficient usability and must handle a concurrent user load of at least 100 users without significant performance degradation.
- **Security**: User data must be encrypted during transmission and storage, and access to sensitive functionalities should be restricted to authorized admin users through secure authentication mechanisms.
- **Usability**: The user interface should be intuitive and user-friendly, with clear and concise error messages provided to guide users in case of input errors or system failures.
- **Reliability**: The system should be available 24/7 with minimal downtime and should have a backup and recovery mechanism in place to prevent data

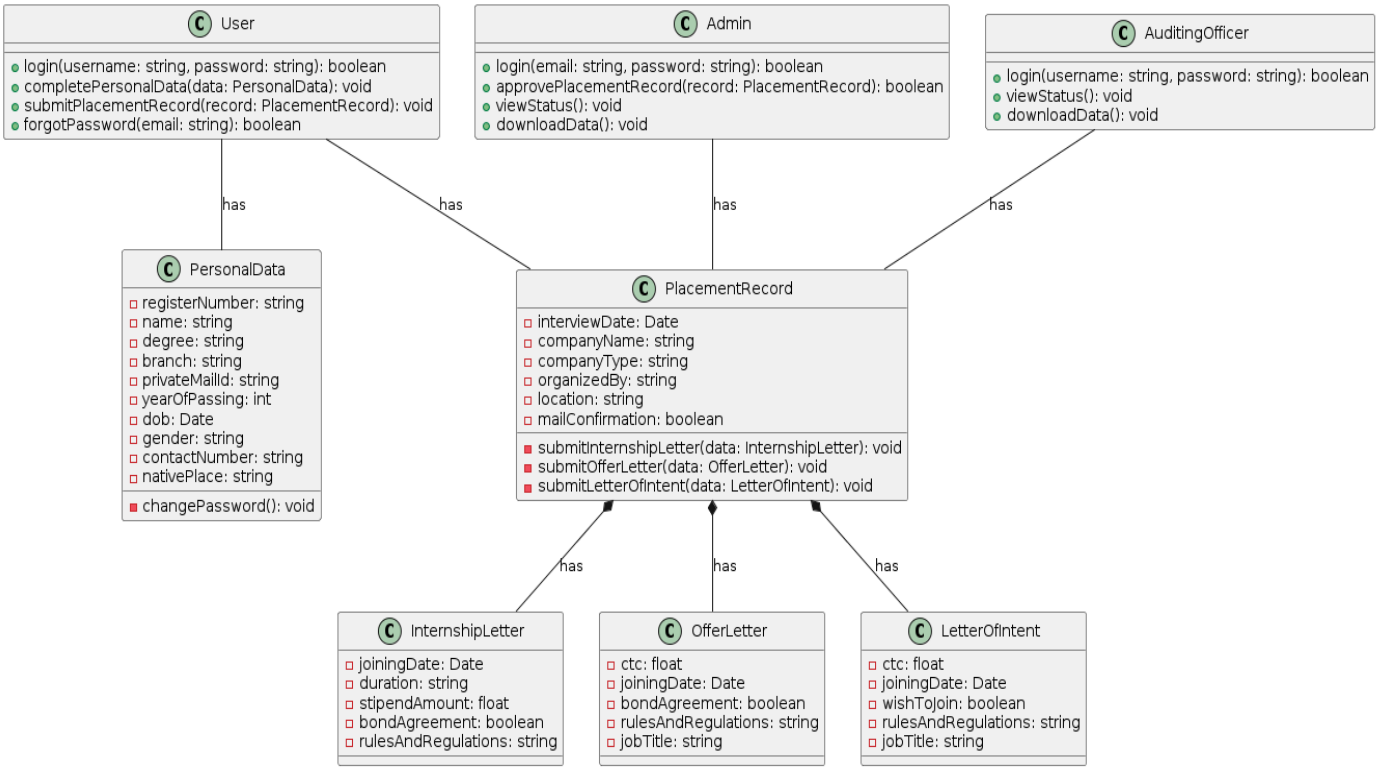
loss in case of system failures or crashes.

- **Scalability**: The system should be designed to accommodate an increasing number of users and data volume over time, and it should be scalable to support additional features and functionalities as per future requirements.

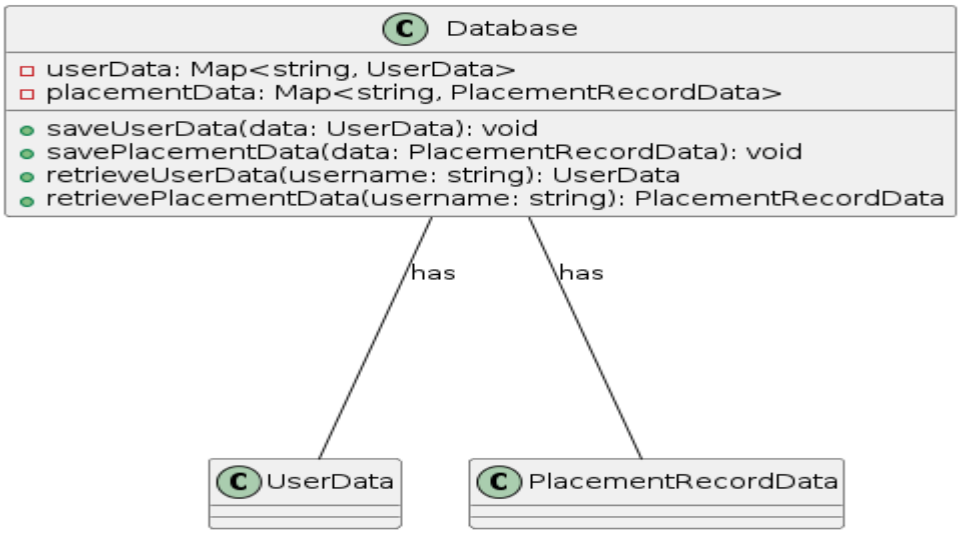
Workflow Diagram :



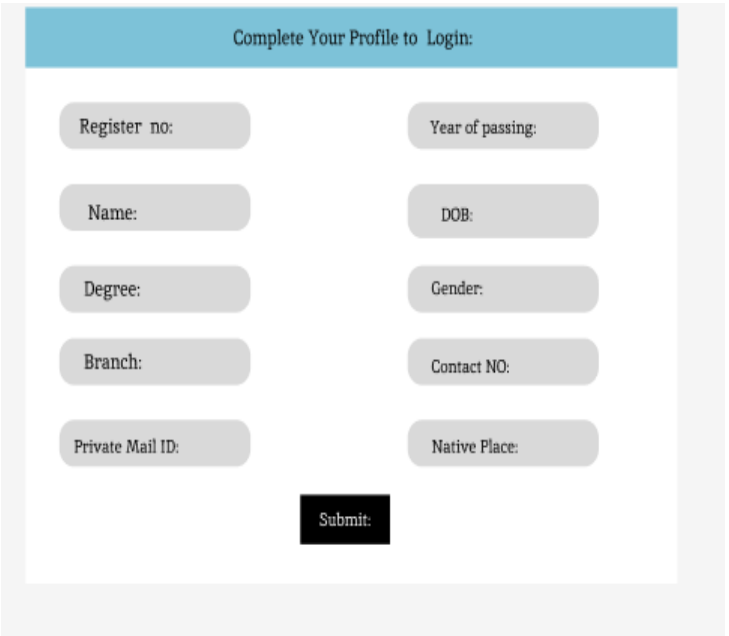
Entity-Relational Diagram(ER diagram)



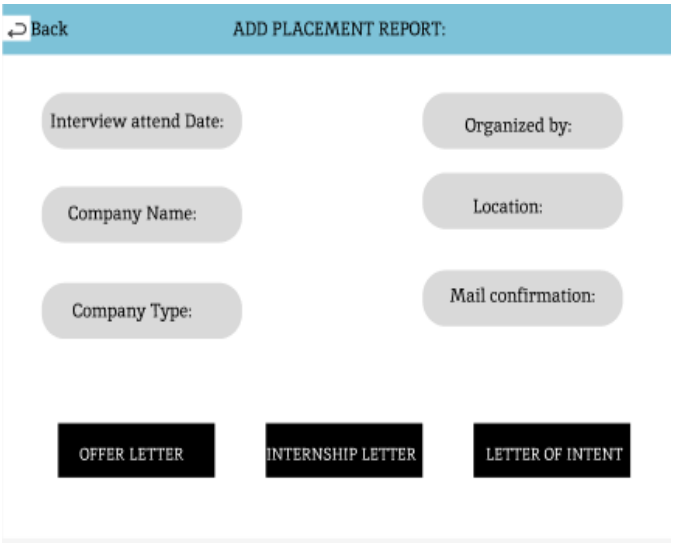
Database ER Diagram

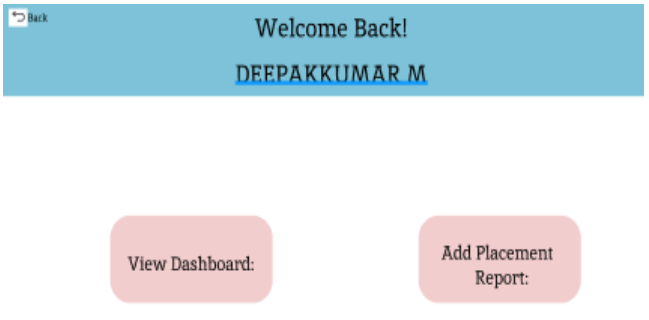


User Interface:




BANNARI AMMAN
INSTITUTE OF TECHNOLOGY
An Autonomous Institution, Affiliated to Anna University,
Approved by AICTE, Accredited by NAAC with 'A+' Grade
Stay Ahead
username:
password:
Login:
Forgot Password?


Back
ADD PLACEMENT REPORT:
Interview attend Date:
Organized by:
Company Name:
Location:
Company Type:
Mail confirmation:
OFFER LETTER
INTERNSHIP LETTER
LETTER OF INTENT


Back
Welcome Back!
DEEPAKKUMAR M
View Dashboard:
Add Placement Report:

Admin's Interface: