



**BANNARI AMMAN**  
**INSTITUTE OF TECHNOLOGY**  
An Autonomous Institution, Affiliated to Anna University,  
Approved by AICTE, Accredited by NAAC with 'A+' Grade



## ***Software Requirements Specification***

**Student Name:** THEJASWINI JAYASINGH

**Seat no:** 78

**Project ID:** 38

**Project Title:** Student Ranking Dashboard

### **Technical Components:**

<b>Component</b>	<b>Tech Stack</b>
Backend	Spring Boot
Frontend	React.js
Database	MySQL
API	OpenAPI

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## 1. Problem Statement

- Users and admins face challenges in efficiently managing student data, monitoring performance metrics, and generating comprehensive ranking reports within educational institutions.
- Students encounter difficulties in tracking their progress, assessing their readiness for placement opportunities, and accessing relevant performance metrics in a centralized manner.
- There is a need for a user-friendly platform that addresses the diverse needs of user admins and students, streamlining the process of performance tracking, progress monitoring, and data analysis.

## 2. Introduction

### 1.1 Purpose

The Student Ranking Dashboard is a web-based application designed to provide accessibility to admins, faculty and students. It aims to offer insights into student performance, progress, and achievements within various areas including programming skills, self-intensive programming, attendance, and placement readiness. This document outlines the functional and non-functional requirements, user roles, and system features of the Student Ranking Dashboard.

### 1.2 Scope of this Document

This document outlines the software requirements for the development of the Student Ranking Dashboard for the Training and Placement team. It encompasses the functional and non-functional requirements, user roles, and system features to be implemented in the application.

### 1.3 Overview

Offers a high-level overview of the document's contents and structure. By providing admins, faculty and students with a centralized platform to monitor performance metrics, track progress, and assess readiness for placement opportunities, the application aims to support informed decision-making and facilitate academic and professional growth.

## 1.4 Business Context

The Student Ranking Dashboard is developed to address the evolving needs of educational institutions and students in effectively managing and monitoring student performance, progress, and readiness for future endeavors. This section delves into the business context surrounding the development and implementation of the Student Ranking Dashboard.

# 3. Functional Requirements

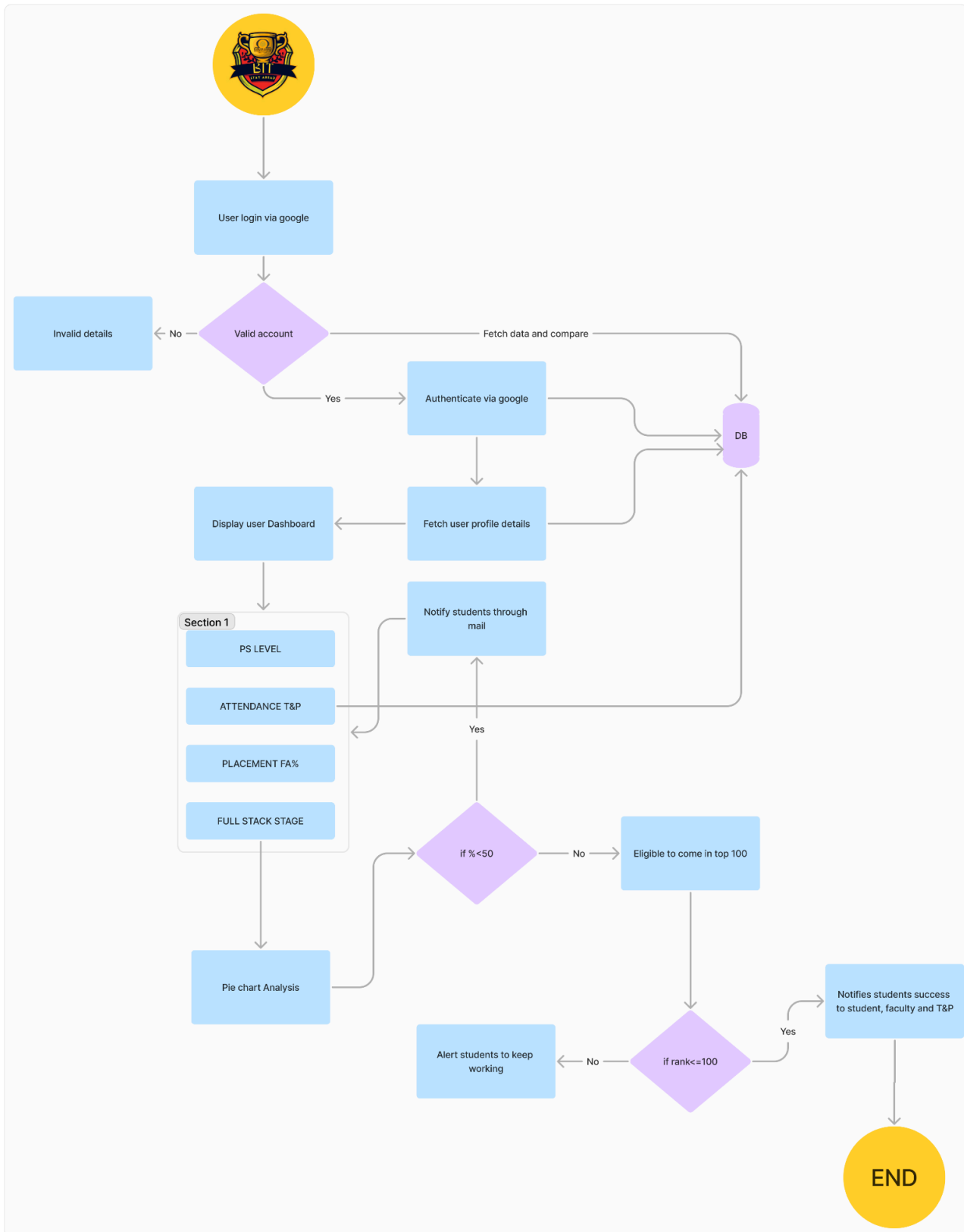
- **User Interface:**
  - Students and faculties can login with their professional mail ID.
  - Admins will have access to view the student dashboard and provide additional features for faculties to edit, add, monitor students progress and export leadership data for further analysis.
- **Ranking Criteria:**
  - Based on the levels cleared in personalized skill and the attempts taken to clear it.
  - Depending on the reward points earned, attendance, weekly progress, CGPA and consistency on examly portal.
- **Data Display:**
  - Dashboard which displays the students rank in bold font.
  - Levels ongoing/completed in PS, stage in full stack
  - Attendance in Training & Placement sessions, FA% in placement
  - Overall top 100 rank students
  - Reward points
- **Admin Dashboard:**
  - Provides quick access to aggregate data on student performance, attendance, and placement readiness percentages.
  - Key metrics are displayed in a visually engaging format, utilizing graphs and tables that allow for quick overview and deeper analysis.
- **Student Dashboard:**
  - Personalized view of their rank, academic and developmental progress.
  - This personalized data presentation supports students in setting goals, self-assessment, and enhancing their academic and placement preparation.
- **Filtering & Sorting:**
  - Availability of sorting option depending on particular subject like grade, task management on leaderboard data.

## 4. Non-Functional Requirements

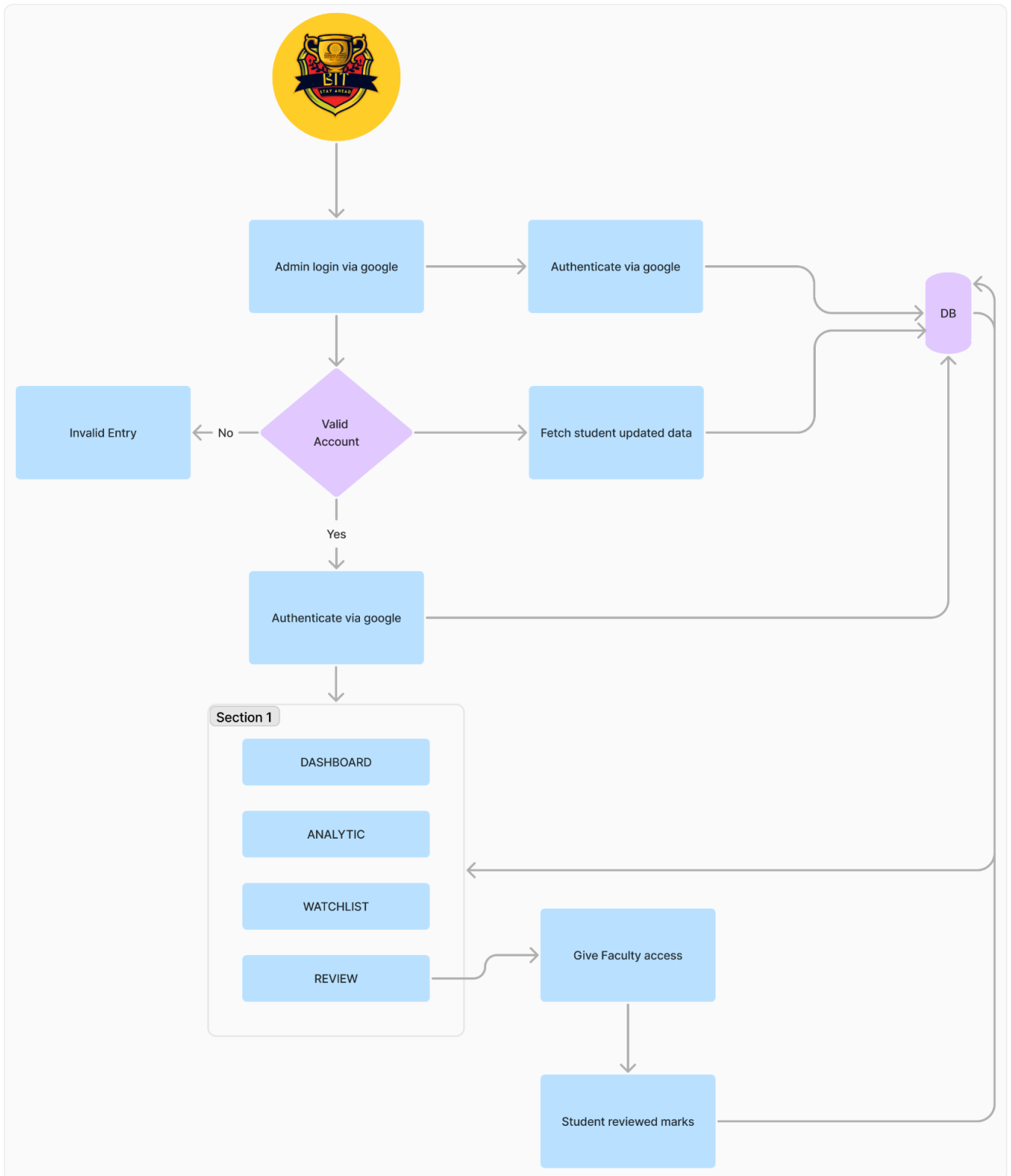
- **Performance:** The response time of the application should be able to support 10,000 users simultaneously and load any page within 2 seconds under normal load conditions, ensuring a swift user experience.
- **Usability:** Intuitive interface and easy to navigate for all user groups, including those with limited technical skills.
- **Reliability:** The system should be available 99.9% of the time, with downtime limited to scheduled maintenance periods outside of peak usage hours, and should have regular backups to avoid losing data.
- **Scalability:** The system should be able to handle an increase in user load and data volume without requiring a complete redesign.
- **Security:** Data transmitted and stored in a database should be encrypted using industry-standard encryption techniques. Strong password policies and, optionally, multi-factor authentication should be implemented to secure user accounts.
- **Portability:** The web application should be browser compatible across the latest versions of major browsers like Chrome, Firefox, Safari, and Edge, and be responsive and adaptable to various screen sizes, including tablets and smartphones.

## 5. FLOWCHART

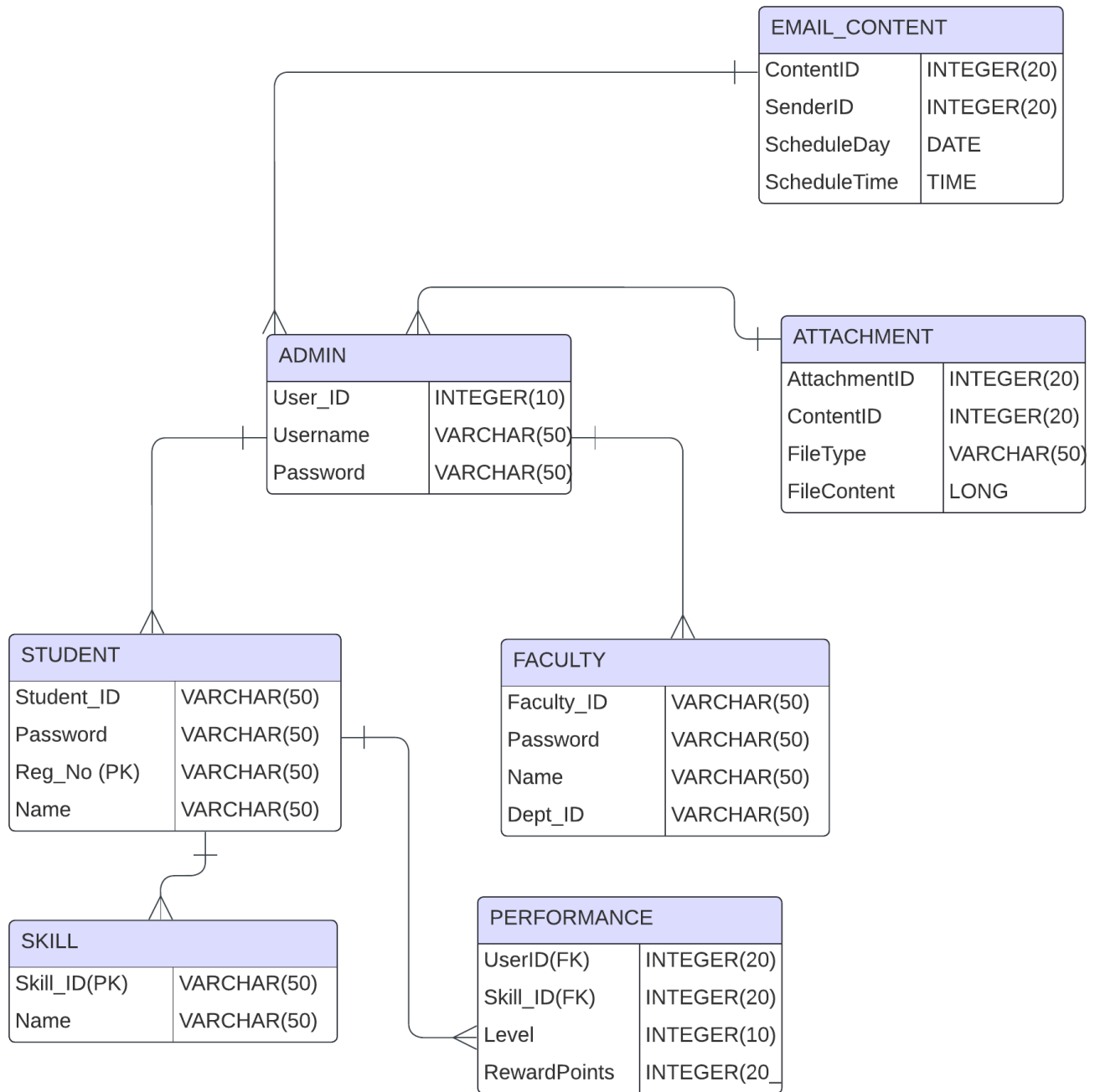
User Interface:



## Admin-Interface:



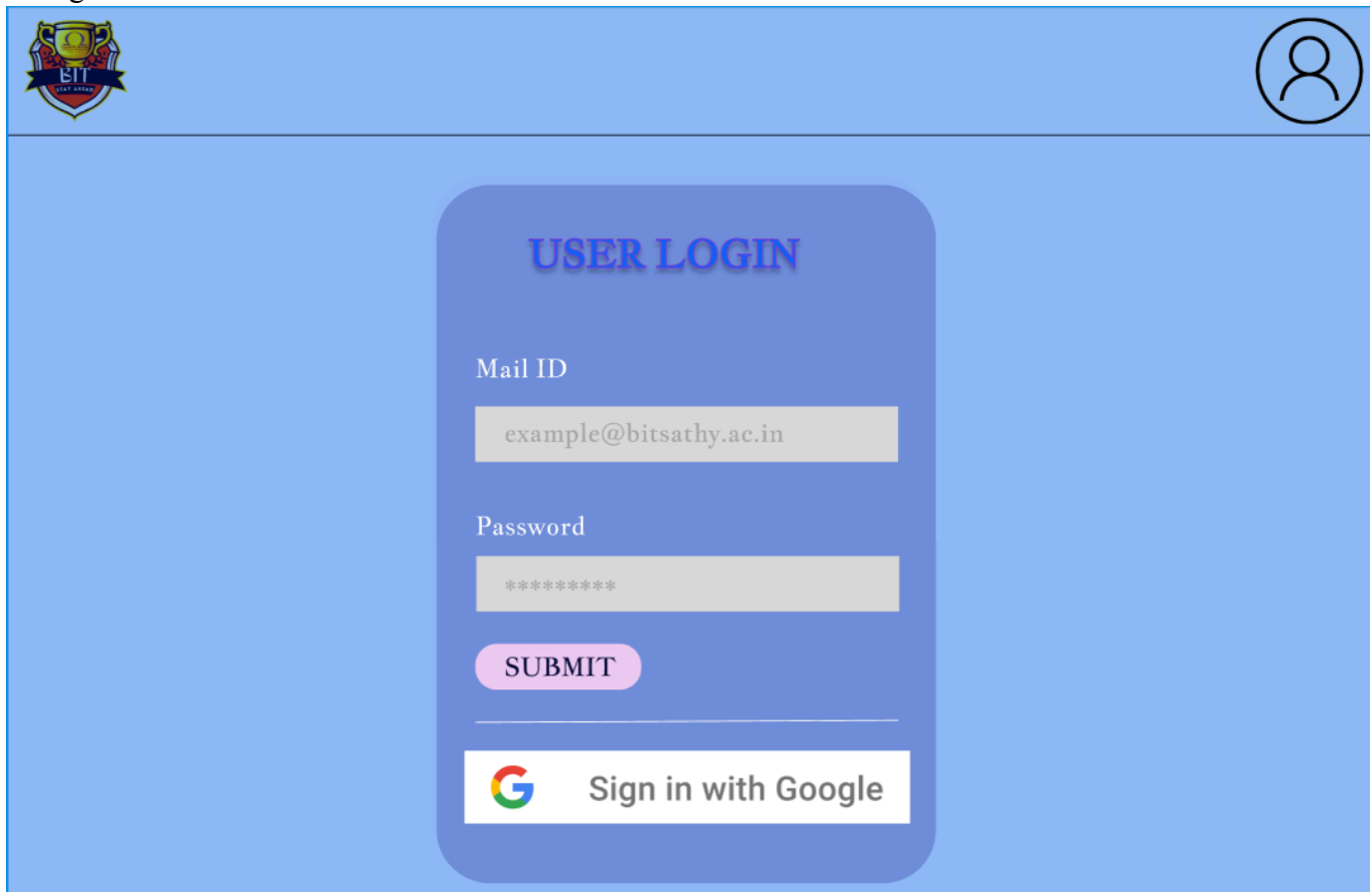
## ER-Diagram:





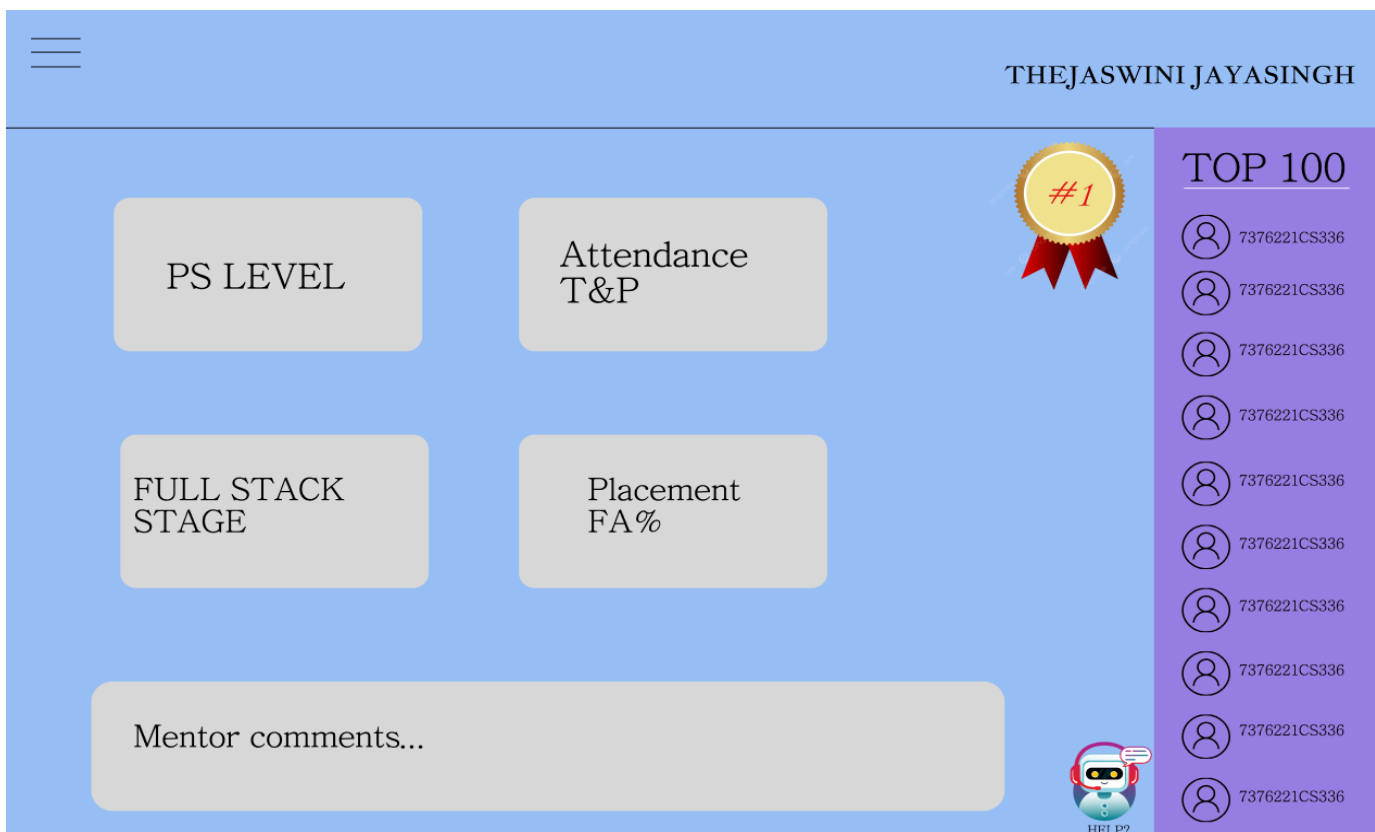
## 6. PROTOTYPE

### 1. Login form





The login form is displayed on a light blue background. In the top left corner is the EIT logo, and in the top right corner is a user profile icon. The form itself is a dark blue rounded rectangle with the title "USER LOGIN" in blue. It contains two input fields: "Mail ID" with the placeholder "example@bitsathy.ac.in" and "Password" with masked characters "\*\*\*\*\*". Below these is a pink "SUBMIT" button. At the bottom is a white button with the Google logo and the text "Sign in with Google".


### 2. Student Dashboard






The student dashboard has a light blue header with a hamburger menu icon on the left and the username "THEJASWINI JAYASINGH" on the right. The main content area is divided into four grey boxes: "PS LEVEL", "Attendance T&P", "FULL STACK STAGE", and "Placement FA%". At the bottom is a wide grey box labeled "Mentor comments...". On the right side, there is a purple sidebar titled "TOP 100" containing ten user icons and IDs (all "7376221CS336"). Above this sidebar is a gold "#1" medal icon. At the bottom right of the dashboard is a "HELP?" icon featuring a robot head.

### 3. Student Account







Username  
user@bitsathy.ac.in




#### User-details

Reg no	: 7376221CSXXX
Department	: CSE
CGPA	: 9.89
Dept-Rank	: 1
Overall-Rank	: 1

 Profile >



 Settings >


 Logout >


#### Contact


Phone	: 12345678901
Parent Phone	: 11224567891


### 4. Admin Dashboard





 Dashboard


 Analytics


 History

 Watchlist

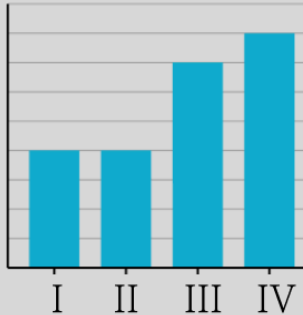
 Document

 Help

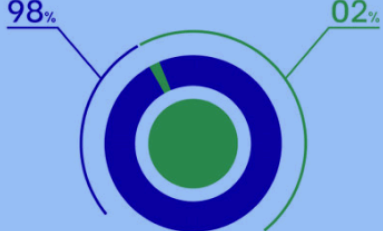
 Settings

 Logout

## DASHBOARD









Category	Value
I	10
II	10
III	25
IV	30





98% 02%

#### Faculty Access

Full Stack Reviewer	  
Project Reviewer	  

## 5. Admin Watchlist

Dashboard  
Analytics  
History  
**Watchlist**  
Document  
Help  
  
Settings  
Logout

# WATCHLIST

UPDATES

TOP 100

DEFAULTERS

PROJECT PROGRESS

**STUDENT QUERIES:**



NEW

Person1  
 Person2

DONE

Person1  
 Person2  
 Person3

## 6. Admin Analytics

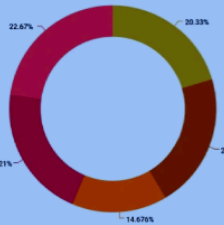
Dashboard  
**Analytics**  
History  
Watchlist  
Document  
Help  
  
Settings  
Logout

# ANALYTICS

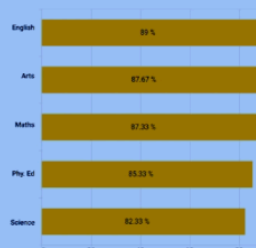
Select Year  
All

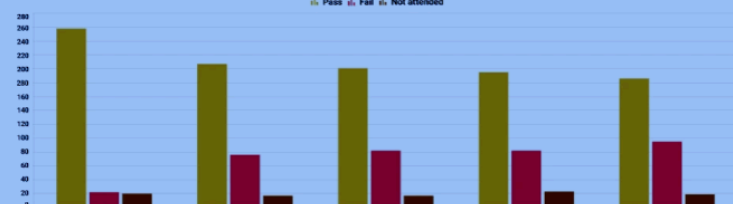
Select Grade  
All

Students  
300

**Students by Grade and Gender**  
Click down to show the number of students by gender.


- Grade 1
- Grade 2
- Grade 3
- Grade 4
- Grade 5

**Student Participation Rate by Branch**


**Examination Results by Branch**


**Avg. Subject Score**

- Arts: 84.37
- English: 84.05
- Maths: 81.86
- Phys. Ed: 84.76
- Science: 79.36




## 7. Faculty Account





**Facultyname**  
faculty@bitsathy.ac.in

-  Profile >
-  Settings >
-  Logout >

### Faculty-details

Reg no	: 2021CSXXX
Department	: CSE
Advanced degree	: Phd
Role	: HOD
Special Lab	: Data Science

### Contact

Phone	: 12345678901
Mentor Phone	: 11224567891