Student Name: KANISKAR C.A

Project ID: 1
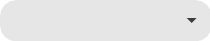
Project title: PS ASSESMENT PORTAL

Technical Components

Component	Tech Stack
Backend	Express
Frontend	Angular
Database	MongoDB
API	RESTful services

Implementation Timeline

Phase	Deadline	Status	Notes
Stage 1	03/06/2024	Approved	Planning and Requirement gathering
Stage 2	26/04/2024	Under review	Design and Prototyping
Stage 3		Under review	DB Designing
Stage 4		In progress	Backend Implementation
Stage 5		Not started	Testing & Implementation

PROBLEM STATEMENT:

The decentralized nature of assessment platforms within educational institutions leads to several challenges, including:

● Inconsistent assessment formats: Different departments and instructors create assessments independently, leading to a lack of standardization in question types and formats (MCQ, short answer, matching), which can confuse students and impact their performance.
● Technical issues: Various assessment platforms may have compatibility issues with different devices and browsers, resulting in technical difficulties for students during exams.
● Disparate data collection: Important data on student performance and learning outcomes are scattered across multiple platforms, making it difficult to compile and analyze results effectively.
● Security concerns: Multiple assessment systems increase the risk of security breaches, including unauthorized access to exam materials and student data.
● Administrative burden: Managing and coordinating different assessment platforms, ensuring uniformity, addressing technical problems, and maintaining security impose a significant administrative burden on faculty and IT staff.

PROJECT-FLOW:

Purpose:

To develop a centralized assessment platform that efficiently manages various types of assessments (MCQ, short answer, match type) and includes a built-in compiler for coding assessments, resolving existing issues of inconsistent formats and fragmented data collection.

Scope:

This system includes user authentication, assessment creation and management tools, real-time grading, and a dashboard for viewing and analyzing assessment results. It integrates with existing learning management systems (LMS) to ensure seamless operation and data consistency.

Business Context:

The centralized assessment platform aims to standardize assessment formats and streamline data collection and analysis across BIT, thus enhancing educational efficiency and security. Primary stakeholders include students, faculty, administrative staff, and the IT department.

Consideration:

● All users possess active Google accounts for authentication.
● Users have regular access to internet-enabled devices.

Dependencies:

● Integration with Google OAuth for user authentication.
● Consistent performance and availability of the existing LMS and email servers.

User Personas:

● Student:Needs a straightforward way to take assessments and receive feedback.

● Faculty: Requires tools to create, manage, and grade assessments efficiently.

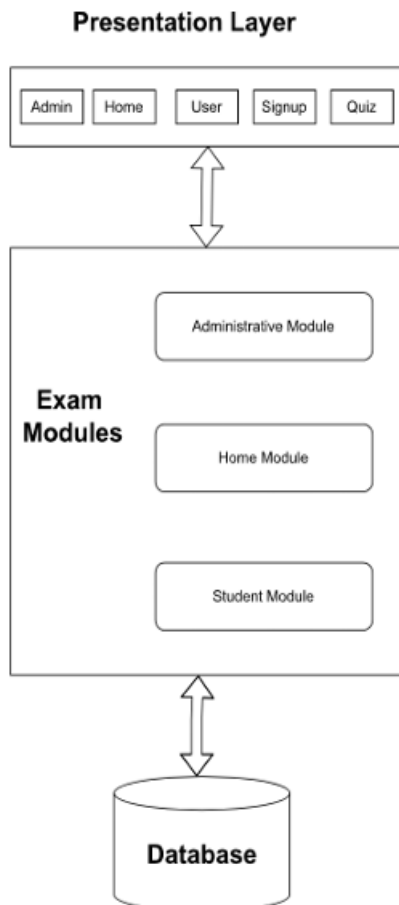● Admin Staff: Manages system operations, resolves issues, and oversees data security.

User Stories:

● As a student, I want to easily access and complete my assessments in various formats (MCQ, short answer, matching) and receive prompt feedback to understand my performance.

● As a faculty member, I need to create and distribute assessments efficiently and ensure they are graded accurately and fairly.
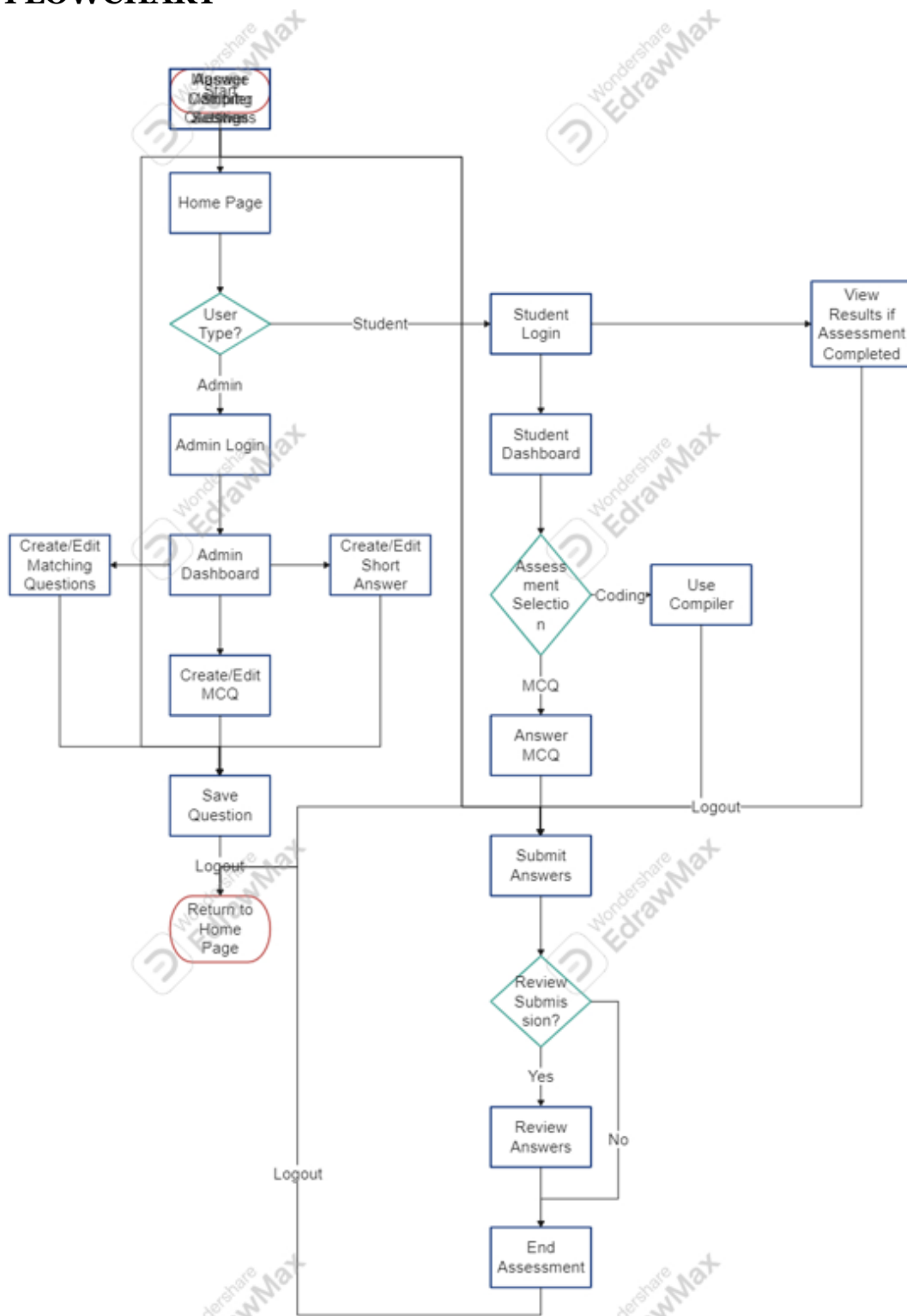
Functional Requirements:

● User Authentication: Secure login using Google OAuth.

● Assessment Creation: Tools for creating assessments with MCQ, short answer, and matching question types.

● Integrated Compiler: Built-in compiler for coding assessments.

● Real-Time Grading: Automated grading for objective questions and a streamlined interface for grading subjective questions.

● Dynamic Dashboard: Real-time viewing and analysis of assessment results.

● Standardized Data Collection: Consistent format for data to facilitate easier analysis and reporting.

● Security Measures: Robust security protocols to protect assessment integrity and user data.
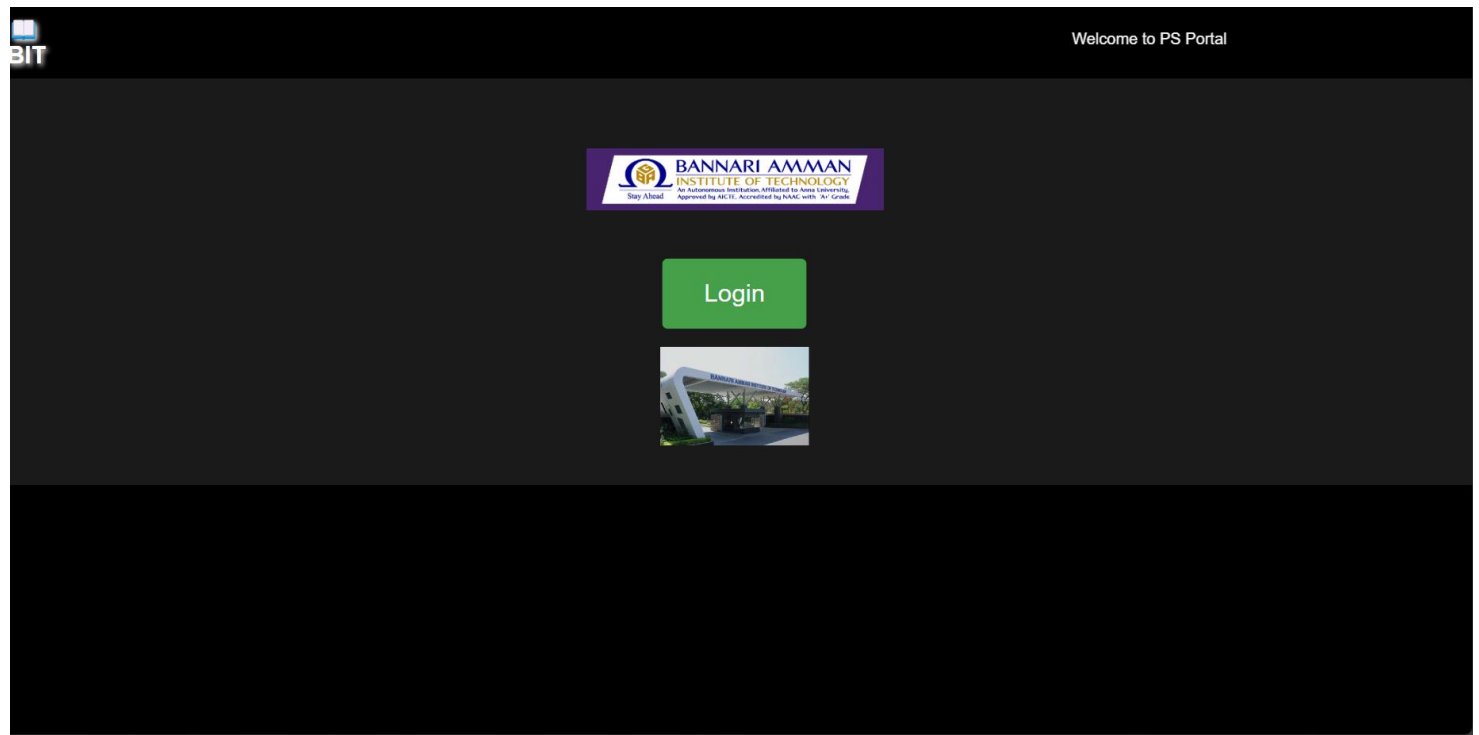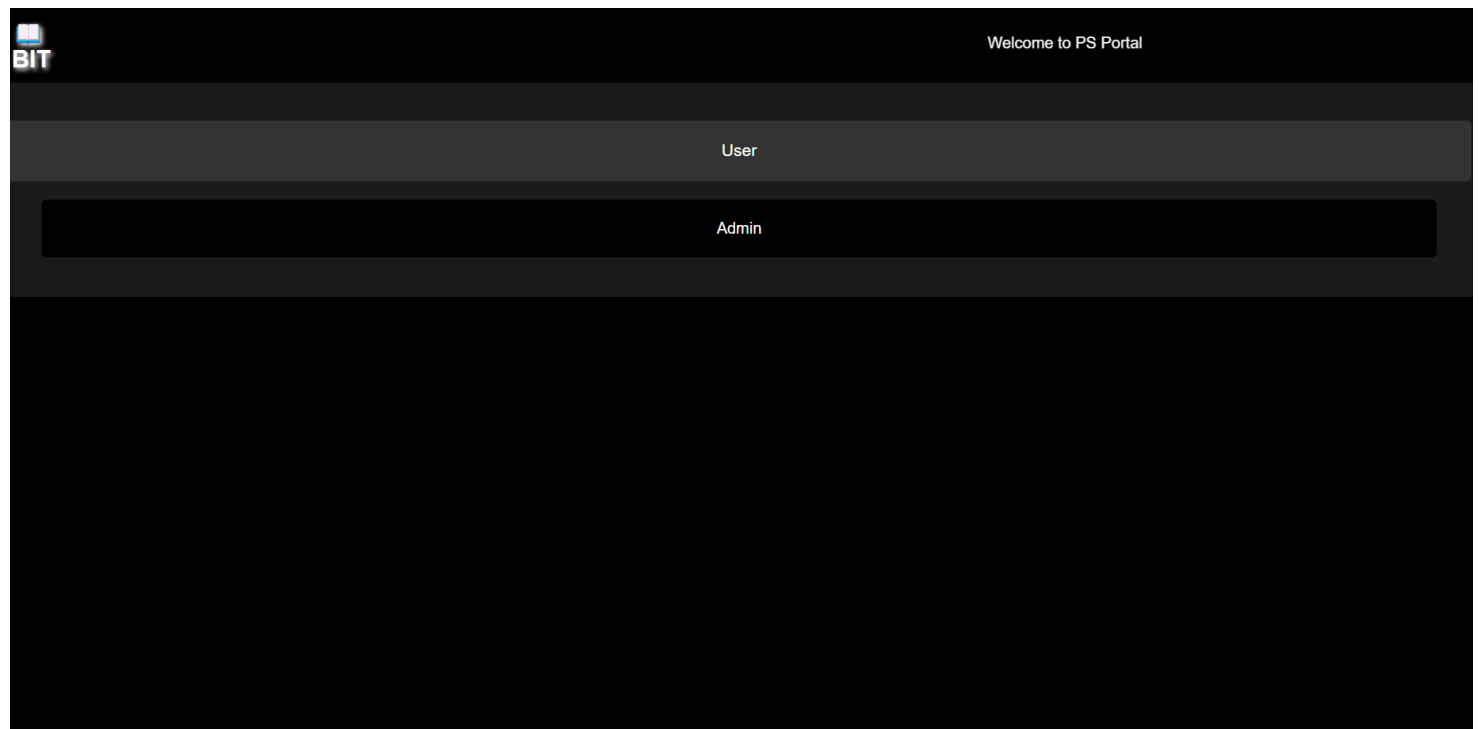
DATABASE ARCHITECTURE

FLOWCHART

Start / Answer Matching / Coding / MCQ Questions Settings

- Home Page
- User Type? → Student → Student Login → View Results if Assessment Completed
- Admin → Admin Login → Admin Dashboard
  - Create/Edit Matching Questions
  - Create/Edit Short Answer
  - Create/Edit MCQ
  - Save Question → Logout → Return to Home Page
- Student Login → Student Dashboard → Assessment Selection
  - Coding → Use Compiler → Logout
  - MCQ → Answer MCQ → Submit Answers → Review Submission?
    - Yes → Review Answers → End Assessment
    - No → End Assessment → Logout

FRONTEND

1.FRONT LOGIN PAGE

2.USER/ADMIN LOGIN

3.
USER END

BIT

☰ Dashboard

📊 Courses Registered

▶ Ongoing Courses

🔓 Logout

Student Name: John Doe

Marks: 85

BIT

☰ Dashboard

📊 Courses Registered

▶ Ongoing Courses

🔓 Logout

📄 MCQ Test

✏️ One Mark Questions

💻 Coding Assessment

Student Name: John Doe

Marks: 85

BIT

- ☰ Dashboard
- 📚 Courses Registered
- ▶ Ongoing Courses
- 🔓 Logout

📄 MCQ Test

✏️ One Mark Questions

💻 Coding Assessment

One Mark Questions

Book a Slot

Student Name: John Doe

Marks: 85

Assessment Booked

Attend

Student Name: John Doe

Marks: 85

📖 BIT

☰ Dashboard
📗 Courses Registered
▶ Ongoing Courses
🔓 Logout

📋 MCQ Test

Instructions

Please read the following instructions carefully before proceeding:

- Ensure you have a stable internet connection.
- Read each question carefully.
- Manage your time effectively.

☑ I have read and understood the instructions

[Proceed] [Cancel]

Assessment

[Attend]

Student Name: John Doe

Marks: 85

📖 BIT

Welcome to PS Portal

☰ Dashboard
📗 Courses Registered
▶ Ongoing Courses
🔓 Logout

📋 MCQ Test

✏️ One Mark Questions

💻 Coding Assessment

Instructions Acknowledged

[Start Test]

Student Name: John Doe

Marks: 85

BIT

- ☰ Dashboard
- Courses Registered
- ▶ Ongoing Courses
- 🔓 Logout

📋 MCQ Test

✏️ One Mark Questions

💻 Coding Assessment

Student Name: John Doe

Marks: 85

One Mark Questions

Question 1
good

Question 2
good

Submit

BIT

- ☰ Dashboard
- Courses Registered
- ▶ Ongoing Courses
- 🔓 Logout

📋 MCQ Test
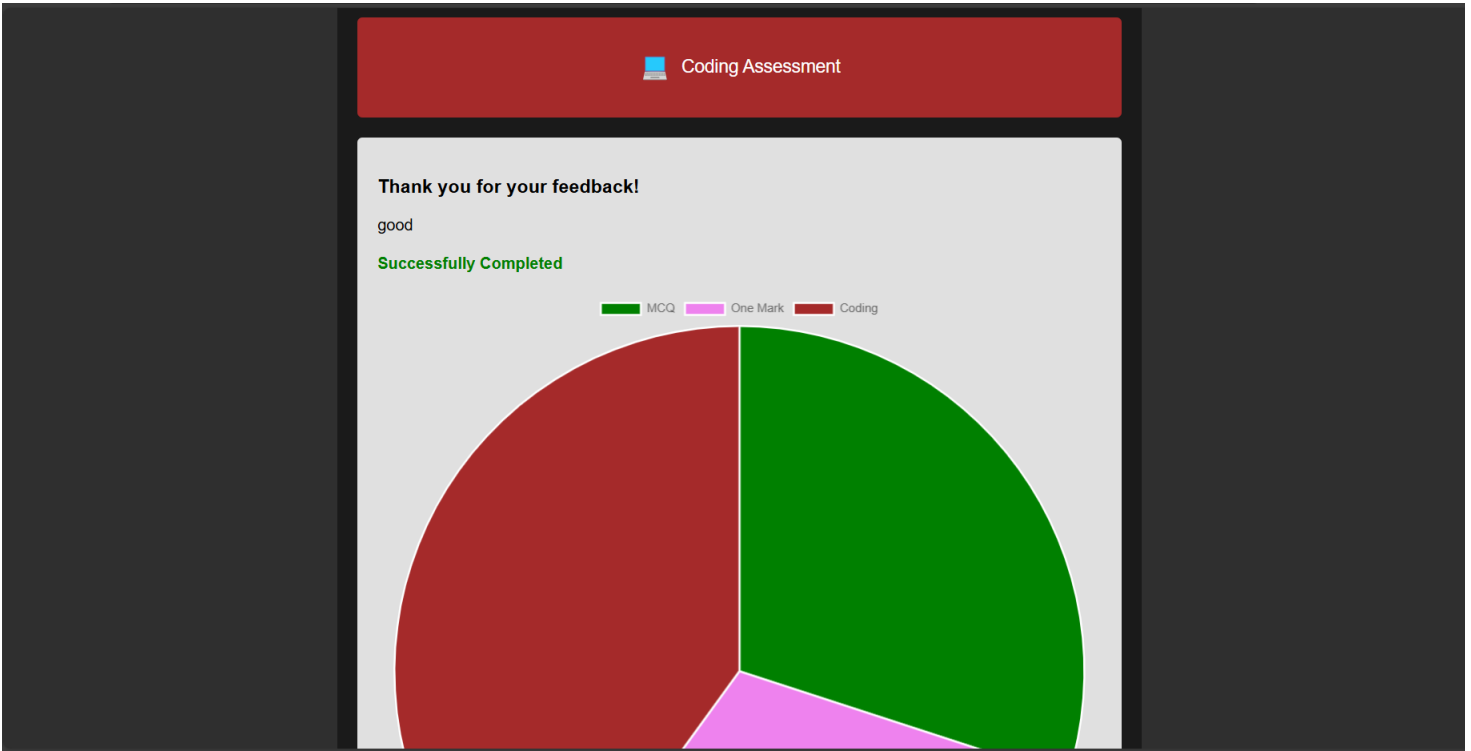
✏️ One Mark Questions

💻 Coding Assessment

Student Name: John Doe

Marks: 85

Please provide your feedback

good

Submit Feedback

Coding Assessment

Thank you for your feedback!

good

Successfully Completed

ADMIN END

BIT

Welcome to PS Portal

☰ Dashboard

📚 Courses Registered

▶ Ongoing Courses

🔓 Logout

➕ Add Questions

📊 Evaluate Grades

Student Name: John Doe

Marks: 85