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

Student Name: GOBIKA P

Seat No: 99

Project ID:19

Project Title: Transport(Transportation Portal)

Stack: MEAN

Software Requirement Specification for TAC Portal

Technical Components

Components	Tech Stack
Frontend	Angular.js
Backend	Express.js and Node.js
Database	MongoDb

Implementation Timeline

Phase	Deadline	Status	Notes
Stage 1	02/05/2024	Under review ▾	Planning and requirement gathering
Stage 2		In progress ▾	Design and prototyping
Stage 3		Not started ▾	DB designing
Stage 4		Not started ▾	Backend Implementation
Stage 5		Not started ▾	Testing and Implementation
Stage 6		Not started ▾	Deployment

1. Introduction

1.1. Purpose:

- The purpose of this document is to provide an overview of the project Transportation portal for the day scholar students.

- This will explain how the portal works based on the requirements gathered from the client.

1.2. Scope of the Project:

- This transportation portal will facilitate the students to register their seats at the beginning of the semester and attendance will also be marked in the portal.

- From an administrative perspective, this system will provide a comprehensive analytical dashboard for attendance, bus, and driver details and also manage the reservation process.

- Administrators can edit the details which include user access, in-charge access, driver details, and bus routes.

- Feedback from the users is also included in the portal.

2. System Overview:

2.1. User:

1. Students:

- They have access to register for their seats and any feedback and have the view access to see information like attendance, allocated seat details, and bus route details.

- If there is any change in the route, it will be intimated through SMS/Email.

2. In-charges:

- In-charges have access to update attendance and view the attendance, bus, and driver details, and also the route.

3. Admins:

- Only admins have access to view and edit all the details on the website which includes the user, in-charge, and bus and driver details and routes of the bus, and combine the buses based on the count.

- SMS/Email is at the beginning of the semester which intimates that the registration for the seats has started.

- After successful registration, an SMS/Email will be sent for confirmation.

- In case, the bus route is changed or the bus is combined, it will be intimated through SMS/Email.

2.2. Features:

1. Login or Sign up:

- The user wants to select what type of access they want to get. Students can log in with their existing account or sign up for a new account.

2. Registration form:

- This is the form where the students can register for their bus seat based on the bus no and the route.

- The registration form includes the student's name, roll number, department, current semester, bus number, route, Email, and phone number.

- The number of vacancies on the bus is also displayed on the registration page. When the vacancies are filled the student wants to contact the manager for further details.

3. Attendance details:

- This page carries the attendance details of the student including the time, date, bus number, seat number, and status (Present or Absent).

4. Bus route and driver details:

- Students can view the bus route and the driver details briefly on the page which contains the phone number of the drivers.

5. In-charge Access:

- In-charge can view the attendance and bus details and also have access to update the attendance of the student.

6. Admin Access:

- Admin can view all the details updated by the student and the in-charge and can have access to update all the details.
- Admin allocates the seats for the registered students and the seating is made from front to back for girls and back to front for boys.
- The seat number is provided along with the seat allocation.

3.1. Functional Requirements:

○ User Management:

- ✓ Students can sign up or log in.
- ✓ They can register their seats through the website. Admins have access to edit the information and have control over the dashboard.

○ Seat Registration:

- ✓ Students can register their details for the allocation of seats. Allocation is made by the admins who have the access to do.

- ✓ After registration it will be intimated to the students by Email/SMS.

- ✓ Registration form contains:

  - Name of the student
  - Roll Number
  - Department
  - Semester
  - Email
  - Mobile number
  - Bus Number
  - Route
  - No of vacancies

○ Attendance Details:

- ✓ Students can view their attendance on the website.

- ✓ In-charge will update their attendance in both morning and evening sessions. Admins can view attendance and edit.

○ Feedback:

- ✓ If there are any queries, both students and in-charges can give their feedback on the feedback page which will be useful for correcting the mistake by the admins.

○ Bus and route details:

- ✓ Students can view the bus details along with the routes.

- ✓ In-charges and Admins can have access to edit the details of the bus.

- ✓ In case of a minimum number of students, the admin can combine the buses.

- ✓ If the route is changed or the buses are combined, it will intimated to the students through Email/SMS.

- **Driver details:**

  - ✓ Students can view driver details in the dashboard.

  - ✓ In-charge an admin can have access to edit the details.

- **Seat allocation:**
  - ✓ Seat allocation is made only by the admins.

  - ✓ To avoid conflicts, seat allocation for boys is made from the back of the bus to the front, and for girls, allocation is made from front to back with seat numbers.

  - ✓ After the allocation of the seats, the seat number is intimated to the student through Email/SMS.

3.2 Non-Functional Requirements:

- **Performance:** The system must respond to user input in less than 2 seconds and be able to accommodate at least 100 concurrent users without noticeably degrading performance to ensure effective usability.

- **Security:** User data must be protected both during transmission and storage, and only approved admin users should be able to access important services through the use of secure authentication methods.

- **Usability:** If input errors or system failures occurs, users should be directed by clear and succinct error notifications on the user interface, which should be user-friendly and intuitive.

- **Reliability:** The system should be available continuously with little downtime, along with a backup and recovery strategy to reduce data loss in the event of system faults or crashes.

- **Scalability:** The system should be designed to accommodate an expanding user base and volume of data over time, in addition to being expandable to enable additional features and capabilities as needed in the future.

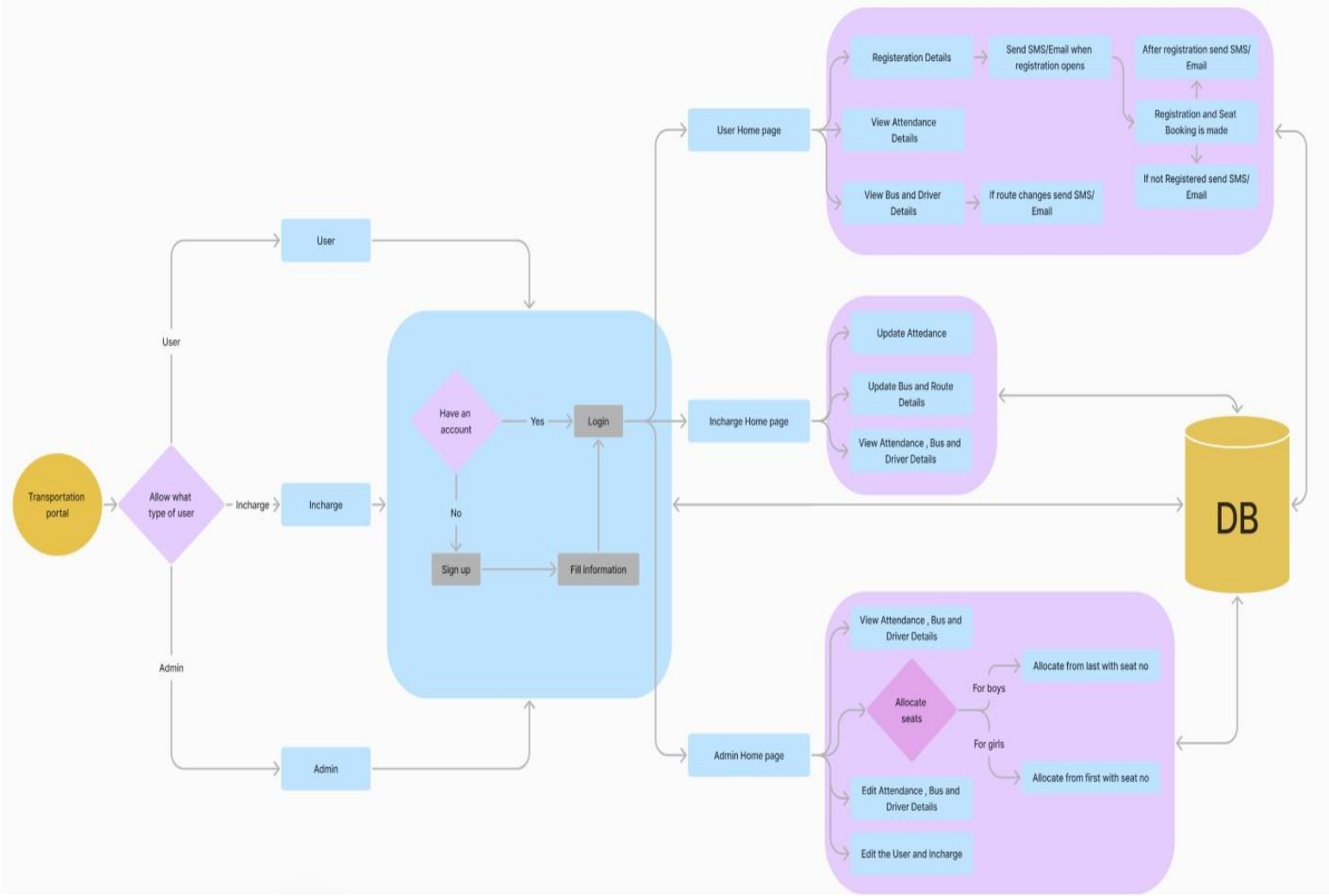
1. Student's Entity:

Name	String
Email	String
Password	Hash code
Roll no	String

2. Registration Form Entity:

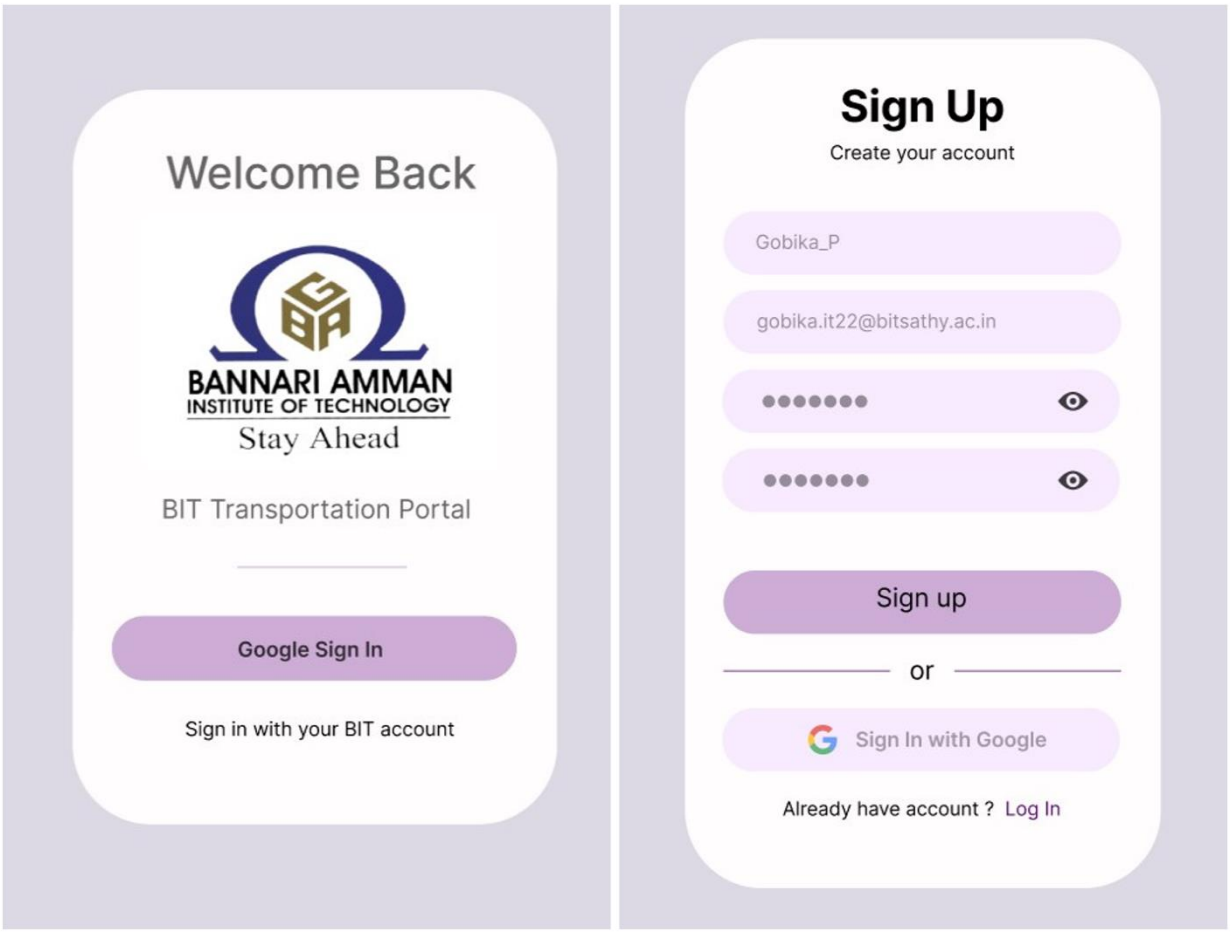
Name	String
Roll no	String
Department	String (Drop down)
Semester	Int (Drop down)
Bus no	Int (Drop down)
Route	String (Drop down)
No of vacancies	Int
Phone no	Int

Flowchart:

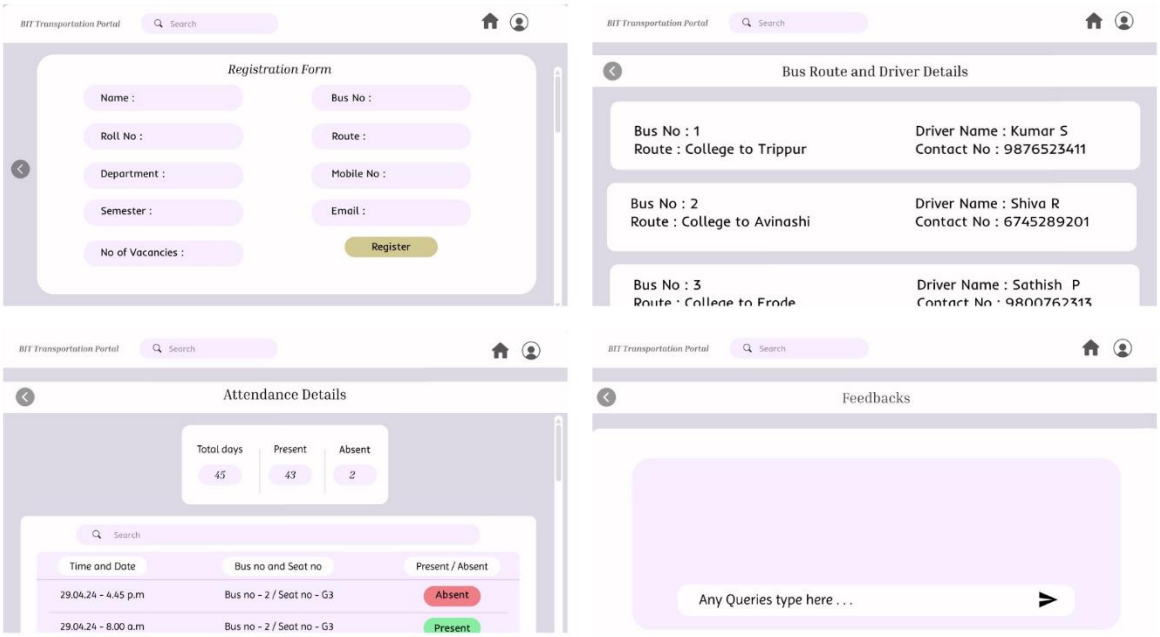

Transportation portal
Allow what type of user
User
Incharge
Admin
Have an account
Yes
No
Login
Sign up
Fill information
User Home page
Registeration Details
Send SMS/Email when registration opens
After registration send SMS/ Email
Registration and Seat Booking is made
If not Registered send SMS/ Email
View Attendance Details
View Bus and Driver Details
If route changes send SMS/ Email
Incharge Home page
Update Attedance
Update Bus and Route Details
View Attendance , Bus and Driver Details
Admin Home page
View Attendance , Bus and Driver Details
Allocate seats
For boys
For girls
Allocate from last with seat no
Allocate from first with seat no
Edit Attendance , Bus and Driver Details
Edit the User and Incharge
DB

Prototype of the Project:

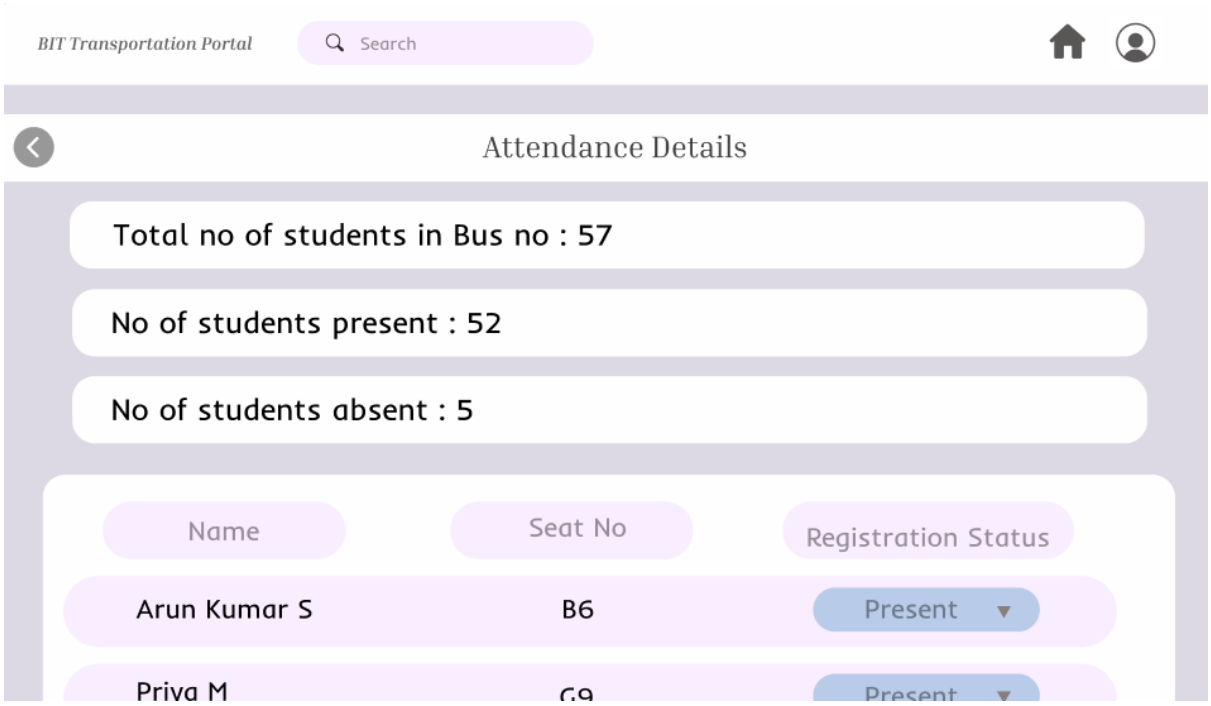
1. Login and Signup form:



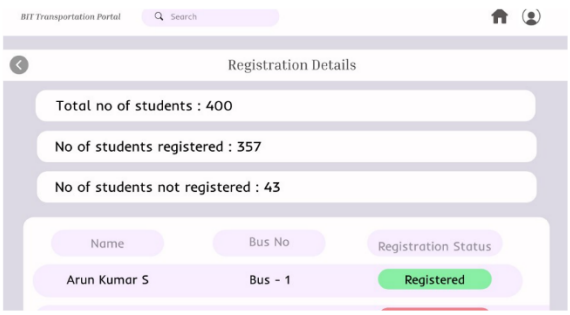
2. User pages:

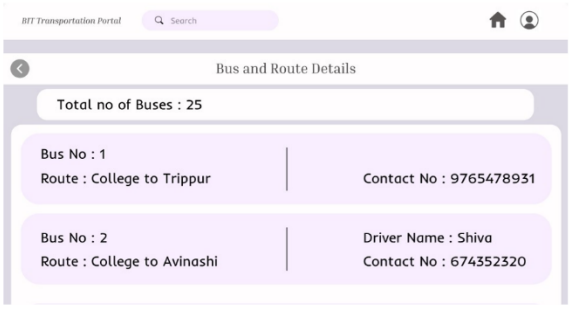


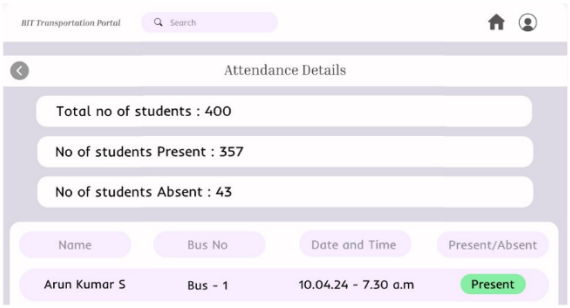
6. In-charge attendance page:

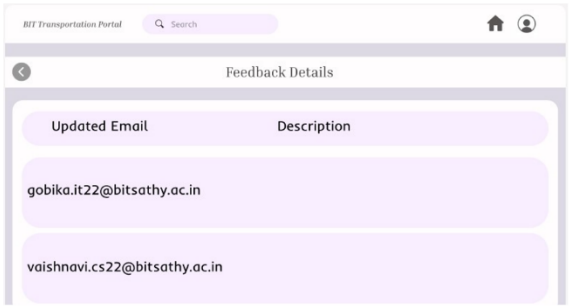


7. Admin pages:









8. Login Details: