

Identifying the tasks and activities that need to be completed in order to achieve the project's objectives.

Objective 1: Establish a Complete Service Subscription System for Students

1. Task 1: Design User Interface for Subscription

- Subtask 1: Create wireframes for online subscription portal.
- Subtask 2: Design user-friendly interfaces for cash payment at the finance department.

2. Task 2: Develop Online Payment System

- Subtask 1: Integrate a secure online payment gateway.
- Subtask 2: Implement a database system to store payment records.

3. Task 3: Implement Subscription Record Management System

- Subtask 1: Create a database schema to store subscriber information.
- Subtask 2: Develop a system for the finance clerk to input payment details and generate receipts.

4. Task 4: Incorporate Instalment(payment by parts) Payment Option

- Subtask 1: Modify the payment system to handle two instalments.
- Subtask 2: Update the receipt generation to reflect instalment details.

5. Task 5: Validate Student Eligibility

- Subtask 1: Implement a verification process to ensure only eligible students can subscribe.
- Subtask 2: Integrate student identification using school registration number.

Objective 2: Enable Real-Time Localization and Tracking of the Bus

1. Task 1: Develop Bus Information Management System

- Subtask 1: Design a database schema for storing bus details.

- Subtask 2: Implement a system for the finance department to manage insurance and fueling records.

2. Task 2: Create Driver and Conductor Information System

- Subtask 1: Design a database schema for driver and conductor details.
- Subtask 2: Develop a system to track driving license information.

3. Task 3: Implement Real-Time Bus Tracking System

- Subtask 1: Integrate GPS technology for real-time bus location tracking.
- Subtask 2: Develop a user application interface for students to track the bus.

4. Task 4: Define Bus Stops and Routes

- Subtask 1: Establish a database schema for bus stops.
- Subtask 2: Develop a system for the bus to adhere to specific routes and stops.

5. Task 5: Analyze Bus Departure Algorithm

- Subtask 1: Design an algorithm to analyze the percentage of students ready to go back home.
- Subtask 2: Implement the algorithm to provide real-time departure analysis.

6. Task 6: Set Time Constraints for Bus Stops

- Subtask 1: Define the maximum time a bus can stay at a non-school bus stop.
- Subtask 2: Implement time-tracking mechanisms for bus stops.

7. Task 7: Implement Student User Application

- Subtask 1: Design a user-friendly application for students to interact with the bus tracking system.
- Subtask 2: Ensure the application allows students to indicate their readiness to board the bus.