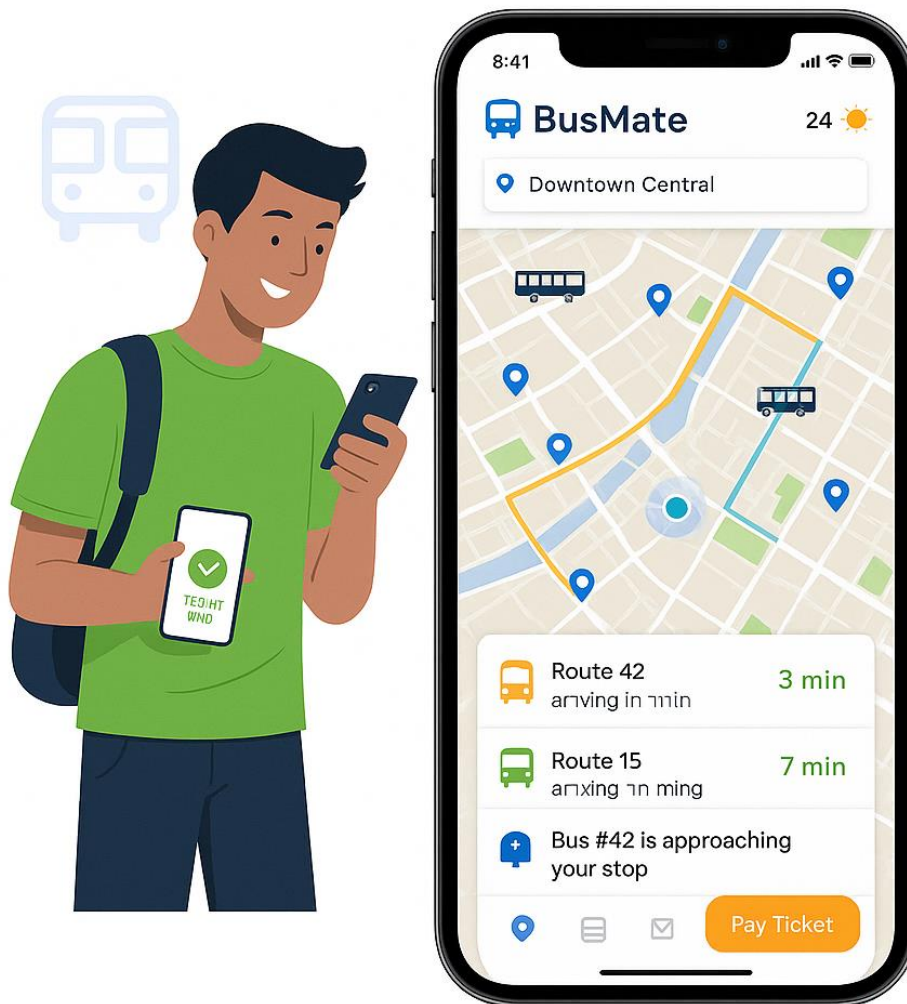# BusMate

SMART BUS TRAVEL ASSISTANT

Transforming Public Transportattion Through Innovation
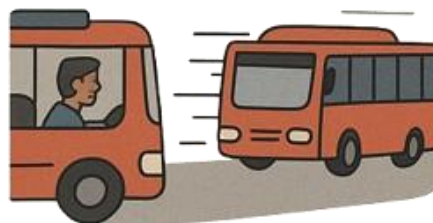

PROJECT PROPOSAL

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Problem Identification

In public bus transport, passengers face many issues like not knowing when the bus will come, buses getting too full, and not being sure where to get on or off. Sometimes people miss buses just because they didn't know it was arriving.

Bus drivers also face problems. They don't always know where passengers are waiting, which makes it hard to stop at the right place. Bus stops can get crowded, and drivers often race against each other to pick up more passengers, which is dangerous and causes accidents. These problems make public transport stressful and unsafe.
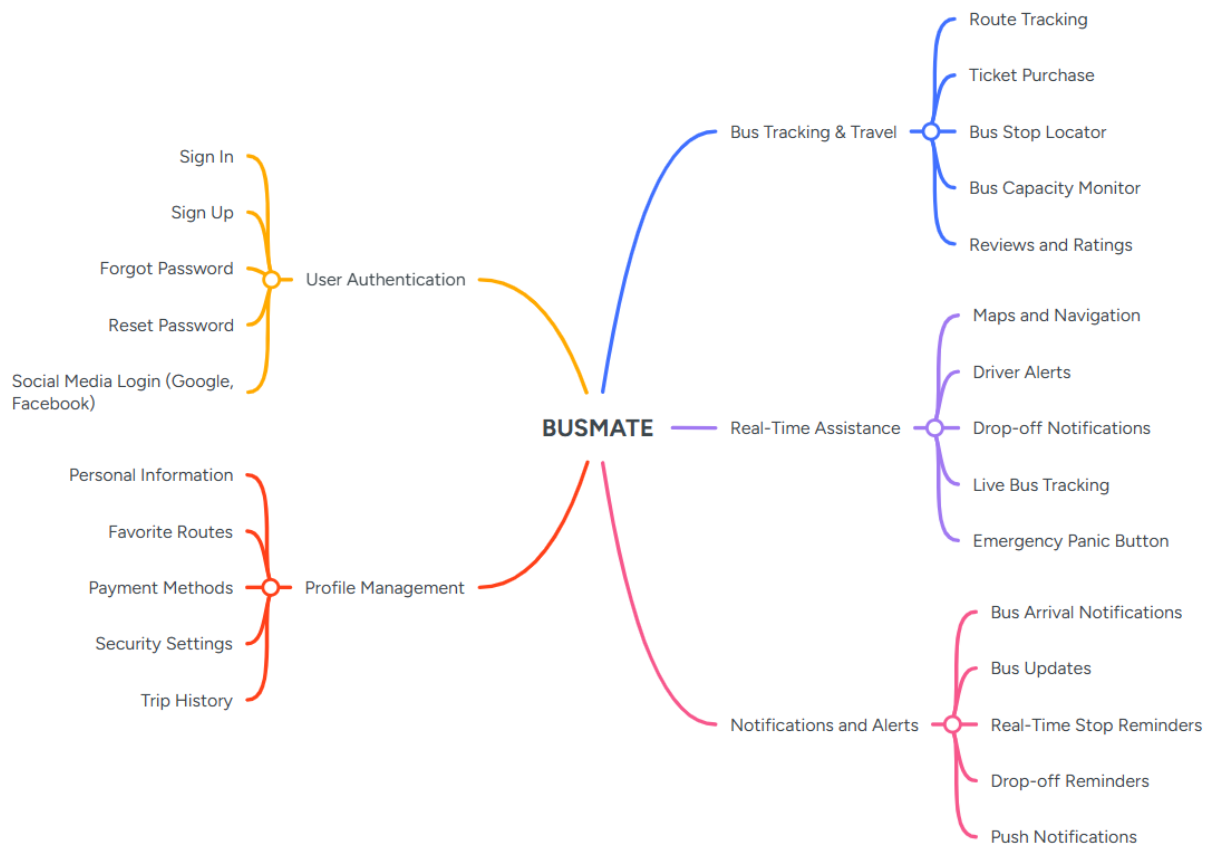
Proposed Approach and Design

BusMate is a mobile app that helps both passengers and bus drivers. It makes bus travel easier, safer, and more organized by using features like GPS tracking, online payments, and alerts.

Main Features:

- **Bus Arrival Notifications**
  Passengers get a message when a bus is close to their stop.

- **Live Location Tracking**
  Shows where buses and bus stops are on a map.

- **Bus Timetables**
  Shows updated times for each bus route.

- **Driver Contact Info**
  Lets passengers contact the driver if needed.

- **Online Ticket Payment**
  Passengers can buy tickets online and show a digital receipt to the driver.

- **Advance Ticket Payment with Driver Alert**
  Passengers can pay before the bus comes. The driver gets a message so they know to stop at that bus hold.

- **Live Passenger Count**
  Passengers can see how full the bus is before getting on. This helps avoid overcrowding.

- **Drop-Off Alert Button**
  If a passenger forgot to set a drop-off point, they can press a button to let the driver know when the stop is close.

- **Drop-Off Notification for Driver**
  If a passenger already set their stop, the app reminds the driver when it's near.

- **Emergency Panic Button**
  Sends the passenger's location to emergency contacts or the police in case of danger.

- **Trip History**
  Saves all trips, tickets, and payments for later use.

- **Complaints, Suggestions, Reviews & Ratings**
  Passengers can rate their bus trip using a 1 to 5-star system for punctuality, cleanliness, driver behavior, and safety. They can write reviews and submit complaints or suggestions. Complaints can be anonymous, and the admin panel helps transport authorities track recurring issues and improve service.

BUSMATE

User Authentication
- Sign In
- Sign Up
- Forgot Password
- Reset Password
- Social Media Login (Google, Facebook)

Profile Management
- Personal Information
- Favorite Routes
- Payment Methods
- Security Settings
- Trip History

Bus Tracking & Travel
- Route Tracking
- Ticket Purchase
- Bus Stop Locator
- Bus Capacity Monitor
- Reviews and Ratings

Real-Time Assistance
- Maps and Navigation
- Driver Alerts
- Drop-off Notifications
- Live Bus Tracking
- Emergency Panic Button

Notifications and Alerts
- Bus Arrival Notifications
- Bus Updates
- Real-Time Stop Reminders
- Drop-off Reminders
- Push Notifications

https://mm.tt/map/3690724172?t=WasexkxoPt

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Expected Outcomes

What We Expect to Achieve:

- Make bus travel easier and more reliable for passengers.

- Help drivers plan stops better and drive more safely.

- Reduce bus accidents caused by overcrowding or racing.

- Make sure passengers don't miss buses or their stops.

- Encourage feedback and continuous improvement of bus services.

Advantages:

- Passengers get useful info in real-time.

- Drivers can plan and stop correctly.

- Less stress and waiting at bus stops.

- Safer travel with emergency and communication features.

- Passenger feedback helps improve service quality.

Disadvantages:

- Needs a smartphone and internet connection.

- Might cost money to set up for smaller bus services.