BRAC UNIVERSITY

Inspiring Excellence_a

CSE471: System Analysis and Design
Assignment on Functional Requirements
Proposed Project Title: Commute Buddy

Group No: 10 , CSE471 Lab Section: 8, Spring 2025	
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Tech Stack:

● Language: Javascript
● Framework: Nextjs , Reactjs
● Styling: CSS
● Database: MongoDB
● Deployment: Vercel/Github

Functional requirements:

Module 1: Profile & Community Management

- **Users**
    - can create an account with name, email & password and log in securely to access personalised traffic data. *[Salehin]*
    - may view & update their profile (e.g. display name, avatar, home/work locations, notification preferences). *[Salehin]*
    - In the dashboard there will be a percentage bar which will indicate profile completion. *[Salehin]*
    - can update their profile with valid documents and can apply for verification. *[Rahman]*
    - can manage a list of followed routes/areas so the app prioritises alerts and suggestions that matter most to them. *[Islam]*
    - can select their preferred roads , zones, regions as per their preference. *[Islam]*
    - Interactable Map *[Islam]*

- **Admins**
    - can edit user roles and trust levels (e.g. verified reporter, moderator) to maintain quality and access control. *[Rahman]*

- ○ will follow up the verification process to ensure user authentication. *[Rahman]*

Module 2: Route Update / Incident, Event Reporting

- **Users can:**
  - ○ Post real-time road reports (accident, congestion, event, hazard)
  - ○ With location, description, photo or video
  - ○ And can set an approximate incident reporting time limit.
  - ○ Upvote/Downvote reports.

- **Admins can:**
  - ○ Edit inaccurate details, or remove false information.

- Submitted reports are automatically grouped on a pin.

Module 3: Navigation, Alerts & Insights

- Upon searching for a destination,a live dashboard displays

  →indicated congestion

  →incident pins with location

  →recommended routes

  →Estimated Time of Arrival

- Push and in-app notifications for:

→Nearby incidents

→Cleared roads

→Major events impacting saved routes

- Search and filter tools to locate:

→Routes

→Incidents

→Community post

→**Filters include**:

   →Keyword

   →Category

   →Severity

   →Time window

- **Users** can view their

→activity history
→Reports submitted
→Confirmations made

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