

#### Functional requirements:

- Real-time location tracking: the system should provide real-time tracking of buses allowing the user to see the current location of the bus on the map.
- Route Planning: The system should provide route planning functionality, allowing users to plan their journeys by selecting a starting point and destination and receiving information about available bus routes, schedules, and estimated travel times.
- User authentication: The user should be able to log into the system or create a new registration if the user doesn't exist in the system. The system should support user authentication to ensure that only authorized individuals can access certain features, such as tracking specific buses or receiving notifications.
- Bookmarks: User Must be able to mark a bus or a route as a favorite or bookmark the bus or the route
- Bus Information: Users should be able to access information about each bus, including its route, schedule, and estimated arrival times at various stops.
- Bus Stop information: the user should be able to view information about bus stops.
- Display Map: The user should be able to view the map with information about nearby buses and highlight the route which the bus is following (if the user has entered the source and destination)
- Admin Panel: An administrative panel should be provided to manage buses, routes, schedules, user accounts, and system settings.
- Feedback Mechanism: Users should have the ability to provide feedback on the system, such as reporting issues with bus services, suggesting improvements, or requesting new features.