**BUS LOCATOR SYSTEM**

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# EXPERIMENT-10

**To draw the implementation view diagram: Component diagram**

### Components and Interactions:

1. **User Interface (UI)**
   * **Mobile App**: Allows users to view bus locations and estimated arrival times.
   * **Web Interface**: Provides a web-based platform with functionalities similar to the mobile app.
2. **Bus Tracking System**
   * **GPS Module**: Installed on each bus to provide real-time location data.
   * **Bus Communication System**: Manages communication between the GPS module and the Central Server.
3. **Server**
   * **Central Server**: Receives and processes data from buses.
   * **Database**: Stores bus routes, schedules, and real-time location data.
4. **Data Processing Components**
   * **Data Aggregator**: Collects data from the GPS modules of all buses.
   * **Location Processor**: Analyzes and processes location data to determine estimated arrival times.
   * **Data Analyzer**: Analyzes data for insights and reporting.
5. **Notification System**
   * **Push Notification Service**: Sends alerts and updates to users about bus arrivals, delays, and other relevant information.
6. **API Layer**
   * **Internal API**: Facilitates communication between internal components.
   * **External API**: Allows third-party applications to access bus location data.

### Diagram:

Below is a textual representation of the diagram. You can create a visual diagram using diagramming tools like Lucidchart, Microsoft Visio, or any other preferred tool.

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