**PUBLIC TRANSPORT OPTIMIZATION**

**PROJECT DEFINITION:**

The project seeks to integrate IoT sensors into public transport vehicles to track occupants, manage seating areas, and set arrival times.

**OBJECTIVE:**

* The objective is to provide real-time transport information to the public through public platforms by increasing the efficiency and quality of public transport services.
* These applications include target definition, IoT sensor system design, real-time traffic information platform development, and their integration using IoT technologies and Python.

**DESIGN THINKING:**

**IoT Sensor Design:**

* Plan the deployment of IoT sensors on public vehicles, including buses, trams, or trains.
* Consider using GPS sensors to track vehicle locations, passenger counters to monitor occupancy, and environmental sensors to measure factors like temperature and air quality.
* Design the sensor placement strategy to ensure data accuracy and minimal interference with vehicle operations.

**Real-Time Updates:**

* Display real-time information on vehicle locations, estimated arrival times, and departures.
* Provide notifications for delays, service disruptions, and important announcements.
* Offer filtering options to allow users to customize the information they receive.

**IoT Communication Protocols:**

* Choose appropriate communication protocols for data transmission from sensors to aggregation points and from aggregation points to the central platform.
* Common protocols include MQTT, HTTP, CoAP, or proprietary protocols.

**Conclusion**

In conclusion, the integration of IoT sensors into public transport vehicles represents a promising step toward enhancing the efficiency and quality of transportation services. By strategically deploying sensors and employing real-time updates, this project aims to provide valuable information to the public, improving their overall commuting experience. Choosing the right IoT communication protocols will be crucial for seamless data transmission and successful integration, ultimately advancing the accessibility and reliability of public transport systems.