**4.2 Functional Requirements (AS-IS)**

The functional requirements for the current public bus system in Johor Bahru outline the essential operational aspects that are currently in place. These requirements focus on the existing capabilities and processes of the system.

**Journey Planning**

* **Basic Route Information:** Passengers can access basic information about bus routes, including the start and end points, through printed schedules and static displays at bus stops.
* **Timetable Availability:** Bus schedules are available in printed form and posted at major bus terminals and some bus stops.

**Service Monitoring**

* **Manual Tracking:** Bus operators and transportation authorities manually monitor bus schedules and operations without real-time tracking capabilities.
* **Incident Management:** Any delays or incidents are reported manually through phone calls or radio communication between bus drivers and the control center.

**Drivers Notifications**

* **Limited Notifications:** Drivers are informed of changes to the schedule through notices.

**Administration**

* **Schedule Management:** Transportation authorities manually create and update bus schedules based on historical data and operator experience.
* **Route Management:** Any changes to bus routes are made manually and communicated through printed materials and static displays.

**4.3 Non-Functional Requirements (AS-IS)**

The non-functional requirements for the current public bus system focus on the performance, reliability, and usability of the existing infrastructure and operations.

**Performance**

* **Operational Efficiency:** The current system operates with significant manual intervention, which can lead to inefficiencies and delays in service management and delivery.
* **Reliability:** The system's reliance on manual processes results in inconsistent service reliability and difficulties in maintaining schedule adherence.

**Security**

* **Data Management:** There is minimal digital data management, with most information being recorded and processed manually, leading to potential data loss or inaccuracies.
* **Access Control:** Access to scheduling and operational data is controlled manually, with limited security measures in place.

**Usability**

* **User Accessibility:** Passengers rely on static schedules and limited printed information, which can be difficult to access and interpret, especially during unexpected changes or delays.
* **Administrative Usability:** Bus operators and administrative staff face challenges in managing schedules and routes manually, leading to potential errors and inefficiencies.

**Maintenance**

* **System Updates:** Any updates to schedules or routes require significant manual effort, including reprinting materials and physically updating information at bus stops.
* **Technical Support:** Limited technical support is available, primarily focused on addressing issues through manual intervention and communication.

**4.5 Summary (AS-IS)**

The current public bus system in Johor Bahru is characterized by a lack of real-time tracking capabilities, reliance on manual processes for scheduling and route management, and limited passenger information accessibility. Functional requirements are focused on providing basic route and timetable information, monitoring services manually, and managing administrative tasks without automated systems. Non-functional requirements highlight the challenges in performance, reliability, security, usability, and maintenance due to the manual nature of the current system. These limitations contribute to longer waiting times, passenger frustration, and operational inefficiencies, underscoring the need for an upgraded solution that leverages modern technology to enhance the overall efficiency and user experience of the public bus system.