**1. Introduction**

* **Purpose:** Describe the purpose of the bus ticket reservation system (e.g., to allow passengers to book bus tickets online, manage reservations, etc.).
* **Scope:** Overview of the system, including the main features like booking tickets, payment processing, ticket cancellation, etc.
* **Definitions, Acronyms, and Abbreviations:** Define any technical terms or abbreviations used in the document.

**2. Overall Description**

* **Product Perspective:** High-level description of how the system fits into the broader context (e.g., integration with payment gateways, user interface, etc.).
* **Product Features:** List the major features like search, booking, payment, ticket generation, and management.
* **User Characteristics:** Describe the users (e.g., customers, admins) and their needs and expectations.
* **Assumptions and Dependencies:** Any assumptions (e.g., internet availability) or external dependencies (e.g., third-party APIs for payment).

**3. System Features**

* **Feature 1:** Bus Ticket Search
  + **Description:** Users can search for available buses based on their departure and destination cities, date, etc.
  + **Functional Requirements:**
    - The system must allow input of departure and destination.
    - The system should display available buses with details (e.g., timings, seats, price).
    - The system should allow sorting of available buses by time, price, etc.
* **Feature 2:** Booking Tickets
  + **Description:** Users can select buses and book tickets.
  + **Functional Requirements:**
    - The system should allow users to select the number of tickets.
    - The system must verify seat availability before confirming the booking.
    - Users should be able to input passenger details.
* **Feature 3:** Payment Integration
  + **Description:** Secure payment processing through various methods.
  + **Functional Requirements:**
    - The system should integrate with a payment gateway (e.g., PayPal, credit/debit cards).
    - Confirmation emails with ticket details should be sent after payment.
* **Feature 4:** Ticket Management
  + **Description:** Users should be able to view, cancel, or modify their bookings.
  + **Functional Requirements:**
    - Users can view a list of their past bookings.
    - The system must allow cancellation or modification within a defined time frame.

**4. External Interface Requirements**

* **User Interfaces:** Describes the layout and user interaction, e.g., web or mobile interface.
* **Hardware Interfaces:** Any hardware interaction, such as printers for ticket printing.
* **Software Interfaces:** Integration with external systems like payment gateways or bus databases.
* **Communication Interfaces:** API or protocols for communication between components.

**5. System Attributes**

* **Performance Requirements:** Response time expectations, number of simultaneous users, etc.
* **Security Requirements:** Data encryption, secure payment processing, user data privacy.
* **Reliability:** System uptime, error handling, and recovery procedures.

**6. Other Requirements**

* **Regulatory and Legal Requirements:** Compliance with transportation regulations, data privacy laws (e.g., GDPR).
* **Environmental Requirements:** Server specifications, hosting requirements.