BookMyTicket
Ticket Booking System
Business Requirement Document
Ver 1.0

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1. Executive Summary

This BRD describes the requirements for the GMJ Solutions project and the **BookMyTicket** platform, which include route-based bookings, user management, and payment processing. It defines critical features, regulations, and compliance criteria to assure functionality and customer satisfaction, and serves as the foundation for design and implementation.

2. Project Description

This project aims to develop the **BookMyTicket** platform, a comprehensive online booking solution offering route-based bookings, user management, and secure payment processing. The current solution lacks features like multi-user booking, gender-based seat selection, and automatic notifications. This platform will address these gaps, enhance customer experience, and ensure compliance with industry standards for data security and regulations. The goal is to improve booking efficiency, customer satisfaction, and streamline operations.

3. Project Scope

This project will develop the **BookMyTicket** platform for online bus ticket bookings, user management, and secure payment processing. Key features will include multi-user booking, gender-based seat selection, and automatic notifications. The platform will ensure compliance with data security and regulatory standards. Third-party integrations and services beyond bus bookings will not be included in the initial phase.

3.1 In Scope

This document is solely for the first phase of the project and explains the work that will be done and what will be delivered. It includes both functional and non-functional requirements to ensure a clear understanding of the project's goals and how they will be implemented. Any features or functionalities that are not listed in this document are not included in this phase. If new requirements come up in the future, they will be considered in later phases and the document will be updated accordingly.

3.2 Out of Scope

Train, flight, or other transport bookings are not part of this phase, as the focus is only on bus ticketing. Multi-language support may be added later. A mobile app will be developed in Phase 2, and group booking features will come in Phase 3. These features are excluded now to keep development simple. Future updates will include more improvements, and this document will be amended as needed.

4. Business Drivers

4.1. Improve booking efficiency by automating journey and seat selection.

4.2. Enhance user experience with a streamlined, user-friendly interface.

4.3. Increase revenue by attracting more customers with a smooth booking process.

4.4. Ensure regulatory compliance by meeting data security and privacy standards.

4.5. Reduce operational costs by minimizing manual booking interventions.

5. Functional Requirements

5.1 Priority

VALUE	RATING	DESCRIPTION
5.1.1	Critical	Essential for system functionality; failure would result in major operational issues. Includes predefined routes, real-time seat availability, and passenger validation.
5.1.2	High	Important but not system-breaking; enhances user experience and usability. Includes gender-based seating restrictions, fare calculations, and automated notifications.
5.1.3	Medium	Useful features that improve efficiency but are not mandatory for the system to function. Includes UI enhancements, session handling, and responsive design support.
5.1.4	Low	Minor improvements that can be implemented in future phases. Includes multilingual support and additional transport modes.

5.2 Requirements Category 1 (RQC)

ID	REQUIREMENT	PRIORITY	RAISED BY
RQC-01	The system must allow users to log in using their mobile number or email along with a password.	Critical	GP
RQC-02	The system must support guest user registration, allowing users to initiate the booking process without creating an account.	Critical	GP
RQC-03	A "Forgot Password" feature must be available, allowing users to reset their password via email or SMS verification.	Critical	GP
RQC-04	The system must allow users to create and manage their profile, storing personal details.	Critical	GP

ID	REQUIREMENT	PRIORITY	RAISED BY
RQC-05	The user profile must include the following fields: name, email, phone number, address, pincode, birthdate, and gender.	Critical	GP
RQC-06	The system must validate user age during registration. Only users between 18 and 80 years old can register.	Critical	GP
RQC-07	The system must send automated SMS/email notifications for booking confirmation or cancellation.	Critical	GP
RQC-08	The system must support online bus ticket bookings for predefined routes only (10 fixed routes). Users cannot manually enter journey details.	Critical	GP
RQC-09	Users must select their boarding and dropping points via dropdown menus to ensure valid inputs.	Critical	GP
RQC-10	The system must provide a date selection calendar, allowing booking only for the next 30 days. Past dates cannot be booked but the previous 1 month remains visible for cancellations or modifications.	Critical	GP
RQC-11	Users must select a predefined time slot from a dropdown before proceeding with seat selection.	Critical	GP
RQC-12	Users must be able to select the number of seats, with a maximum booking limit of 5 seats per transaction.	Critical	GP
RQC-13	The system must provide an "Add Passenger" button, allowing users to enter passenger details (name, age, gender) for each selected seat.	Critical	GP
RQC-14	Passengers below 18 or above 80 must have a companion while booking a ticket.	Critical	GP
RQC-15	The fare must be auto-calculated based on the number of passengers and base fare per seat. No manual adjustments are allowed.	Critical	GP
RQC-16	The bus seat layout must visually indicate booked, available, currently selected, and female-reserved seats using different colors.	Critical	GP
RQC-17	Real-time seat availability updates should be implemented to prevent double booking.	Critical	GP
RQC-18	Gender-based seat restriction: Males cannot book adjacent to females unless no other seats are available.	Critical	GP
RQC-19	The system must display a Booking Summary Screen before proceeding to payment, showing journey details, passenger details (name, age, gender), seat numbers, fare breakdown, and total price.	Critical	GP

ID	REQUIREMENT	PRIORITY	RAISED BY
RQC-20	A Checkout Button must be available on the Booking Summary Screen to proceed to the payment gateway.	Critical	GP
RQC-21	If a guest user reaches the checkout screen, they must be redirected to the registration page before proceeding with payment.	Critical	GP
RQC-22	Users must be able to select a payment method from available options: UPI, Net Banking, Debit Card, or Credit Card.	Critical	GP
RQC-23	The system must process payments in real-time and update the booking status accordingly.	Critical	GP
RQC-24	After a successful booking and payment, users must be able to print their ticket from the system.	Critical	GP
RQC-25	The printed ticket must include passenger details (name, age, gender), journey details (boarding & dropping points, date, time), seat numbers, fare.	Critical	GP
RQC-26	Users must be able to access and print their ticket anytime from the User Profile.	Critical	GP
RQC-27	Users should be logged out automatically after a session timeout due to inactivity.	Critical	GP
RQC-28	The system should allow error handling messages for invalid inputs, seat conflicts, and failed transactions, ensuring a seamless user experience.	Critical	GP

6. Non-Functional Requirements

ID	REQUIREMENT
NFR-01	The system must be available 24/7.
NFR-02	System End of Day (EOD) will be performed at 12:00 AM.
NFR-03	The system will be back online by 12:05 AM after maintenance.
NFR-04	All screens should be responsive and mobile-friendly.
NFR-05	Screens should load within 5 seconds.
NFR-06	Lock screen status should retain user data when reactivated.
NFR-07	Navigation between screens should not exceed 5 seconds.
NFR-08	Transactions should be processed efficiently without delays.
NFR-09	The entire booking transaction should complete within 1 minute.
NFR-10	The system should handle 1,000 concurrent users at peak times.

ID	REQUIREMENT
NFR-11	The system must have a disaster recovery mechanism to ensure minimal downtime in case of failures.
NFR-12	Daily backups should be performed at 11:45 PM to prevent data loss.
NFR-13	Users should have the option to abort and reset transactions if needed.
NFR-14	The system must comply with data security and regulatory standards.

7. Constraints and Assumptions

UNIQUE ID	REQUIREMENT
C1	Only 10 predefined routes can be selected for booking.
C2	Users cannot manually enter boarding or dropping points (Dropdown selection only).
C3	The system does not support bookings beyond 30 days
C4	The booking process must be completed within a single session to ensure seat availability.
A1	Users will have internet access while booking.
A2	The platform will use secure payment gateways for transactions.
A3	The server infrastructure will support peak traffic loads of up to 1,000 CONCURRENT users.

8. Approvals

NA