

PRD — Travel (Bus) Booking MVP

1) Summary & Goals

Build a simple bus-ticket booking MVP: users search for a route, pick a seat, pay, and get a ticket.

Success (MVP): Users can (a) find a bus and lock a seat, (b) pay via UPI or Card and receive a ticket or a clear failure message.

Out of Scope: Cancellations/refunds, coupons/loyalty, multi-currency, round trips, complex seat layouts, operator policies.

2) Flows (with embedded constraints)

Flow A — Search & Select Seat

Goal: User finds a one-way bus, selects an available seat, and provides contact details.

Steps

A1. Enter **Origin**, **Destination**, **Travel Date**.

- **Constraints:**
 - **Origin** ≠ **Destination**.
 - **TravelDate** must be **today +1 to +30 days** (no past/today).
 - Allowed values (see Parameter Dictionary).

A2. See list with **Departure Time**, **Bus Type** (Seater/Sleeper), **Seats Left**.

- **Constraint:** Show results only when route exists for the day (we'll seed test data to always have at least one result for valid pairs).

A3. Open seat map and select **Seat**.

- **Constraint:** Seat must be **Available** at click time (we re-check availability on select).

A4. Enter **Name**, **Phone (10 digits)**, **Email**; proceed to payment.

- **Constraints:** Phone must be exactly 10 digits; email must contain "@" and a domain.

Output: Draft **Booking ID** (temporary) created; seat **soft-locked for 10 minutes**.

Flow B — Pay & Confirm Ticket

Goal: User pays via UPI/Card and gets a confirmed ticket.

Prerequisite: A valid draft **Booking ID** with a **soft-locked** seat from Flow A.

Steps

B1. Choose **Payment Method**: UPI or Card.

- **Constraint:** Only these two methods are shown.

B2. Complete payment.

- **Constraint:** We simulate **Payment Outcome** as one of: **Success / Failure / Timeout**.

B3. Show result.

3) Parameters

Parameter	Values (small pool)	Notes / Constraints
UserType	Guest, Registered	No behavioral difference in MVP except prefilled contact for Registered.
Origin	BOM, BLR	Mumbai (BOM) or Bengaluru (BLR).
Destination	BLR, BOM	Must be different from Origin .
TravelDate	T+1, T+7, T+14	Any of these counts as valid (T = today).
BusType	Seater, Sleeper	Display only.
SeatPref	Window, Any	Display only; actual seat must be Available.
SeatStatus	Available, Booked	Must be Available at selection; re-check at click.
Phone	9999990001, 9999990002	Exactly 10 digits required.
Email	rahulmittal@example.com, aditishah22@example.com	Must contain “@” and domain.
PaymentMethod	UPI, Card	Only two methods in MVP.
PaymentOutcome	Success, Failure, Timeout	

4) Scenarios

Flow A — Search & Select Seat

Happy Paths

- **BOM→BLR on T+7 shows buses; user picks S1 and proceeds.**
The user selects Mumbai as origin, Bengaluru as destination, date T+7. Results list at

least one Seater bus. Seat S1 is available; the user selects it, enters a valid 10-digit phone and email, and reaches the payment screen with a temporary Booking ID.

- **BLR→BOM on T+1 sleeper seat selection works.**
The user searches Bengaluru to Mumbai for T+1, opens a Sleeper bus, selects SL1 (available), enters valid contact details, and proceeds to payment.

Negative Scenarios

- **Origin and destination are the same.**
The user chooses BOM for both origin and destination. The system shows a clear error and blocks search until one is changed.
- **Past or same-day date is entered.**
The user tries today (T) or a past date. The system shows “Choose a date from tomorrow to 30 days ahead” and prevents search.
- **Phone number fails validation.**
The user enters a 9-digit phone. The field shows “Enter a 10-digit number” and disables Continue.

Edge Cases

- **Seat becomes unavailable between list and selection.**
The user clicks S2, but another user just booked it. The system shows “Seat no longer available,” refreshes the seat map, and asks to choose another seat.

Flow B — Pay & Confirm Ticket

Happy Paths

- **UPI payment succeeds and ticket is issued.**
With a valid Booking ID from Flow A, the user pays via UPI. The gateway returns Success. The app confirms the booking, hard-locks the seat, displays a Ticket ID, and emails/SMSes the details.
- **Card payment succeeds.**
The user pays by Card; the gateway returns Success. The app issues one Ticket ID and shows the trip details.

Negative Scenarios

- **Payment fails.**
The gateway returns Failure. The app clearly states “Payment failed,” releases the seat lock, and offers “Retry payment” and “Back to seats.”

Edge Cases

- **Payment success but email/SMS send fails.**
The ticket is confirmed and visible on the confirmation screen, but notification send fails. The app shows “Ticket confirmed” with a “Resend email/SMS” button; no duplicate tickets are generated.