# Lab 1: Requirements Engineering & UML Use-Case Modelling

**Requirements Table (Word/Excel):**

| **Req ID** | **Type** | **Description** | **Priority** | **Acceptance Criteria** | **Rationale** |
| --- | --- | --- | --- | --- | --- |
| FR-001 | Functional | The system shall allow a student or faculty to register an account using their college ID. | High | New registration is confirmed and user can log in and book a bus. | Enables secure access for all college members. |
| FR-002 | Functional | The system shall allow users to book available seats on any college bus for a selected route/trip. | High | Upon booking, seat availability is updated and user is emailed a booking receipt. | Core booking functionality. |
| FR-003 | Functional | The system shall allow administrators to add, edit, or delete bus listings and routes in the system. | High | Admin successfully adds/edits/deletes a bus or route and changes reflect for users. | Maintains up-to-date bus/service information. |
| FR-004 | Functional | The system shall allow users to view all scheduled bus timings, routes, and current seat availability. | High | Users can view real-time schedules and seat counts for all buses. | Transparency and planning for users. |
| FR-005 | Functional | The system shall allow users to cancel bookings and process refund as per policy. | Medium | After cancel, seat is released and user is notified of refund (if applicable). | User convenience and fairness. |
| NFR-001 | Nonfunc. | The system shall complete a booking transaction in under 10 seconds. | High | Performance log shows transaction time < 10 seconds. | Ensures service efficiency during peak load. |
| NFR-002 | Nonfunc. | The system shall be accessible 24x7 with uptime ≥ 99.5% per month. | High | Monthly server log shows uptime ≥ 99.5%. | Reliable access for students/staff. |