**SRS DOCUMENTATION**

**Software Requirement Specification – Search Module**

**Project Name**: E-Bus Management System  
**Module**: Search Bus  
**Prepared By**: Charan Sai   
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**1. Introduction**

The **Search Module** allows users to find available buses between two cities based on the provided source and destination. This is a key feature that enhances user experience and helps them book their journey efficiently.

**2. Functional Requirements**

| **Req. ID** | **Requirement Description** |
| --- | --- |
| REQ-SR-001 | The system shall allow users to input a **Source** and **Destination** city. |
| REQ-SR-002 | The system shall fetch and display all matching buses from Firebase database. |
| REQ-SR-003 | The system shall display bus details such as Bus Number, Type, Time, and Contact Info. |
| REQ-SR-004 | The system shall display "No buses found" if no data matches the input. |
| REQ-SR-005 | The system shall handle both **uppercase** and **lowercase** inputs. |
| REQ-SR-006 | The search shall be restricted to logged-in users only (if authentication is applied). |
| REQ-SR-007 | The system shall offer a responsive design compatible with mobile and desktop views. |
| REQ-SR-008 | The system shall validate that both source and destination fields are not empty. |
| REQ-SR-009 | The system shall display results in a card or table format with clear visibility. |
| REQ-SR-010 | The search results shall support dynamic updates without needing a full page reload. |

**3. Non-Functional Requirements**

| **Req. ID** | **Requirement Description** |
| --- | --- |
| REQ-NFR-001 | The search functionality shall respond within 2 seconds under normal load. |
| REQ-NFR-002 | The search results shall be styled consistently with the overall UI design. |
| REQ-NFR-003 | The module shall support accessibility features (screen reader compatible). |
| REQ-NFR-004 | The system shall maintain data confidentiality and not expose sensitive user data. |
| REQ-NFR-005 | The system shall be compatible with major browsers: Chrome, Edge, Firefox, Safari. |

**4. User Interface Details**

* **Fields**:
  + Source (Text Input)
  + Destination (Text Input)
* **Button**:
  + Search (Triggers search functionality)
* **Results Display**:
  + List of matching buses with details (Bus Number, Type, Time, Contact)

**5. Example Flow**

1. User enters "Hyderabad" as Source and "Vijayawada" as Destination.
2. User clicks on "Search".
3. System fetches bus records from Firebase.
4. Displays matching buses with details.
5. If no match found, displays an appropriate message.