**Project Design Phase-II**

**Solution Requirements (Functional & Non-functional)**

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| Date | 26-05-2025 |
| Team ID | LTVIP2025TMID61039 |
| Project Name | Rental Home: Finding Your Perfect Home |
| Maximum Marks | 4 Marks |

**Functional Requirements:**

Following are the functional requirements of the proposed solution.

**Functional Requirements – rental house**

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| --- | --- | --- | --- |
| **ID** | **Requirement** | **Description** | **Priority** |
| **FR-01** | **User Registration & Login** | **Users (tenants/owners/agents) must be able to register and securely log in.** | **High** |
| **FR-02** | **Profile Management** | **Users can update personal details, preferences, and contact info.** | **Medium** |
| **FR-03** | **Property Listing** | **Home owners/agents can add, edit, or remove rental property details.** | **High** |
| **FR-04** | **Search Properties** | **Tenants can search properties based on filters (location, budget, size, amenities).** | **High** |
| **FR-05** | **Property Details View** | **System should display detailed property info with images, rent, and availability.** | **High** |
| **FR-06** | **Save & Bookmark** | **Users can save/bookmark favorite properties for later.** | **Medium** |
| **FR-07** | **Contact Owner/Agent** | **Tenants can send inquiries/messages to property owners/agents.** | **High** |
| **FR-08** | **Recommendation Engine** | **System suggests relevant properties based on user preferences.** | **Medium** |
| **FR-09** | **Notifications & Alerts** | **Users get alerts for new listings, price changes, or saved searches.** | **Medium** |
| **FR-10** | **Payment Integration** | **If applicable, support rent payment or service fees through the system.** | **Low** |
| **FR-11** | **Admin Management** | **Admin can manage users, property listings, and reports.** | **High** |
| **FR-12** | **Reports & Analytics** | **Admin/owners can view reports on property views, leads, and rentals.** | **Medium** |

**Non-functional Requirements:**

Following are the non-functional requirements of the proposed solution.

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| --- | --- | --- | --- |
| **ID** | **Requirement** | **Description** | **Priority** |
| NFR-01 | Performance | The system should handle at least 500 concurrent users without performance degradation. | High |
| NFR-02 | Scalability | The system must scale to support future growth in users and property listings. | High |
| NFR-03 | Availability | The system should be available **99.9% of the time** excluding planned maintenance. | High |
| NFR-04 | Security | Data must be encrypted (SSL/TLS), with role-based access control for users and admins. | High |
| NFR-05 | Usability | User interface must be intuitive, mobile-friendly, and accessible (WCAG 2.1 compliant). | Medium |
| NFR-06 | Reliability | System must recover from failures automatically within 5 minutes. | High |
| NFR-07 | Maintainability | Codebase should follow modular architecture and be easy to update/extend. | Medium |
| NFR-08 | Interoperability | System should integrate with external APIs (maps, payment gateways, messaging services). | Medium |
| NFR-09 | Data Backup & Recovery | Daily backups must be taken, with recovery possible within 2 hours. | High |
| NFR-10 | Response Time | Search results must be displayed within 3 seconds under normal load. | High |
| NFR-11 | Compliance | Must comply with data privacy laws (GDPR, local housing regulations). | High |
| NFR-12 | Auditability | All user activities should be logged for traceability and auditing. | Medium |