Project Design Phase-II Solution Requirements (Functional & Non-functional)

| Date | 28 JUNE 2025 |
|---------------|--|
| Team ID | LTVIP2025TMID49487 |
| Project Name | House hunt: finding your perfect rental home |
| Maximum Marks | 4 Marks |

Functional Requirements:

Following are the functional requirements of the proposed solution.

| FR No. | Functional Requirement (Epic) | Sub Requirement (Story / Sub-Task) |
|--------|--------------------------------|---|
| FR-1 | User Registration | Registration through Form |
| | | Registration through Gmail |
| | | Registration through LinkedIN |
| FR-2 | User Confirmation | Confirmation via Email |
| | | Confirmation via OTP |
| FR-3 | Order Placement | Add products to cart |
| | | Apply discount/coupon code |
| | | Place order in offline/online mode |
| FR-4 | AI Chatbot Support | Natural language conversation |
| | | Help with placing orders |
| | | Order tracking |
| FR-5 | Voice-Based Ordering | Convert voice to text using Watson STT |
| | | Process voice commands for order placement |
| FR-6 | Order Status & Tracking | View order history |
| | | Track order using Order ID |
| | | Delivery status notifications |
| FR-7 | Admin Panel | View/manage all orders |
| | | Update order status |
| | | Access analytics dashboard |
| FR-8 | Product Management | Add/update/remove products |
| | | Categorize products |
| FR-9 | Payment Processing (if online) | Integration with payment gateway |
| | | Handle payment status callbacks |
| FR-10 | Weather-Aware Delivery Logic | Use weather API to assess delivery conditions |
| | | Alert users in case of disruption |

Non-functional Requirements:

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

| FR No. | Non-Functional Requirement | Description |
|--------|----------------------------|--|
| NFR-1 | Usability | Intuitive UI/UX design for end-users on web & mobile, responsive layout |
| NFR-2 | Security | Secure user data, encrypted API communication, IAM controls, OWASP practices |
| NFR-3 | Reliability | 99.9% uptime target, robust failover mechanisms, automated backups |
| NFR-4 | Performance | Handle 1000+ concurrent users, <300ms API response time, caching for speed |
| NFR-5 | Availability | Multi-zone cloud setup, load balancers, auto-restart for failed containers |
| NFR-6 | Scalability | Containerized microservices with autoscaling support via Kubernetes |