**Project Design Phase-II**

**Technology Stack (Architecture & Stack)**

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| Date | 22 May 2025 |
| Team ID | LTVIP2025TMID56254 |
| Project Name | HouseHunt: Finding Your Perfect Rental Home |
| Maximum Marks | 4 Marks |

**Technical Architecture:**

**House Hunt** is designed using a scalable **3-tier architecture**, ensuring a robust, maintainable, and scalable system:

1. **Presentation Layer (Frontend):** A responsive and user-friendly interface for tenants and landlords to browse listings, book visits, and manage profiles.
2. **Business Logic Layer (Backend):** Handles core functionalities such as user authentication, property listings, booking management, payments, and messaging.
3. **Data Storage Layer:** Stores all essential data including user profiles, property details, bookings, chat records, and payment transactions.

🧩 Integration with third-party APIs is included for real-time notifications (SMS/email), map-based search, and digital payments.

**Table-1 : Components & Technologies:**

| **S.No** | **Component** | **Description** | **Technology** |
| --- | --- | --- | --- |
|  | User Interface | Web/mobile-friendly interface for tenants & landlords | HTML, CSS, JavaScript / React Js etc. |
|  | Application Logic-1 | Booking, calendar, chat, and visit scheduling. | Node.js, Express.js |
|  | Application Logic-2 | |  | | --- | | Admin panel, user management, reporting | | React js, Node js |
|  | Database | User data, listings, visits, messages, payments | MongoDB |

**Table-2: Application Characteristics:**

| **S.No** | **Characteristics** | **Description** | **Technology** |
| --- | --- | --- | --- |
|  | Open-Source Frameworks | Frontend frameworks | React.js, Node.js, BootStrap, Tailwind CSS |
|  | Scalable Architecture | 3-tier architecture with RESTful APIs | Microservices |

**References:**

[**React.js Documentation**](https://react.dev/)

[**Node js Best Practice**](https://nodejs.org/en/learn/getting-started/introduction-to-nodejs)

[**JSON Web Server Referance**](https://www.npmjs.com/package/json-server)

[**https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d**](https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d)