**Project Design Phase-II**

**Technology Stack (Architecture & Stack)**

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| --- | --- |
| Date | 26-05-2025 |
| Team ID | LTVIP2025TMID21134 |
| Project Name | House Hunt |
| Maximum Marks | 4 Marks |

**Technical Architecture:**

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

**Technology Stack**

The House Hunt app uses the MERN stack, supported by various libraries and tools to enhance performance

and user experience.

**Frontend Technologies:**

React.js is used to build interactive UI components.

Libraries like Bootstrap, Material UI, and Ant Design help with styling and layout.

Axios is used to make API calls to the backend server.

**Backend Technologies:**

Node.js serves as the runtime environment.

Express.js manages routing and server logic.

Multer is used to upload images (for property listings).

JWT and bcryptjs are used for secure authentication and password encryption.

**Database:**

MongoDB stores user profiles, property listings, and booking data.

Mongoose is used as an ODM to simplify schema creation and data validation.

Other Tools and Libraries:

Moment.js is used for date/time formatting in bookings.

Nodemon helps in development by automatically restarting the server on changes.

Git and GitHub are used for version control and team collaboration.

Postman is used for API testing during development.

This technology stack provides a reliable, scalable, and secure foundation for the application.

**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, CSS |
|  | Scalable Architecture | 3-tier architecture with RESTful APIs | Microservices |

