

Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	25-06-2025
Team ID	LTVIP2025TMID53224
Project Name	HouseHunt: Finding Your Perfect Rental Home
Maximum Marks	4 Marks

Technical Architecture:

The HouseHunt platform is developed using a scalable MERN-based 3-tier architecture that includes the presentation layer (frontend), business logic (backend), and data storage layer (MongoDB). This architecture ensures real-time performance, security, and smooth integration via RESTful APIs using Axios. The frontend delivers responsive UI for renters, owners, and admins, while the backend manages the logic for user authentication, booking, and property management.

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web-based responsive interface for renters and owners	HTML, CSS, JavaScript, React.js, Bootstrap, Material UI
2.	Application Logic-1	User registration, property browsing, inquiry system	Node.js, Express.js
3.	Application Logic-2	Admin panel for approvals, owner property management	React.js (Admin UI), Node.js (API layer)

S.No	Component	Description	Technology
1.	User Interface	Web-based responsive interface for renters and owners	HTML, CSS, JavaScript, React.js, Bootstrap, Material UI
4.	Database	Stores users, properties, bookings, chats	MongoDB

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
5.	Open-Source Frameworks	Modern UI and backend tools	React.js, Node.js, BootStrap, Tailwind CSS
6.	Scalable Architecture	3-tier architecture with RESTful APIs and real-time integration	Microservices, RESTful API, Axios
7.	Responsiveness	Mobile-friendly and responsive layout	Media Queries, Bootstrap Grid System
8.	Security	Role-based access, encrypted communication	JWT, HTTPS, CORS, Helmet.js

References:

[React.js Documentation](#)

[Node js Best Practice](#)

[MongoDB Docs](#)

[Material UI](#)

<https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d>