

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

Date	26-05-2025
Team ID	LTVIP2025TMID56105
Project Name	HouseHunt: Finding Your Perfect Rental Home
Maximum Marks	4 Marks

Technical Architecture – HouseHunt

The HouseHunt platform is built using the MERN stack and follows a well-structured 3-tier architecture, supporting role-based operations for renters, property owners, and admins.

□ Architecture Layers:

- Presentation Layer:**
Built with React.js, this layer supports dynamic UI rendering, client-side routing, and role-based dashboards (Renter, Owner, Admin).
- Business Logic Layer:**
Developed using Node.js and Express.js, it handles all backend logic including API processing, authentication, inquiry management, listing updates, and user control.
- Data Layer:**
MongoDB stores all application data including users, property listings, booking inquiries, and admin activity.

□ Table-1: Components & Technologies

S. No.	Component	Description	Technology
1	User Interface	Web UI for renters, owners, and admins	React.js, JavaScript, CSS
2	Application Logic – 1	Inquiry handling, user auth, routing	Node.js, Express.js
3	Application Logic – 2	Admin panel, owner dashboard, property management	React.js (components), Node.js
4	Database	Stores users, properties, bookings, favorites	MongoDB

⚙ Table-2: Application Characteristics

S. No.	Characteristic	Description	Technology
--------	----------------	-------------	------------

1	Open-Source Frameworks	Frontend and backend using modern JS-based stacks	React.js, Node.js, Express.js
2	Scalable Architecture	Modular 3-tier design with token-based access control	RESTful APIs, JWT, MongoDB

□ References

- [React.js Documentation](#)
- **Node.js Best Practices**
- **JWT Authentication Reference**
- [MongoDB Official Documentation](#)
- [How to Draw Useful Architecture Diagrams](#)