

Technology Stack

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| Date | 31 January 2026 |
| Team ID | LTVIP2026TMIDS38973 |
| Project Name | HouseHunt: Finding Your Perfect Rental Home |
| Maximum Marks | 4 Marks |

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

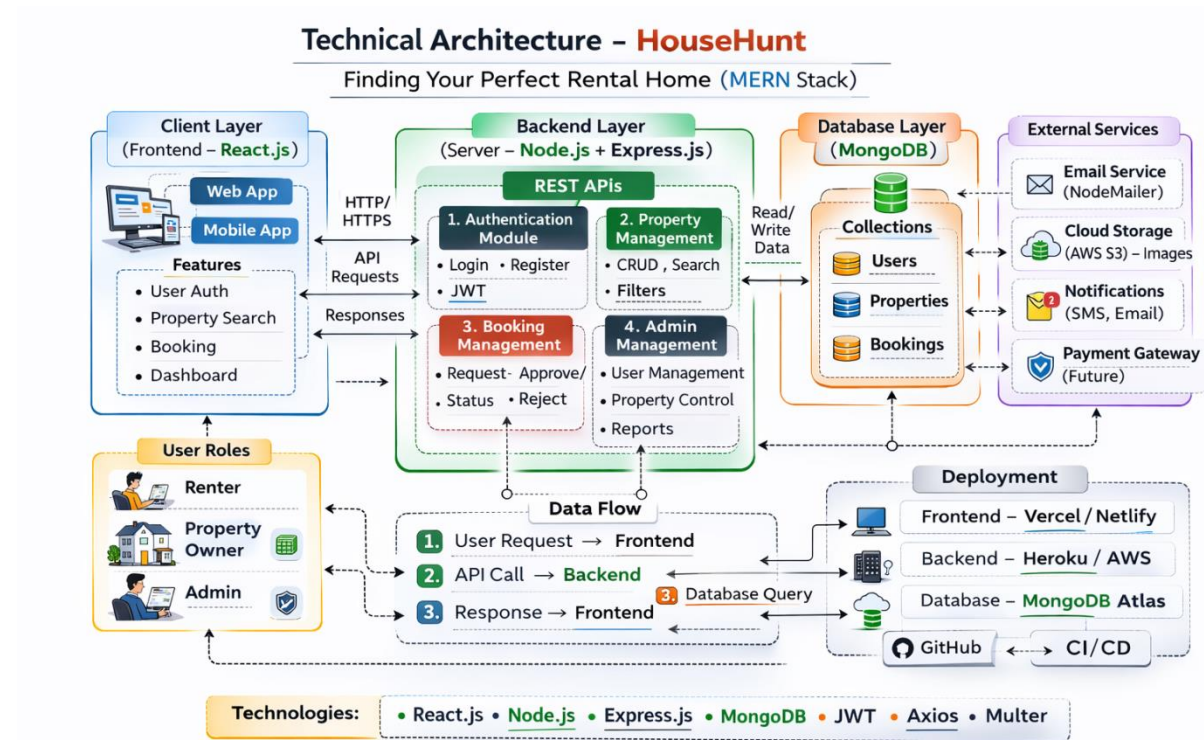


Table-1 : Components & Technologies:

| S.No | Component | Description | Technology |
|------|-----------------|--|------------------------------|
| 1. | User Interface | Frontend framework to build responsive user views, dashboards, pages | React.js |
| 2. | API Development | Backend framework to create RESTful APIs and route handling | Express.js |
| 3. | Server Platform | Server runtime that executes backend code | Node.js |
| 4. | Database | NoSQL database to store users, properties, and bookings | MongoDB |
| 5. | Authentication | Token-based security for login sessions and protected routes | JSON Web Tokens (JWT) |
| 6. | UI Libraries | UI component libraries for clean layout and interactive design | Bootstrap, Material UI, AntD |
| 7. | HTTP Client | For frontend to backend API communication | Axios |
| 8. | File Upload | Handles property image uploads and storage | Multer |
| 9. | Middleware | Enables secure cross-origin requests and request parsing | CORS, Body-Parser |
| 10. | Security | Hashes passwords to secure user credentials | bcryptjs |

Table-2: Application Characteristics:

| S.No | Characteristics | Description & Technology |
|------|-----------------|--|
| 1. | Performance | The system responds quickly with minimal delay in property search (< 2 seconds) and navigation throughout the app |
| 2. | Scalability | Handles increasing numbers of users and properties without performance impact due to MERN stack and modular design |
| 3. | Security | Implements secure login, data encryption, hashed passwords, role-based access control (admin, owner, renter) |
| 4. | Usability | The interface is intuitive, responsive, and easy to use on both desktop and mobile devices |

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|----|-----------------|--|
| 5. | Availability | The application is designed to be highly available, reliable, and accessible 24/7 |
| 6. | Maintainability | Clean modular code with proper directory structure for easier updates, debugging, and feature enhancements |
| 7. | Compatibility | Works across modern web browsers (Chrome, Firefox, Edge, Safari) and devices |
| 8. | Reliability | Ensures consistent data updates and safe storage, with proper error handling and fail-safes |