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

Date	
Team ID	PNT2025TMID09657
Project Name	Rentease-HOUSE RENT APP USING MERN
Maximum Marks	4 Marks

Technical Architecture:

The technical architecture of the house rental application is built on the **MERN stack**, which consists of four key components:

1. **Frontend (React.js):** This is the user interface that tenants, owners, and admins see and interact with. It's responsible for presenting property listings, application forms, and dashboards in a user-friendly way.
2. **Backend (Express.js & Node.js):** This is the server-side part of the application. It handles all the business logic, API calls, and user authentication. It acts as the bridge between the frontend and the database.
3. **Database (MongoDB):** This is where all the application data is stored. It's a flexible, non-relational database that holds information about user profiles, property listings, rental applications, and payments.

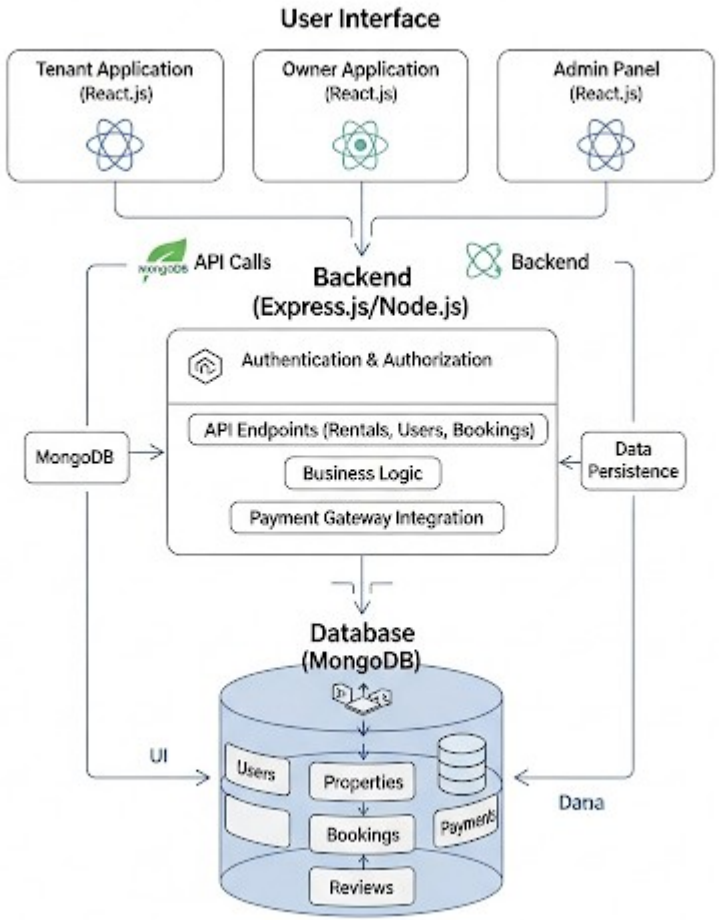
User Interface
Tenant Application
(React.js)
Owner Application
(React.js)
Admin Panel
(React.js)
API Calls
Backend
(Express.js/Node.js)
Backend
Authentication & Authorization
API Endpoints (Rentals, Users, Bookings)
Business Logic
Payment Gateway Integration
MongoDB
Data
Persistence
Database
(MongoDB)
UI
Users
Properties
Bookings
Payments
Reviews
Data

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript / React Js etc.
2.	Application Logic-1	Logic for a process in the application	javascript
3.	Application Logic-2	Logic for a process in the application	Renting services across world
4.	Application Logic-3	Logic for a process in the application	House rent logic
5.	Database	Data Type, Configurations etc.	NoSQL,
6.	Cloud Database	Database Service on Cloud	No use of this
7.	File Storage	File storage requirements	Basic system storage
8.	External API-1	Purpose of External API used in the application	Working properly as listing any property
9.	External API-2	Purpose of External API used in the application	Showing result on dashboard
10.	Machine Learning Model	Purpose of Machine Learning Model	No use of ML
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Local

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Resources provided by course guide and chatgpt and AI	Technology of Opensource framework
2.	Security Implementations	Use secure network to access and implement the project.	-
3.	Scalable Architecture	3 tier architecture	Fontend and backend mern stack
4.	Availability	More available for every user	databases
5.	Performance	Impactful performance	Implementation plateforms