

Project Design Phase Solution Architecture

Date	30th March 2025
Team ID	SWTID1743953304
Project Name	House- Hunt: Finding Your Perfect Rental Home
Maximum Marks	4 Marks

Solution Architecture:

Solution Architecture refers to the detailed design and structure of a software system or application that solves a specific business problem. It is like a blueprint that outlines how the system will work, what technologies will be used, and how different parts of the system will interact with each other.

Solution Architecture Diagram:

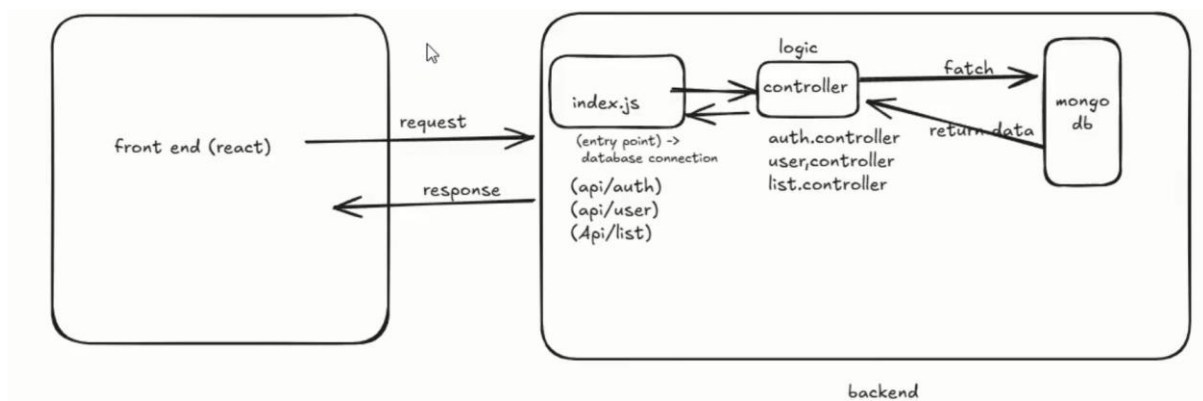


Figure 1: Architecture and data flow of our house rental app "rentzy"

This is a solution architecture diagram for a full-stack web application—specifically a house renting platform using React (frontend), Node.js/Express (backend), and MongoDB (database).

1. Frontend (React)

The client-side (browser) where users interact with your website.

Users can:

- Sign up / log in
- Search for properties
- View listings
- Contact owners, etc.

When a user performs an action (e.g., searches for a house), the React frontend sends a request to the backend.

2. Backend (Node.js + Express)

This part handles the logic and talks to the database. It's divided into:

index.js

This is the entry point of the backend server.

It connects to the MongoDB database.

It defines different API routes like:

- i. /api/auth → login/signup
- ii. /api/user → user-related operations
- iii. /api/list → property listing actions

3. Controllers

Handle business logic.

Each controller is responsible for a specific feature:

- i. auth.controller: handles authentication (login, signup)
- ii. user.controller: handles user profile, info, etc.
- iii. list.controller: handles property listings (create, fetch, update, delete)

4. Request Flow:

React sends a request to an API route.

index.js routes the request to the right controller.

Controller interacts with the database (MongoDB).

Data is fetched and processed.

A response is sent back to the frontend.

5. MongoDB (Database)

Stores data like:

- i. User details
- ii. Property listings
- iii. Images, prices, location info, etc.
- iv. The controllers send queries to MongoDB to fetch, update, or delete data.