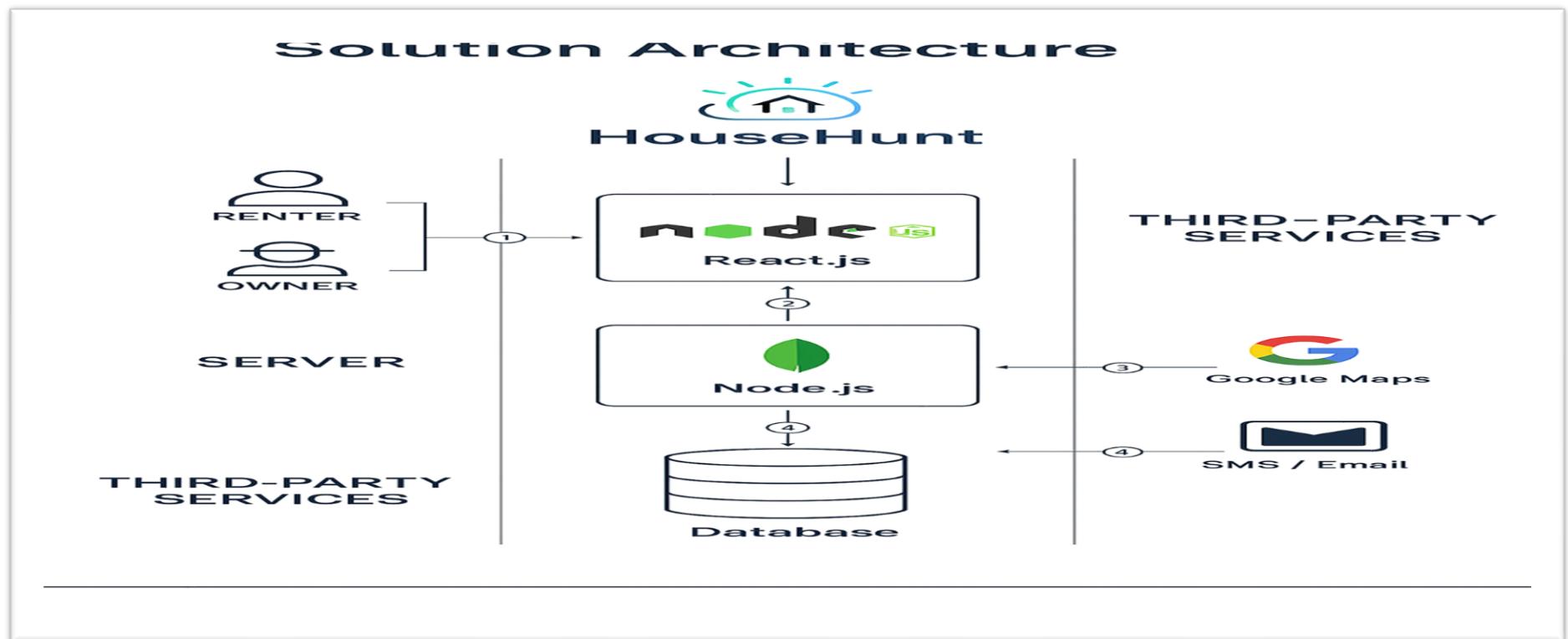


**Project Design Phase-II**  
**Technology Stack (Architecture & Stack)**

Date	21/06/25
Team ID	LTVIP2025TMID58222
Project Name	House-Hunt: Finding-Your-Perfect-Rental-Home
Maximum Marks	4marks

**Technical Architecture:**



**Table-1 : Components & Technologies:**

S.No	Component	Description	Technology
1.	User Interface	Web-based UI for renters, owners, and admins to interact with the system.	React.js, Tailwind CSS
2.	Application Logic-1	Handles user authentication and role management (Renter/Owner/Admin).	Node.js, Express.js
3.	Application Logic-2	Business logic for property listing, search, and filtering.	Node.js, Express.js
4.	Application Logic-3	Booking management, messaging, review system, and wish list functionalities.	Node.js, Express.js
5.	Database	Stores user info, property details, bookings, messages, and reviews.	MongoDB
6.	Cloud Database	Cloud-hosted database service for real-time access and scalability.	MongoDB Atlas
7.	File Storage	Stores images and documents related to rental listings.	Cloud, Firebase Storage
8.	External API-1	For Google Maps integration to show property location and directions.	Google Maps API
9.	External API-2	For social login (Gmail / LinkedIn) and email verification.	Google OAuth, LinkedIn API, SMTP or Firebase Auth
10.	Machine Learning Model	Recommends properties based on user preferences and search history.	Python, Scikit-learn or TensorFlow (Optional)
11.	Infrastructure (Server / Cloud)	Backend hosted on cloud platform for performance and availability.	Render, Vercel , or AWS EC2

**Table-2: Application Characteristics:**

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Entire project is built on widely adopted open-source tools and libraries.	React.js, Node.js, MongoDB
2.	Security Implementations	OAuth login, JWT tokens, HTTPS, input validation, and database sanitization.	Firebase Auth, JWT, Helmet.js
3.	Scalable Architecture	Microservices-ready backend, cloud-hosted DB, and load balancing options.	Node.js with Express, MongoDB Atlas
4.	Availability	Deployed on cloud platforms with high uptime and monitoring.	Render, Vercel, AWS
5.	Performance	Fast response with server-side pagination, caching, and optimized DB queries.	Redis (optional), Express.js