

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

Date	20 February 2026
Team ID	LTVIP2026TMIDS80887
Project Name	FreelanceFinder: Discovering Opportunities, Unlocking Potential
Maximum Marks	4 Marks

Technical Architecture:

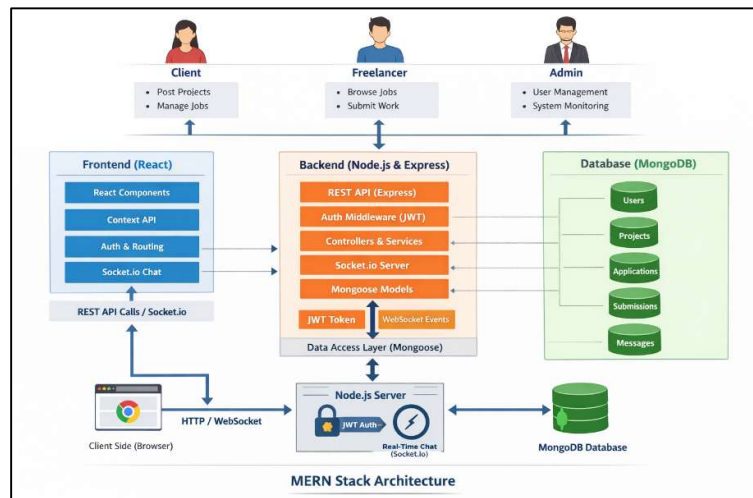


Table-1: Components & Technologies:

S. No	Component	Description	Technology
1.	User Interface	Web interface for clients and freelancers to register, browse projects, apply, chat, and manage work	HTML, CSS, JavaScript, React.js, Bootstrap
2.	Application Logic-1	User authentication, registration, role management, profile handling	Node.js, Express.js
3.	Application Logic-2	Project management, bidding system, freelancer selection	Express.js, Node.js
4.	Application Logic-3	Real-time chat and notifications between client and freelancer	Socket.IO
5.	Database	Stores users, freelancers, projects, applications, chats, reviews	MongoDB, Mongoose
6.	Cloud Database	Database hosting in cloud	MongoDB Atlas
7.	File Storage	Storage for portfolio files, project attachments, submission files	Cloudinary / Local Storage
8.	External API-1	Email notifications for registration, project updates, and messages	Nodemailer/ SMTP
9.	External API-2	Authentication and secure password handling	JWT/ bcrypt
10.	Infrastructure (Server / Cloud)	Backend server deployment and hosting of full-stack MERN application	Node.js Server, Render / AWS / Vercel

Table-2: Application Characteristics:

S. No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Frameworks used to develop frontend and backend	React.js, Node.js, Express.js, Bootstrap
2.	Security Implementations	Secure authentication, password encryption, protected APIs	JWT Authentication, bcrypt hashing, HTTPS
3.	Scalable Architecture	MERN 3-tier architecture separating UI, server, and database	React + Node/Express + MongoDB
4.	Availability	Cloud hosting ensures 24/7 platform access	Render / Vercel / MongoDB Atlas
5.	Performance	Efficient API communication and optimized frontend rendering	Axios, REST APIs, React Virtual DOM