**Project Design Phase-II**

**Technology Stack (Architecture & Stack)**

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| --- | --- |
| Date | 26-06-2025 |
| Team ID | LTVIP2025TMID59482 |
| Project Name | ALPHA Works – FreelanceFinder |
| Maximum Marks | 4 Marks |

**Technical Architecture:**

**ALPHA Works –** FreelanceFinder is built using a robust and scalable 3-tier architecture, ensuring modularity, performance, and ease of maintenance.

🔹 **Architecture Layers:**

1. **Presentation Layer (Frontend):**User-friendly web interface for freelancers and clients to register, manage profiles, post jobs, place bids, communicate, and process payments.

2. **Business Logic Layer (Backend):**Manages user authentication, project postings, bidding logic, messaging, notifications, and admin functionalities.

3. **Data Storage Layer:**Secure and scalable storage of user accounts, project details, chat logs, reviews, and payment history.

The system is integrated with third-party APIs for real-time chat, email/SMS notifications, and payment processing, ensuring a seamless and secure user experience.

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

| **S.No** | **Component** | **Description** | **Technology** |
| --- | --- | --- | --- |
|  | User Interface | Responsive UI for clients and freelancers | HTML, CSS, JavaScript / React Js etc. |
|  | Application Logic-1 | Handles project posting, bidding, messaging | Node.js, Express.js |
|  | Application Logic-2 | |  | | --- | | Admin panel, user management, project moderation | | React js, Node js |
|  | Database | Stores user profiles, projects, bids, messages, reviews, and payments | MongoDB |

**Table-2: Application Characteristics:**

| **S.No** | **Characteristics** | **Description** | **Technology** |
| --- | --- | --- | --- |
|  | Open-Source Frameworks | Frontend frameworks | React.js, Node.js, BootStrap, Tailwind CSS |
|  | Scalable Architecture | 3-tier architecture with RESTful APIs | Microservices |

**References:**

[**React.js Documentation**](https://react.dev/)

[**Node js Best Practice**](https://nodejs.org/en/learn/getting-started/introduction-to-nodejs)

[**JSON Web Server Referance**](https://www.npmjs.com/package/json-server)

[**https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d**](https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d)