**Requirement Analysis**

**Technology Stack (Architecture & Stack)**

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| --- | --- |
| Date | 10 April 2025 |
| Team ID | Team ID : SWTID1743172790 |
| Project Name | Social Media Web App |
| Maximum Marks | 4 marks |

**Technical Architecture:**

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

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Component** | **Description** | **Technology** |
|  | User Interface | How user interacts with application e.g.  Web UI, Mobile App, Chatbot etc. | HTML, CSS, React.js |
|  | Application Logic-1 | Registration, Login, Profile Setup | Node.js, Express.js |
|  | Application Logic-2 | Real-Time Messaging, Notifications | Socket.io, Node.js |
|  | Application Logic-3 | Newsfeed, Posts, Likes, Comments | Node.js, Express.js |
|  | Database | User Info, Posts, Comments | MongoDB |
|  | Cloud Database | Hosted Cloud DB | Firebase Firestore / MongoDB Atlas |
|  | File Storage | Store images, videos, profile picture | AWS S3 / Firebase Storage |
|  | External API-1 | Social Login APIs | Google API, LinkedIn API |
|  | Infrastructure (Server / Cloud) | Cloud Deployment & Scaling | Local, Kubernetes, etc. |

**Table-2: Application Characteristics:**

| **S.No** | **Characteristics** | **Description** | **Technology** |
| --- | --- | --- | --- |
|  | Open-Source Frameworks | List the open-source frameworks used | Technology of Opensource framework |
|  | Security Implementations | List all the security / access controls implemented, use of firewalls etc. | Encryptions, HTTPS etc. |
|  | Scalable Architecture | Justify the scalability of architecture (3 – tier, Micro-services) | Docker, Kubernetes |
|  | Availability | Justify the availability of application (e.g. use of load balancers, distributed servers etc.) | |  | | --- | |  |  |  | | --- | | AWS Load Balancer | |
|  | Performance | Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN’s) etc. | IndexedDB |

**References:**

[**https://c4model.com/**](https://c4model.com/)

[**https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/**](https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/)

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