**Project Name:**

LinkedIn-Style Social Media Platform (MERN Stack)

**Prepared By:**

Intern ID: IP -6622

1. **System Architecture Overview**

The application follows a 3-tier architecture:

Frontend: React.js with Tailwind CSS

Backend: Node.js with Express.js (REST APIs)

Database: MongoDB Atlas (cloud-hosted NoSQL database)

Image Hosting: Cloudinary

Deployment: Render

**2. Component Breakdown**

* **Frontend:**
  + Signup, Login, EditProfile, Home, Post, ConnectionList, etc.
  + Axios for API requests
  + React Context API for global state (user, posts)
* **Backend:**
  + Routes: /api/auth, /api/user, /api/post, /api/connection
  + Controllers handle logic for CRUD, image upload, and authentication
  + Middleware for authentication using JWT
* **Database Collections:**
  + users
  + posts
  + connections
  + comments

**3. API Structure**

|  |  |  |
| --- | --- | --- |
| Endpoint | Method | Description |
| /api/auth/signup | POST | Register a new user |
| /api/user/updateprofile | PUT | Update user profile |
| /api/post/create | POST | Create a new post |
| /api/connection/send/:id | POST | Send a connection request |

**4. Data Flow**

1. User signs in and receives JWT token
2. Frontend stores the token (usually in cookies)
3. Authenticated API calls made using the token
4. Data fetched from MongoDB and shown on the frontend

**5. Security**

* JWT-based authentication
* CORS configuration for cross-origin requests
* Environment variables used for API keys and secrets