**Features and Functions:**

1. **User Authentication & Authorization (Completed)**
   * **Signup**: Create a new user account.
   * **Login**: Authenticate users and issue a JWT token.
   * **Profile Management**: Update user profile details like name, bio, profile picture, etc.
   * **Authorization Middleware**: Restrict certain endpoints to authenticated users.
2. **Posts (Completed)**
   * **Create Post**: Allow users to upload text, images, or videos. **(Remaining)**
   * **Fetch Posts**:
     + Get all posts (for a timeline).
     + Get posts by a specific user.
   * **Update Post**: Allow users to edit their posts.
   * **Delete Post**: Allow users to delete their posts.
3. **Likes and Comments (Completed)**
   * **Like Post**: Toggle like/unlike functionality.
   * **Comment on Post**: Add comments to posts.
   * **Fetch Comments**: Retrieve comments for a specific post.
4. **Follow/Unfollow Users (Completed)**
   * **Follow User**: Add a user to the current user's following list.
   * **Unfollow User**: Remove a user from the following list.
   * **Fetch Following/Followers**: Retrieve lists of followers and following.
5. **Search (Remaining)**
   * Search for users by name or username.
   * Search for posts by keywords or hashtags.
6. **Notifications**
   * Notify users when someone follows, likes, or comments on their post.
7. **Timeline/Feed (Remaining)**
   * Show posts from followed users in chronological or prioritized order.
   * Paginate the feed for better performance.
8. **Direct Messaging (Optional) (Remaining)**
   * Allow users to chat with each other.

**4. Database Design (MongoDB)**

**Collections and Schema:**

1. **Users**
   * username, email, password, profilePic, bio, followers, following.
2. **Posts**
   * content, image, userId, likes, comments, createdAt.
3. **Comments**
   * postId, userId, text, createdAt.
4. **Notifications**
   * userId, type (like, comment, follow), postId, senderId, createdAt.
5. **Messages (Optional)**
   * senderId, receiverId, message, createdAt.

**5. Backend REST API Routes**

**Users**

* POST /api/auth/signup – Register a new user.
* POST /api/auth/login – Log in a user.
* GET /api/users/:id – Get user profile.
* PUT /api/users/:id – Update user profile.
* POST /api/users/:id/follow – Follow a user.
* POST /api/users/:id/unfollow – Unfollow a user.

**Posts**

* POST /api/posts – Create a new post.
* GET /api/posts – Fetch all posts (or user-specific).
* GET /api/posts/:id – Fetch a single post.
* PUT /api/posts/:id – Update a post.
* DELETE /api/posts/:id – Delete a post.

**Likes and Comments**

* POST /api/posts/:id/like – Like/unlike a post.
* POST /api/posts/:id/comment – Add a comment to a post.
* GET /api/posts/:id/comments – Get all comments for a post.

**Notifications**

* GET /api/notifications – Fetch user notifications.

**Search**

* GET /api/search/users – Search for users.
* GET /api/search/posts – Search for posts.