Project Title: SmartConnect – A Mini Social Media Platform

Objective:

To develop a simple social media platform that allows users to connect, share posts, comment, like content, and communicate in real-time.

Project Description:

SmartConnect is a web-based social media application that enables users to interact by sharing posts, liking and commenting on posts, following others, and maintaining profiles. It mimics core functionalities of mainstream platforms like Instagram, Facebook, and Twitter, and can be customized based on user requirements.

Key Features:

1. **User Authentication:**
   - Sign up, log in, and secure password handling.
2. **User Profile Management:**
   - Upload profile picture, update bio, follow/unfollow other users.
3. **Post Creation:**
   - Users can create text/image/video posts.
4. **Like & Comment System:**
   - Users can like or comment on others' posts.
5. **News Feed:**
   - A timeline that shows recent posts from followed users.
6. **Search Functionality:**
   - Search users or hashtags.
7. **Chat/Messaging (Optional):**
   - Real-time private messaging using WebSockets.

Core Modules and Features:

🌐 User Management

- Register new users with email and password.
- Secure login/logout (JWT or session-based).
- Password reset (optional).

👤 User Profiles

- View and edit profile info (bio, photo, social links).
- View posts made by a user.
- Follow/Unfollow users.

📝 Posts

- Create a post (text/image/video).
- Edit or delete own posts.
- Add hashtags and mentions.

❤️ Interactions

- Like a post.
- Comment on a post.
- Reply to comments (optional nested threads).

📄 Feed/Timeline

- See posts from followed users in reverse chronological order.
- Infinite scroll or pagination.

🔍 Search

- Search users, hashtags, or posts.
- Filter content by user or date.

🔔 Notifications

- Get notified when someone follows you, likes your post, or comments.

💬 Chat System (Optional)

- Real-time messaging using WebSockets or Firebase.
- Chat history and online status indicators.

SOCIAL
MEDIA

Technical Stack:

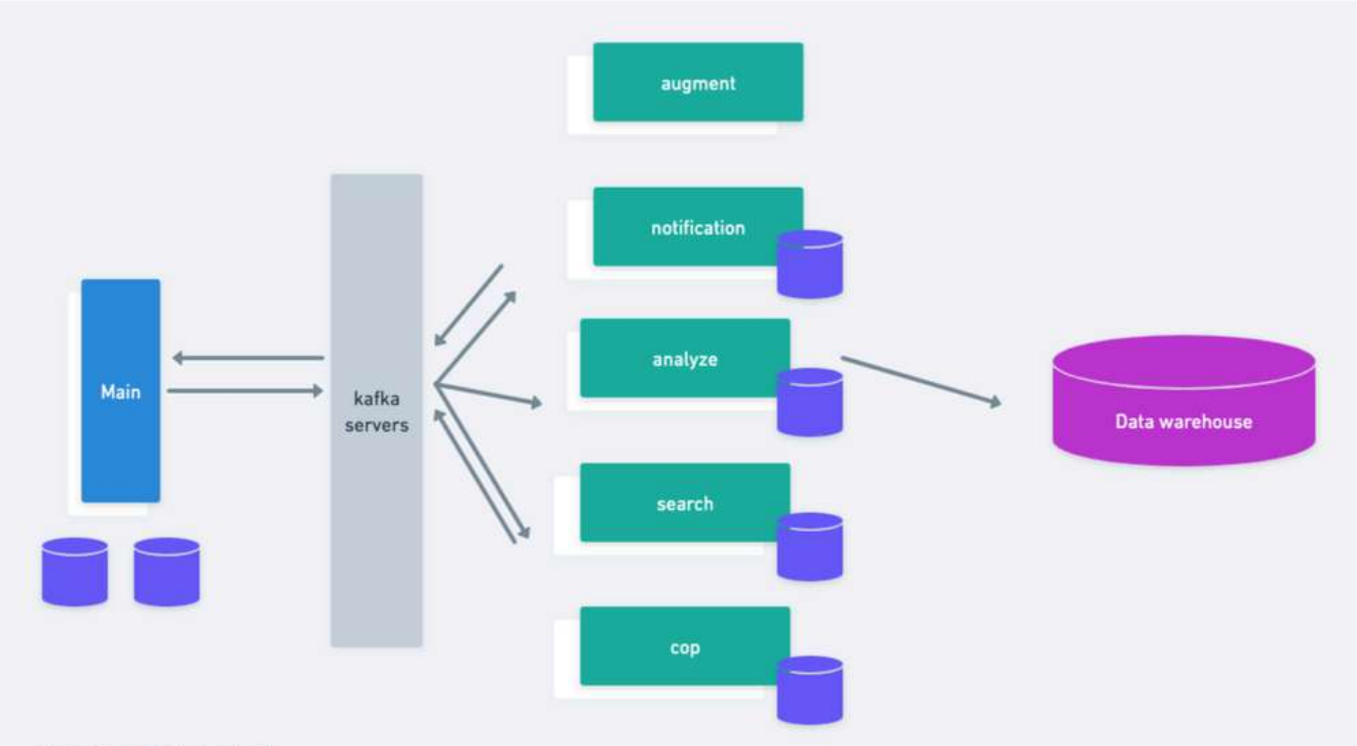
Component	Technology
Frontend	HTML, CSS, JavaScript, React / Vue.js
Backend	Node.js + Express / Django / Flask
Database	MongoDB / PostgreSQL / MySQL
Auth	JWT / OAuth2.0
Real-Time Chat	Socket.io / Firebase (optional)
Media Storage	Cloudinary / Firebase Storage
Deployment	Vercel / Netlify (Frontend), Render / Heroku / AWS EC2 (Backend)

System Architecture:

Frontend (React) → API Calls → Backend (Node.js / Django) → Database (MongoDB/PostgreSQL)

↑ ↓

Cloudinary for media hosting Authentication with JWT



Database Design Overview:

📦 Users Table/Collection:

```
{
  "user_id": "UUID",
  "username": "aditi_k",
  "email": "aditi@example.com",
  "password": "hashed_password",
  "bio": "Student | Developer",
  "profile_image": "URL",
  "followers": ["user_id1", "user_id2"],
  "following": ["user_id3"]
}
```

📝 Posts Table/Collection

```
{
  "post_id": "UUID",
  "user_id": "owner_id",
  "content": "Hello World!",
  "media_url": "image/video URL",
  "timestamp": "2025-06-07T18:00:00Z",
  "likes": ["user_id1", "user_id2"],
  "comments": [
    {
      "comment_id": "cmt1",
      "user_id": "user_id1",
      "text": "Nice post!",
      "timestamp": "2025-06-07T18:05:00Z"
    }
  ]
}
```

Technology Stack:

- **Frontend:** HTML, CSS, JavaScript (React or Vue.js)
- **Backend:** Node.js with Express / Django / Flask
- **Database:** MongoDB / MySQL / PostgreSQL
- **Authentication:** JWT or OAuth
- **Optional Tools:** Firebase (for real-time features), Cloudinary (for media storage)

Modules/Pages:

1. Home / Timeline
2. User Profile
3. Post Detail
4. Notifications
5. Login / Register

6. Settings

Target Audience:

- Students building portfolios.
- Community networks (colleges, small businesses).
- Closed corporate or educational networks.

Future Enhancements (Optional):

- Dark Mode and Theme Customization.
- AI-powered content recommendation system.
- Video streaming and live broadcasting.
- Story feature (24-hour disappearing posts).
- Two-Factor Authentication for added security.
- Admin panel for moderation.

Benefits:

- Learn full-stack development (frontend, backend, database).
- Apply UI/UX principles.
- Practice CRUD operations, real-time communication, and authentication.
- Understand social networking logic.

Conclusion:

The **SmartConnect** social media project demonstrates practical knowledge of full-stack development, integrating real-time communication, user interaction, and media handling. It reflects the core workings of popular platforms like Instagram or Twitter on a smaller scale. This project not only strengthens backend and frontend skills but also gives exposure to security, scalability, and user experience aspects of social platforms.