Requirement Gathering and Analysis Phase Data Flow Diagram & User Stories

Date	07 July 2024
Team ID	SWTID1719938419
Project Name	Social Media App (MERN)
Maximum Marks	

Data Flow Diagrams:
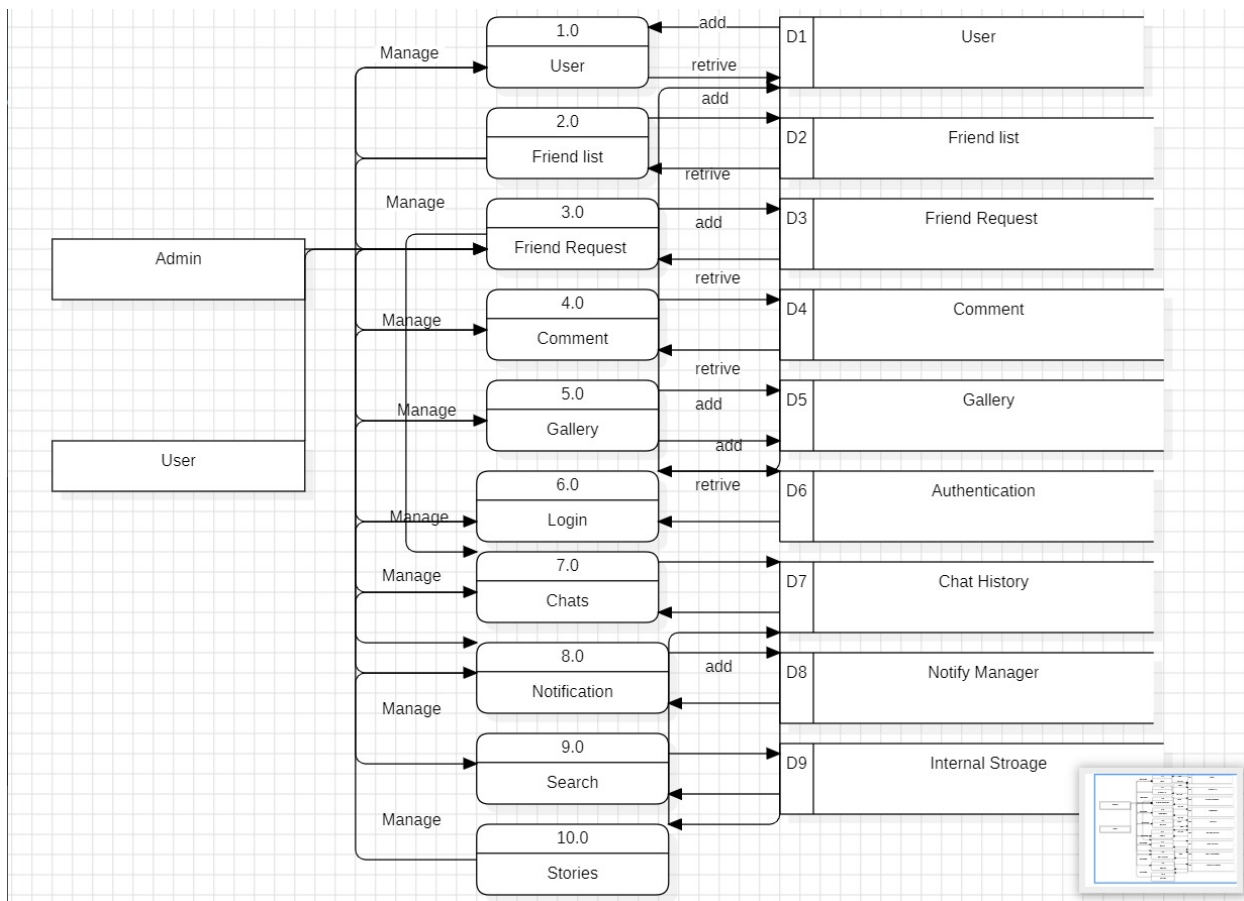
User Stories:

User Type	Functional	User	User Story / Task	Acceptance	Priority	Release
Customer (Mobile user)	Registration Page	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Sprint-1 (Frontend)
Customer (Mobile user)	Login page	USN-2	As a user, I can log into the application by entering email & password	I can log into the application	Medium	Sprint-1 (Frontend)
Customer (Mobile user)	Home Page	USN-3	As a user, I can view a feed of posts from users I follow on the home page, including text, images, and videos.	I can see a feed of posts	High	Sprint-1 (Frontend)
Customer (Mobile user)	Chats Page	USN-4	As a user, I can send and receive instant messages with other users in real-time.	I can send and receive messages	Low	Sprint-1 (Frontend)
Customer (Mobile user)	Notifications Page	USN-5	As a user, I receive notifications for likes, comments, and mentions on my posts or interactions with my content.	I can receive notifications	Medium	Sprint-1 (Frontend)

Customer (Mobile user)	Search	USN-6	As a user, I can search for other users, posts, or topics within the application.	I can search within the application	Medium	Sprint-1 (Frontend)
Customer (Mobile user)	Stories	USN-7	As a user, I can create and view stories consisting of photos or short videos that disappear after 24 hours.	I can create and view stories	Low	Sprint-1 (Frontend)
Backend Developer	Set up project structure	USN-8	As a backend developer, I need to set up the project structure with necessary directories and configuration files to facilitate organized development.	The project structure is set up with directories and config files	High	Sprint-2 (backend)
Backend Developer	Create models	USN-9	As a backend developer, I need to create database models (User, Post, Stories, Notifications, Chats) with defined attributes and relationships to accurately represent data entities within the application.	Database models are created	Medium	Sprint-2 (backend)

Backend Developer	Create Controllers	USN-10	As a backend developer, I need to create controllers (UserController, PostController, NotifyController, ChatController) to handle incoming requests, interact with models, and return appropriate responses based on business logic and client requirements.	Controllers are created and functional	High	Sprint-2 (backend)
Backend Developer	create middleware	USN-11	As a backend developer, I need to create middleware functions (authentication middleware) to intercept and process incoming requests before they reach the route handlers, ensuring security, validation, or other cross-cutting concerns are addressed consistently across the application.	Middleware functions are created and integrated	High	Sprint-2 (backend)

Backend Developer	Establishing API routes	USN-12	As a backend developer, I need to define and implement API routes that map incoming HTTP requests to the appropriate controller actions, ensuring clear and organized access points for client-server communication within the application.	API routes are defined and implemented	Medium	Sprint-2 (backend)
Backend Developer	Setup Database	USN-13	As a backend developer, I need to set up the database (install the database system, configure connections, initialize schemas) to store and manage application data securely and efficiently.	Database is set up and configured	High	Sprint-3 (Database)

Backend Developer	Database for Users	USN-14	As a backend developer, I need to create a database schema and tables for storing user information (user ID, name, email, password) to support user registration, authentication, and profile management.	User database schema and tables are created	Medium	Sprint-3 (Database)
Backend Developer	Database for Posts	USN-15	As a backend developer, I need to create a database schema and tables for storing posts (post ID, user ID, content, timestamp) to support the creation, retrieval, and management of user-generated content.	Posts database schema and tables are created	Medium	Sprint-3 (Database)

Backend Developer	Database for Chats	USN-16	As a backend developer, I need to create a database schema and tables for storing chat messages (message ID, sender ID, receiver ID, message content, timestamp) to support real-time messaging between users.	Chats database schema and tables are created	Medium	Sprint-3 (Database)
Backend Developer	Database for Stories	USN-17	As a backend developer, I need to create a database schema and tables for storing stories (story ID, user ID, media content, timestamp, expiration time) to support the creation, display, and expiration of ephemeral stories.	Stories database schema and tables are created	Low	Sprint-3 (Database)

Frontend Developer	Make API calls	USN-18	As a frontend developer, I need to make API calls to the backend (using Axios) to retrieve and send data for features like user registration, login, posting, and messaging, ensuring seamless communication between the client and server.	API calls are implemented and integrated	High	Sprint-4 (integrate frontend and backend)
Frontend Developer	Handle responses and errors	USN-19	As a frontend developer, I need to handle API responses and errors appropriately (showing success messages, handling validation errors, displaying error notifications) to ensure a smooth user experience and robust error handling in the application.	API responses and errors are handled appropriately	High	Sprint-4 (integrate frontend and backend)

| Frontend Developer | Updating User Interface (UI) | USN-20 | As a frontend developer, I need to update the User Interface (UI) dynamically based on the data received from API responses (displaying user profiles, posts, messages, notifications) to ensure the application reflects the current state of the backend and provides a seamless user experience. | UI updates dynamically based on API responses | High | Sprint-4 (integrate frontend and backend) |
| QA Engineer | Test integration | USN-21 | As a QA engineer, I need to perform integration testing to verify that the frontend and backend components interact correctly, ensuring that data flows smoothly between them and that all integrated features function as expected. | Integration tests verify smooth interaction between components | High | Sprint-5 (Testing) |

| QA Engineer | Debug Issues | USN-22 | As a QA engineer, I need to identify and debug integration issues between the frontend and backend components, ensuring that any discrepancies or errors are resolved promptly to maintain the application's functionality and reliability. | Integration issues are identified and resolved | High | Sprint-5 (Testing) |