Solution Architecture:

Members: **Team ID: 591283**

Navaneth. A – 21BLC1569, Prabhanjan Kumar – 21BCE3589

User Interface (UI):

The front end of the app serves as the user's point of interaction, providing a seamless experience for managing financial activities. It encompasses intuitive interfaces for stock investment, payment processing, wallet management, loan services, and rewards.

Application Layer:

At the core, the application layer manages user interactions, processes data, and orchestrates various functionalities. It acts as the central hub for handling user requests and facilitating communication between different components.

Server Infrastructure:

The backend resides in the server infrastructure, responsible for user authentication, executing business logic, and processing data. It ensures a secure and reliable foundation for the app's functionality.

Database:

The database stores crucial user data, financial information, transaction details, and other pertinent application data. This robust data storage solution enables efficient retrieval and management of user-specific information. These features can be implemented in the future.

API Layer:

Facilitating seamless communication between the frontend and backend, the API layer in finance app enables the exchange of data and functionalities. APIs serve as a conduit for the app to retrieve and transmit information to and from the server.

Third-Party Integrations:

To enhance the features, it integrates with external services and APIs. This includes connecting to external sources for stock market information, financial forecasts, and other relevant data.

Caching Layer:

The application optimizes performance by implementing a caching layer that stores frequently accessed data. This reduces the load on the database, resulting in improved response times and a more responsive user experience.

Scalability and Load Balancing:

Ensuring scalability, the architecture allows for horizontal scaling by adding more servers or resources as needed. Load balancers distribute incoming traffic evenly, maintaining optimal performance during varying levels of user activity.

Analytics and Monitoring:

To gain insights into user behaviour, monitor performance, and ensure security, the application can be incorporated analytics and monitoring tools. These tools provide valuable data on app performance, user engagement, and potential security concerns.