

Question 1:

(5 Marks)

Provide a functional decomposition of the below mentioned system.

Suppose a company wants to develop a mobile app for managing personal finances. The app should allow users to track their expenses, set budgets, and view reports and analytics.

Using the functional decomposition diagram, the development team can identify the different components required for the finance management app. For example, the expense tracking component will allow users to enter_and categorize their expenses, set reminders for recurring expenses, and view their spending history.

The budgeting component will allow users to set budget limits for different categories, track their progress towards their budget goals, and receive notifications when they exceed their budget.

The report and analytics component will provide users with visualizations and summaries of their financial data, allowing them to track their financial health over time and identify areas for improvement.

Finally, the user account and authentication component will handle user registration, login, and authentication, as well as enabling users to manage their personal information and view their account settings.

Question 2:

2+3 (5 marks)

In a chat application there can multiple chat groups. A user can be the participant of any chat group by sending joining request to the admin. The admin will then approve the request and the requesting user will become participant of the chat group. Once a user becomes participant of a group, (s)he will receive all the future messages (or updates) of that group instantly. The participant can choose to read a received message at the time of his/her choice.

a. Which architecture style(s) seem(s) the most obvious to be used for this application? chal, its client server Mod

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b. Provide the architecture diagram:

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client 3

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