

Brief

Objective: Develop a high-level system design for a hypothetical new feature or solution for Airbnb. This could be an extension of the platform, a new feature for hosts or guests, or a tool to improve Airbnb's internal operations.

Instructions:

Choose one feature or solution you think would enhance Airbnb's platform. This could be something you believe would benefit either hosts or guests, or perhaps Airbnb's operations. Clearly define the problem this solution aims to solve.

Create a high-level system design for your chosen solution. The system design should include the following elements:

- a. Key Components and their Functionalities: Identify the main parts of your system and explain what each one does. This might include user interfaces, databases, servers, and more. Be sure to explain why each component is necessary for your system.
- b. Interactions and Dependencies between Components: How do the different parts of your system interact with each other? What dependencies exist between them? Be sure to explain how data flows between these components.
- c. Data Flow within the System: You should map out how data travels within your system. This includes data sources, storage, processing, and presentation. How is data entered into the system? How is it stored and processed? How is it ultimately presented to the users?

Assumptions: Clearly state any assumptions you make during the design process. These assumptions can include, but are not limited to, technical constraints, user behavior, or market conditions.

Visual Representation: Use a tool like Draw.io, Whimsical, or any similar application to create diagrams of your system. These diagrams should be clear, well-organized, and should visually represent the components of your system and how they interact.

Written Explanation: Accompany your diagrams with a brief written explanation of your design. This should include the problem your system is solving, an overview of how your system works, and a description of the key components of your system.

Submission: Submit your completed assignment in the form of a PDF. The PDF should include both your diagrams and written explanation.