Skit Example Descriptions: The examples will be a restaurant analogy with the waiter/restaurant as the server and the customers as the clients.

General case: Scenario 1:

General case There are 2 customers ordering food and the waiter takes their orders separately and brings them back the food they ordered. This example demonstrates how the server can be connected to more than one client. Furthermore, it also shows that for a communication to happen between a client and a server, the client has to be the one to first initiates the request after which the server will reply with a response.

Scenario 2: Client communication

A customer orders food and tells the server that he will pay for the other customer’s bill. This demonstrates that if the clients want to communicate with each other, they have to do it through the server.

Advantages:

Scenario 3: Multiple client types with the same server. In this scenario, a customer orders delivery on the phone. This shows that there can be multiple types of clients, but still having the same server. Scenario 4: server update Here, the server is updated by having a different menu, the customers can still interact with the server the same as before. Server update

Disadvantage:

Scenario 5: Server single point of failure: The server crashed and is unable to tend to the customers. This example demonstrates the single point of failure problem that the client server architecture has, where everything is reliant on the one server.

Scenario 6: Denial of service/ server bottleneck This scenario has one customer constantly making requests to the server, inhibiting the other customers from making requests. This shows that a malicious client can overload the server by making it do multiple or difficult requests. This also demonstrates that the server is a potential bottleneck of the whole system if not enough resources are dedicated to it.

ATM Scenario

The ATM will service one customer at a time. A customer will be required to insert an ATM card and enter a personal identification number (PIN)-both of which will be sent to the bank for the card will be retained in the machine until the customer indicates that he/she desires no further transactions, at which point it will be returned-except as noted below.

The ATM must be able to provide the following services to the customer: A customer must be able to make a cash withdrawal from any suitable account linked to the card, in multiples of $20.00. Approval must be obtained from the bank before cash is dispensed. A customer must be able to make a deposit to any account linked to the card, consisting of cash and/or checks in an envelope. The customer will enter the amount of the deposit into the ATM, subject to manual verification when the envelope is removed from the machine by an operator. Approval must be obtained from the bank before physically accepting the envelope. A customer must be able to make a transfer of money between any two accounts linked to the card. A customer must be able to make a balance inquiry of any account linked to the card.

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