Tolu Elebute
100724471

1. What is EDA? What are its advantages and disadvantages?

EDA: You don't need to store the data. We can just put our data in a database inside each microservice and we can use the stream of events to keep it up to date.

- Event sourcing is making events your data model. Storing data as events
- Events retain info otherwise lost
- Real time activities are updated as it's happening. Events map the user journey
- Kafka can be used as a storage system

Event Sourced Architecture: using stored events to derive views

Why Microservices:

- Loose coupling
- Scale Applications
- Experimentation

2. In Kafka, what's meant by cluster, broker, topic, replica, partition, zookeeper, controller, leader, consumer, producer, and consumer group?

Cluster: A cluster is made up one or more servers running on kafka.

Broker: This is a server running on kafka inside a cluster

Topic: This is the thing a producer writes to and a consumer reads from.

Replica: A multiple copy of data spread across servers

Partition: This is as a result of a topic being divided into multiple logs

Zookeeper: This is used to track the status of the nodes in a cluster and maintains list of kafka topics and messages.

Controller: This is one of the brokers serving to manage the partitions and replicas and such.

Leader: One of the servers in a partition selected to handle read and write requests for a partition

Consumer: They read events published by the producer

Producer: They publish events to kafka

Consumer Group: A group of consumers working together to consume data from some topics.

Video 1: https://vimeo.com/677535625/b3e43d1f7e
https://vimeo.com/677738507/b4feeff3af

Updating the volume options in the yaml file provides persistence to the data as kafka is, afterall, architected for persistent storage