Kaamran Minhas
100593277

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1. **What is EDA? What are its advantages and disadvantages?**
    - EDA is Event Driven Architecture. Many large software organizations utilize this software architecture to construct software applications with the primary objective of producing, consuming, reacting to, and detecting events.
    - EDA tools have a number of advantages, including reducing time spent creating complicated ICs, avoiding manufacturing mistakes, lowering manufacturing costs, optimising IC design, and ease of use.
    - EDA also has a number of drawbacks, including unclear results, a lack of systematic analysis, a limited sample size, and obsolete information, all of which might compromise the material's credibility.

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

    - **Cluster**: One or more servers – or in this case referred to as 'Kafka Brokers' - running make up a Kafka cluster.
    - **Broker**: A kafka broker is essentially the same as a kafka server and is part of a cluster.
    - **Topic**: A topic is a collection of partitions that are handled as a whole.
    - **Replica**: Replicas are data copies that are replicated across many brokers/servers.
    - **Partition**: In Kafka, data is organised into logs, in which the process of dividing those logs into various pieces, or a more appropriate term would be partition(s).
    - **Zookeeper**: is a service synchronisation and naming registry used in distributed systems.
    - **Controller**: One of the brokers in a Kafka cluster serves as the controller, overseeing partition and replica statuses as well as administrative tasks like reassigning partitions.
    - **Leader**: The followers passively duplicate the leader, while the leader handles all read and write requests for the partition. Load is evenly distributed throughout the cluster, each server functions as a leader for some of its partitions and a follower for others.
    - **Consumer**: Kafka is generally consumed by groups of people. When a large number of consumers subscribe to the same topic and belong to the same consumer group, each consumer receives messages from a subset of the subject's partitions.
    - **Producer**: Each message is assigned to a topic partition by a producer partitioner, who then sends a produce request to the partition's leader.
    - **Consumer Group**: Consumer groups are essentially a collection of several customers who have subscribed to the same topic with partitions.