What is CAP theorem, discuss a scenario where CAP theorem helps you choose a technology over the other or helps you make a design decision.

Ans.

CAP stands for Consistency, Availability and Partition Tolerance.

Consistency means user should be able to see the same data no matter which node they get connected to.

Availability means user should be able to access data the data no matter which node they get connected to. Even of the request is a success or a failure a response should be received.

Partition Tolerance means the system should keep on running even in a single node failure situation.

In some cases, consistency is compromised over availability and it also could also be visa-versa.

In a situation where consistency is required e.g in a system where the writes done by a certain user should be shown to other users in an instant. MongoDb could be used here.

Is a system where data needs to be shown but it is possible that it is not very recent. Here availability is required. Casandra could be used in such situations.