CAP Theorem

Consistency : Consistant data
Availability : Website to be available
Partition Tolerance : In our distributed system, if a server goes down, this is called network partition.Here we have server/partitions backups.

For a distributed system it is difficult to attain all the 3 properties at a same time, third property is always compromised.

CP : In this the availability will not present, as the data is consistent , we need to stop the data availability to update the data

AP : In social media, if we post anything the feed will gets update to different user at different time, so consistency is compromised.

CA : If we have one node, in which the data is coming and getting updated, so the data is Consistant and Available but this system is not Partition tolerant.

An application will always be CP or AP, as we can't work with a system the is CA where not other partition is present as at the time of outage the system will break down.

So the **Partition Tolerance** is the common of all the three.

Application Examples with their design :

Blog Website : Availability
Multiplayer online Games : Availability
Stock Trading Platforms : Consistency
Banks : Consistency
Video Streaming websites : Availability
Ticket Booking System : Consistency

Thus it totally depends on the Business idea, that how we approach our design to be.