Latency
- delay in network communication, time taken to transfer across the network
- Measuring latency: milliseconds.
- Factors affecting latency: Location (distance or propagation), network congestion; protocol efficiency, network infra.

Throughput
- Avg volume of data that can pass through the network over a specific time; determines number of users that can access the network at the same time
- Measuring throughput: KBps (kilobytes per sec) or MBps or GBps.
- Factors affecting Throughput: Bandwidth, processing power, packet loss, network topology

Users experience improved performance under low latency and high throughput.

Bandwidth
- theoretical maximum data that can be transferred over a network
- MBps.

How to improve latency and throughput:

1. Shortening propogation between source and destination.
2. Caching frequently access data closer to source.
3. Optimizing transport protocol for specific application- TCP (data transfer) or UDP(streaming and gaming). TCP has higher latency and higher throughout, UDP has minimal latency but higher throughput.
4. Assign quality of service (QoS) to divide network traffic into categories, each with different priority.