**9. What is the difference between MIMO and MU-MIMO?**

**MIMO (Multiple Input Multiple Output)** is a wireless technology where multiple antennas are used at both the transmitter and receiver ends to send and receive more than one data stream at the same time. It boosts data rates and improves the reliability of the connection.

**MU-MIMO (Multi-User MIMO)** is an advanced version of MIMO that can communicate with multiple devices simultaneously using multiple antennas. It’s designed to handle multiple users more efficiently, especially in networks with a lot of connected devices.

**MIMO (Multiple Input Multiple Output):**

* Introduced in 802.11n (Wi-Fi 4).
* Uses multiple transmitting and receiving antennas to send multiple data streams at once.
* Great for increasing speed and improving signal reliability.
* But it only communicates with **one device at a time**—even though it's faster, others still have to wait their turn.

**MU-MIMO (Multi-User MIMO):**

* Came in with 802.11ac (Wi-Fi 5) and improved further in 802.11ax (Wi-Fi 6).
* It also uses multiple antennas but can talk to **several devices at the same time**.
* This is super useful in busy networks where many users are connected.
* It helps reduce wait time and makes everything feel faster, especially in places like offices, schools, or cafes.