

## Module 2 - Fundamental of Operating Systems & Networks

1: What's the difference between the hardware and software of a computer?

Answer: Think of it like this: hardware is the physical stuff you can touch, like the keyboard, mouse, and computer screen. Software is the invisible part that tells the hardware what to do, like the operating system (Windows, macOS, Linux) and the apps you use.

2: Can you explain IP addresses and why some are private?

Answer: Imagine IP addresses as house addresses. They tell computers how to find each other on the internet. Private IP addresses are like addresses within a neighborhood that only people in that neighborhood can use. This helps keep your home network secure.

3: What's the deal with network protocols and port numbers?

Answer: Think of protocols as rules for how computers should talk to each other. Port numbers are like specific rooms within a computer, where different apps and services live. For example, your web browser might use port 80 to connect to websites.

4: What are the different types of network devices?

Answer: There are a few key players: routers are like traffic cops, directing data between different networks; switches are like post offices, sorting data to the right destination within a network; and hubs are like party hosts, broadcasting everything to everyone.

5: How do I keep my data safe with backups?

Answer: Backups are like saving a second copy of your important files. You can use software, external hard drives, or cloud storage to make sure your data is safe in case something happens to your computer.

6: What's the difference between HTTP and HTTPS?

Answer: Think of HTTP as a regular conversation. HTTPS is like a conversation with a secret code, making it harder for others to eavesdrop on what you're saying.

7: What's the purpose of SSL and TLS?

Answer: These are security protocols that add a layer of protection to your online communications. It's like locking your front door to keep unwanted visitors out.

8: What is a MAC address?

Answer: A MAC address is like a unique serial number for your network card. It helps your computer identify other devices on the same network.