

TASK0000 ##### The most likely reason might be that DNS is not set correctly. And DNS server just can not change names of website to IP addresses.

TASK0001 ##### What problems create? 1 - It creates a networks conflict because two computer fight over one IP address. 2 - Loss of connection. One or both computers may lose access to the network or internet. 3 - Unstable connection: Information may go to the wrong computer causing errors and confusion.

Why it happens ?

1 - Static IP conflict. Someone manually set an IP address that is already being used . 2 - DHCP error. The DHCP accidentally gives the same IP address to both devices. 3 - Also if device keeps its old IP for too long, dhcp servery may assign it again.

TASK0002 ##### Two main reasons: 1 - Very big traffic. Too many devices are connected to wifi at the same time so it slows down the connection 2 - Internet service problems. Router is connected to the wifi but the internet speed from ICP is slow and unstable.

TASK0003 ##### 1 - incorrect password or security settings. 2 - adapter problem or disabled wifi. device's wireless hardware may be turned off or broken. 3 - router might block the device or use wifi type that device cant connect to.

TASK0004 ##### 1 - The university website's server might be down or DNS cant translate its name to an IP address 2 - website might be blocked by network or firewall.

TASK0005 ##### 1 - might be the router or modem problems. router might be connected to wifi but not to the internet. 2 - The internet service might be broken. 3 - device might have incorrect IP address, subnet mask or gateway.

TASK0006 ##### The most likely reason is that problem is in that specific device. 1 - it can be browser or app settings like firewall, antivirus or extension blocking sites 2 - or cached data or cookies causing whatsapp web and instagram no to load.

TASK0007 ##### 1 - Printer might have lost its IP address. printer may have disconnected from the network, changed ip, failed to get a correct ip from the router 2 - network or router problems. The router or wifi might be blocking printer. or ptinter and computer are on the different subnets.

TASK0008 ##### It can be the router or gateway problems. Device that connects to the internet is not working or not configured correctly. Or it might be incorrect network settings. Computer might have wrong IP address, subnet mask or default gateway that prevent internet access.

TASK0009 ##### The problem is in phone. Phones wifi adapter may be weak, outdated or have software issues. Or some apps, background processes or incorrect network settings on the phone may slow it down.

TASK0010 ##### MAC address - Data link - MAC is used to identify devices on the same network. IPv4 address - Network - IPv4 identifies devices across different netwroks Port 443 - transport layer - Ports are used to deliver data to correct applications Wifi signal - physical layer - It is radio waves that cares data ethernet frame - Data link - frames contain MAC address and data for local delivery router - network

layer - It sends packets between network using IP addresses
TCP handshake - Transport - TCP handshake makes reliable communication between apps
Collision domain - Data link - collision happens at data link layer when devices share a medium
ARP - Data Link/ Network - ARP resolve IP addresses to MAC addresses
Subnet mask - network - defines network and host portions of IP address
Default gateway - Network - router where packets are sent when leaving a local network
switch - data link - switches forward frames based on MAC addresses with network