

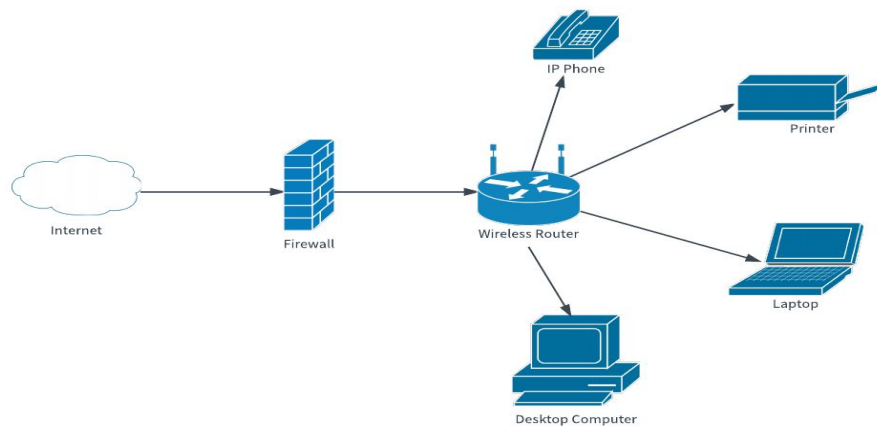
Module A.3

Topic 1: Network Access

1. Wifi is a facility allowing computers, smartphones, or other devices to connect to the Internet or communicate with one another wirelessly within a particular area.
 - a. Computer hardware is any physical device used in or with your machine, whereas software is a collection of code installed onto your computer's hard drive.
 - b. In term of computer network, specifically wireless network, frequency (or radiofrequency) is the rate of radio signal to send and receive communication signal measured in hertz (hz), cycles per second. Common frequencies that are used for wifi communication are 2.4 Ghz (giga hertz per second) and 5 Ghz.
2. Bluetooth is a wireless technology standard for exchanging data over short distances from fixed and mobile devices.
 - a. The main difference is that Bluetooth is primarily used to connect devices without using cables, while Wi-Fi provides high-speed access to the internet. Bluetooth is a wireless technology standard that is used to exchange data over short distances (less than 30 feet), usually between personal mobile devices.
3. A system for connecting a number of computer systems to form a local area network, with protocols to control the passing of information and to avoid simultaneous transmission by two or more systems.
 - a. Ethernet is faster than wifi and bluetooth.
4. Dial-up Internet access is a form of Internet access that uses the facilities of the public switched telephone network to establish a connection to an Internet service provider by dialing a telephone number on a conventional telephone line.
 - a. In 1979, Tom Truscott and Steve Bellovin, created an early predecessor to dial-up Internet access called the USENET. The USENET was a UNIX based system that used a dial-up connection to transfer data through telephone modems.^[1]Dial-up Internet has been around since the 1980s via public providers such as NSFNET-linked universities and was first offered commercially in July 1992 by Sprint.^[2] Despite losing ground to broadband since the mid-2000s, dial-up is still used where other forms are not available or where the cost is too high, such as in some rural or remote areas.

5. A hotspot is a physical location where people may obtain Internet access, typically using Wi-Fi technology, via a wireless local area network (WLAN) using a router connected to an internet service provider.
6. Wireless networks are typically set up to use DHCP, where the network router automatically assigns an IP address to computers and other devices. This makes setting up a wireless printer really simple. Just power it on and scroll through the menu interface to make sure Wi-Fi is turned on.
 - a. Cordless phones are wireless devices, TV remote controls, radios and GPS systems, cell phones, wireless mice and keyboards, etc.
 - b. **Pros (wired):** Wired networks have remained a popular choice because they offer some obvious advantages, such as security and speed.
Cons (Wired): Wired networks come with two big drawbacks: expense and clutter.
Pros (Wireless): With a wireless network it is easy to provide access to the network, which you can connect to from multiple devices. Tablets, smartphones and laptops can all connect to the network.
Cons (Wireless): Security is a little more challenging for wireless networks.

7.



- a. The wifi router wirelessly connects to the laptop and printer. The desktop computer uses an ethernet cable to connect to the internet.