Assignment – 04

WIRED NETWORKS:

A wired network is a type of computer network where devices are connected using physical cables, such as Ethernet cables. These networks use wires to transfer data between computers, servers, printers, and other devices.In a wired network, cables run between the devices and a central device like a switch, router, or hub. This setup provides a stable and fast connection because the data travels directly through the cables, reducing interference and improving speed.

Example:

A typical office network is a good example of a wired network:

Computers are connected to a switch or router using Ethernet cables.A server is also connected to the same switch, providing services like file sharing and internet access.Printers and other devices can also be wired into the network for shared access.

Advantages

*.Faster and more reliable than wireless

*.More secure (less prone to hacking)

*.Ideal for high-data usage tasks like video editing, gaming, or server access

Disadvantages

*.Less flexibility (devices must stay near cables)

*.More difficult to install and expand.

WIRELESS NETWORKS:

A wireless network is a type of computer network where devices connect and communicate without using physical cables. Instead, they use radio waves or infrared signals to transmit data.These networks allow laptops, smartphones, tablets, printers, and other devices to connect to the internet or each other through a wireless access point (WAP) or router. This makes wireless networks very flexible and convenient, especially in places where wiring is difficult or expensive.

Example:

A common example of a wireless network is Wi-Fi in a home.

A wireless router connects to the internet through a cable or fiber line.Devices like phones, laptops, smart TVs, and tablets connect to the router using Wi-Fi.All these devices can share files, stream videos, browse the web, or print wirelessly.

Advantages

*.No need for cables.

*.Easy to expand and move devices.

*.Supports mobile and portable access.

*.Great for homes, offices, schools, and public places airports.

Disadvantages

*.Security risks.

*.Slower Speed.

*.Limited range.