

Kemnal Technology College – Computer Science Kemnal Key – Year 8 Term 3

Computer network – Two or more computers (or other electronic devices) that are **connected together**, usually by cables or Wi-Fi.

Server – A powerful computer that often acts as a central hub for services in a network, e.g. emails, internet access and file storage. Each computer connected to a server is called a client.

Standalone computer – A computer that is not connected to a network.

Hub - is the most basic networking device that connects multiple **computers** or other network devices together. Unlike a network switch or router, a network **hub** has no routing tables or intelligence on where to send information and broadcasts all network data across each connection.

Switch – is a **computer** networking device that connects devices together on **computer** network by using packet **switching** to receive, process, and forward data to the destination device.

Kemnal Key Questions

- What is a network?
- What is a client?
- What is a server?
- What would be a benefit of having a network?
- What is a computer called when it is not connected to a network?



Peripheral Device – A computer device, such as a keyboard or printer that is not part of the essential computer system.

Local area network (LAN) – A **local area network** is when computers or devices are connected together over a **small geographical area**, such as within a home, a building or one site. A LAN can be created to share data or hardware such as a printer, or to share an internet connection.

Wide area network (WAN) – A **wide area network** is when computers or devices are connected together over a **large geographical area**. For example, a company with an office in London and another in Beijing would use a WAN to allow the employees to share one network. Some companies will connect a number of LANs in different areas together to create a WAN. The biggest WAN we know is the internet.

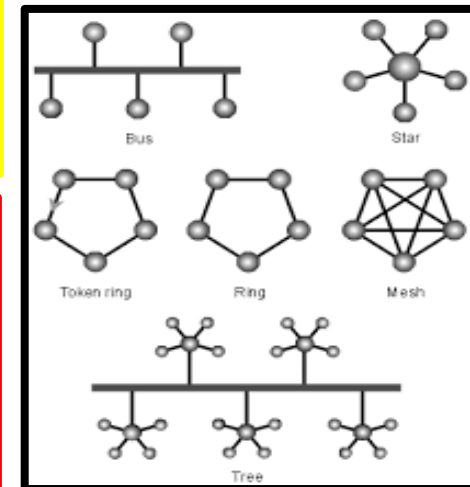
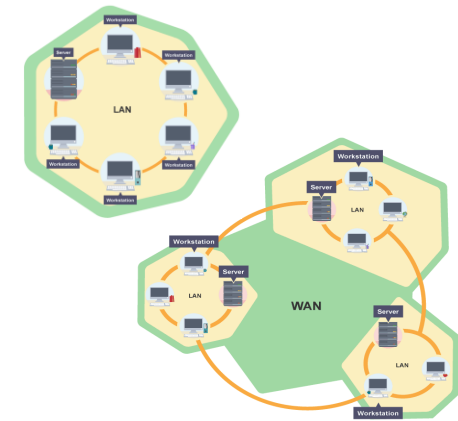
Benefits of a computer network – Using a network allows you to share:

- Hardware, such as a printer
- Software, allowing multiple users to run the same programs on different computers
- Data, so that other people can access shared work and you can access your data from any computer on the network

Networking is critical if you want to use your computer to communicate. Without it you couldn't send an email, a text or an instant message.

Computer network topology – The way computers are connected to the network and laid out. Point-to-point, Star, Bus and Ring are examples.

Software makes hardware useful. It gives it the instructions it needs to operate. When hardware runs software, it loads the software into its RAM. There are two main types of software: systems software and applications software



What is software?

Hardware is the **physical parts** of the computer and **software** is the **programs** that run on a computer.

There is a close relationship between hardware and software. Without software, hardware is very limited and without hardware, software would not be able to run. They need each other.