Characteristics of networks

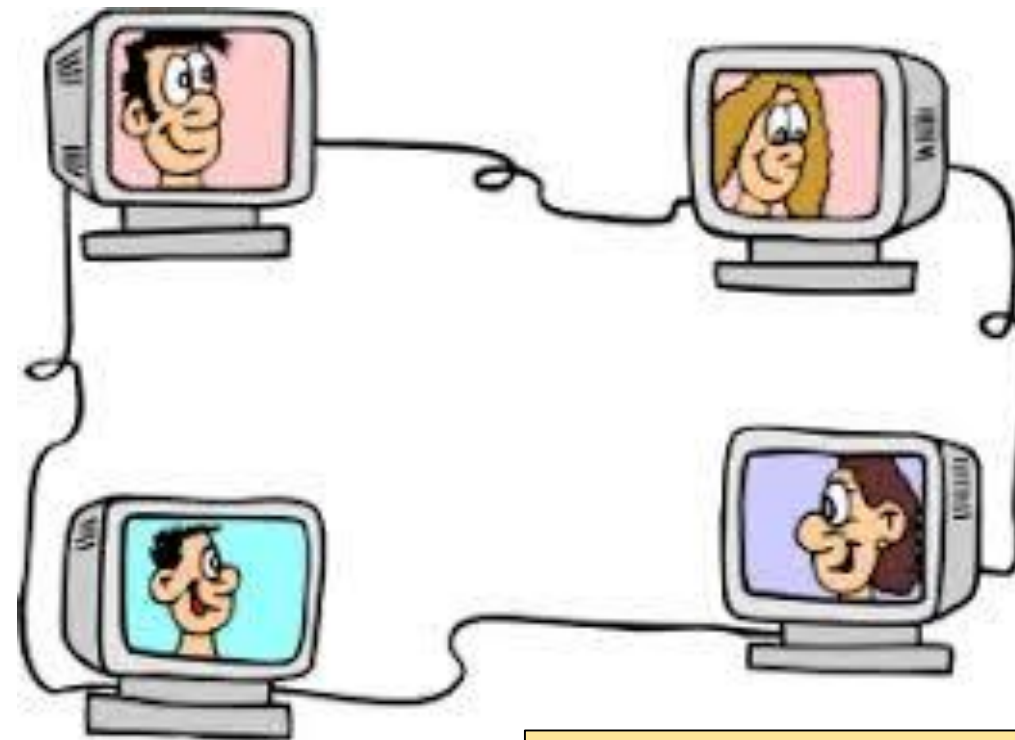**What is a computer network?**

Monday, 04 April 2022

Learning Intention

To develop knowledge by explaining what a computer network is

To secure understanding by examining key characteristics of a computer network

To achieve excellence by. comparing a network with a stand alone device in terms of advantages and disadvantages

Keywords

Stand alone device
A computing device that is not connected to any other device

Tier 2 word – characteristic
A feature or quality belonging to a person, place, or thing
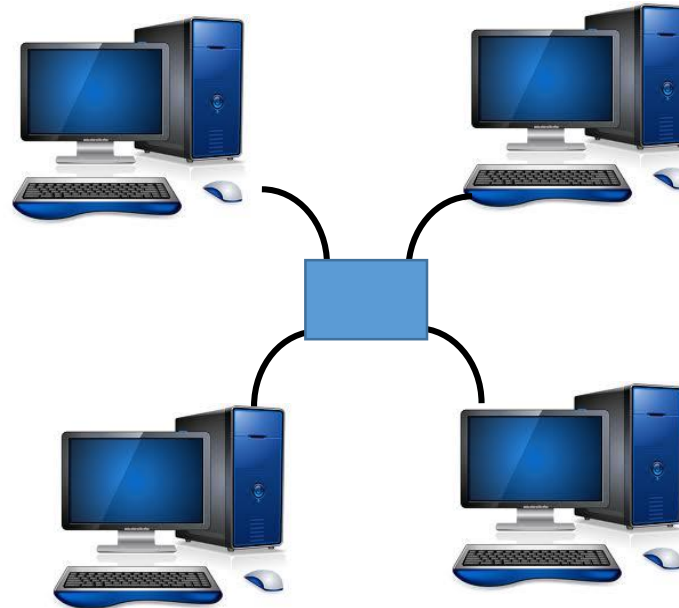
Computer networks

A network consists of a *number of computer systems connected together.*

Workstations, printers, servers, hardware can be connected with wires or using wireless technology

Stand alone device

Computers connected together to form a network

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Discuss: Where have you used a network?

What are you able to do on it? How is it different to using a stand alone computer?

Advantages and disadvantages

There are many **advantages and disadvantages** of **using a computer** network **over a stand-alone computer.**

Advantages	Disadvantages
• Share hardware • Share software • Share data/files • Easier for internal communication/can send email • Central backup • Easier to monitor network activity • Centrally controlled security • Can access data from any computer • Can connect globally	• A network manager may need to be employed – expensive • Security problems – files sent between computers could spread a virus • Hackers can gain access to data more easily • If the server is down, all workstations on the network are affected • Initial cost of servers, communication devices, etc. can be expensive

Data and resource sharing
Security
Globalisation
Backups
Archiving
Disaster recovery
Cost
Maintenance

Task 1

1. What is a computer network?

   Choose from know it, grasp it or think it to structure your answer

KNOW IT:
Complete the sentence:
A computer network is…..

GRASP IT:
What is a computer network?
What is a stand alone device?

THINK IT:
Explain the difference between a computer network and a stand alone device - *make sure you have a good definition of a network*

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Task 2

2. Create a mind map or table to **identify at least 4 advantages and disadvantages of using a network**

   Choose your level from know it, grasp it or think it

KNOW IT:
List advantages and disadvantages

GRASP IT:
Explain the advantages and disadvantages

THINK IT:
Discuss the advantages and disadvantages of using a network compared to a stand alone device

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Exam Q

Complete the exam questions

Self-mark and improve your answer using the mark scheme

A large comprehensive school has over 500 computers connected to their *Local Area Network (LAN)* with a connection to the Internet.

(a) Describe, **in detail**, **four** *disadvantages* for the school of having a network of computers compared to stand alone computers.
[8]

2 A small business has three stand-alone computers, a printer and an internet connection in an office.

(a) State **two** advantages of connecting the computers to create a local area network.

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