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Southam College Computing & ICT Department



Summer

Project

This booklet provides several tasks for you to update your current knowledge and learn new concepts required for ICT

Please complete the research and tasks. These will form the basis of a suitability test when you return in September.

Bring this booklet back in for checking on your first lesson in September

Some Sources Of Information:

www.teach-ict.com --- YouTube: CraigDave --- www.orc.org.uk --- bbc bitesize

Section 1 – Peripheral devices and Media

Computer hardware can be defined as any component that the user can physically touch. These are generally broken down into Input & Output devices.

An Input device allows the user to interact with the computer system by entering data whereas an Output device allows the computer system to provide the user with information, data or instructions.

Task 1 – The following is a selection of input and output devices. Complete the table indicating with a tick as to whether they are input or output devices plus briefly explain what its purpose is.

Device	Input or Output	Purpose
Speaker		
Mouse		
Keyboard		
Monitor		
Plotter		
Headphones		
Printer		
Scanner		

Sensor		
Microphone		
Barcode Reader		
Graphics Tablet		

Task 2 - Research what is meant by assistive technology

Name of assistive technology 1:

Explanation:

Name of assistive technology 2:

Explanation:

Another part of a computer system is storage. Storage can generally be divided into two categories: Primary and Secondary.

Task 3 - Using the tables below, research and complete the table to explain the storage device identified.

Secondary Storage

Magnetic	
Cloud	
Solid State	
Optical	

There can be many various types of operating systems on different computer systems (Multi-Tasking, Multi-User, distributed & Real-Time).

Task 4 - Describe how each of the following operating systems function on a computer system:

Multi-Tasking:

Multi-User:

Distributed:

Real-Time:

Task 5 - Question:

Which of these operating systems would be best suited for running on a nuclear power station computer system? Explain your answer.

Answer:

Task 6 - Question:

What type of operating system is Windows 11?

Answer:

Utilities Software is a relatively small program that usually only has one purpose or function on a computer system. They are usually only concerned with the maintenance of the computer system.

Section 2 - Transmission

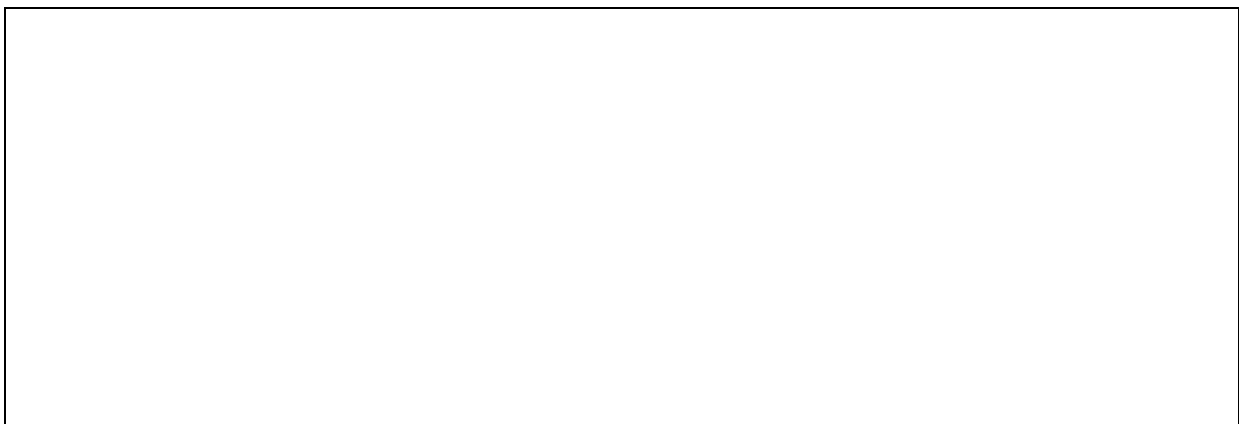
Transmission of data is an essential, understanding the concept, process and implications of transmitting data within and between IT Systems

Task 7 - Consider the different methods explain how each of them work:

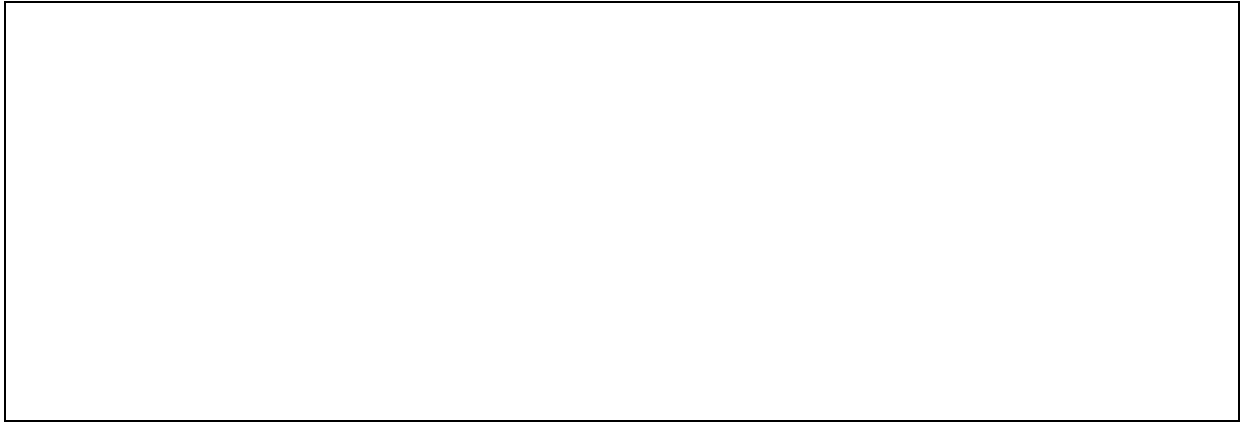
Bluetooth



USB



Wi-Fi

A large, empty rectangular box with a thin black border, intended for providing details about Wi-Fi connectivity.

Ethernet

A large, empty rectangular box with a thin black border, intended for providing details about Ethernet connectivity.

Section 3 – Networks

Networks are collections of connected computing devices. They consist of a number of devices known as nodes, which are mostly made up of various computers, but can also include shared peripherals such as printers, scanners and secondary storage devices.

Networks can be implemented in a variety of topologies depending upon how they need to be used. Each with their own advantages and disadvantages.

Task 8 – For each of the following network topologies draw a diagram of its layout and describe one advantage and one disadvantage for each.

Bus:

Star:

Ring:

The extent at which networks are designed also play a factor in what topology or model may be employed. These extents are described as LAN's, WAN's, VPN and PAN's.

Task 9 - Define a LAN, WAN, VPN and PAN (do not just state what the acronym means!).

LAN:

WAN:

VPN:

PAN:

For networks to function successfully there have to be rules and standards that must be followed. These are known as

'Protocols'. Some protocols are used for the transmission of email.

Task 10 - Explain what the protocol listed below

SMTP, uses & why it is needed:

POP, uses & why it is needed:

IMAP, uses & why it is needed:

Section 4 – Threats To Computer Systems

All computer systems come with a degree of insecurity, some larger than others. Each of these threats are usually aimed at targeting one aspect of the computer system.

Task 11 – Explain each of the following security threats and what they are specifically targeting:

Phishing:

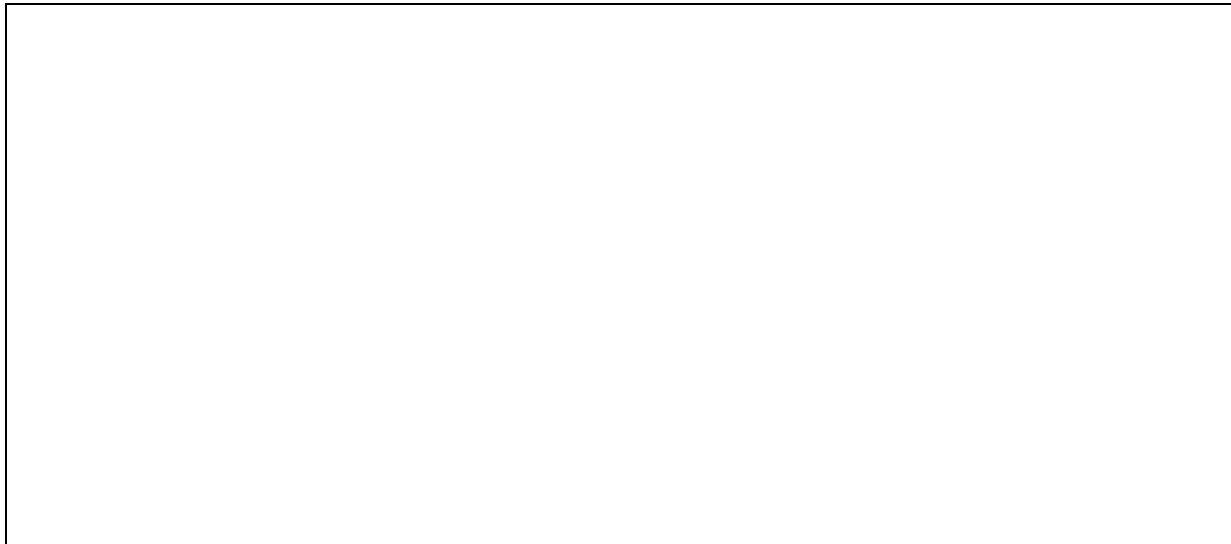
Hacking:

Virus:

Trojan:

Key Logging:

**Task 13 – In the box below explain what is covered by
'Copyright, design and patents legislation.**



Section 6 – Purpose and Principles of website

Task 14 – Pick a ecommerce website. Explain the purpose and target audience of the website.

Screenshot of website -

Explain its purpose

DON'T FORGET TO HAND THIS IN WHEN YOU RETURN IN SEPTEMBER