

CS7.1 What are Computers? Work Book



7	2 How Computers Work		Hardware		Scanner Microp	rocessor	
•		ę	Input, Process, Output (IPO)	1			
1a	 Overview on the unit This unit is about the hardware, software 	ß	Data is entered in to a computer.				
	and binary data which enables a		and outputs the result.			Outputs	
Ę	computer to work.	Зb	Input devices send signals in to a		Inputs	Speaker	
i	computer.		computer e.g. keyboard, mouse or ramera		+	•	
H	: Software is the programs, applications	щ	Output devices communicate the			••	
	and data in a computer.	ł	data in a format useful to the user		Camera		
ų	1 Binary: A computer processes data as a		e.g. printer, speaker, monitor.				
	string of 1s and 0s. This is the only data it	PE	Sensors are specialist input devices	ĩ			
	can process.		which sense changes in the				
2.	Definitions		environment e.g. light,	Ē	nase negative	recentor	
2	a Peripheral – input and output devices.		temperature, moisture, pressure,	ų	Motor and a	Software	
2	b Topology – how a network is organised.		motion, smoke.	5	A consister actuach is two or	JULWAIE	
5	c Virus- software which can harm your	Å	A computer system always	0		7. Types of software	
	computer.		includes inputs, processing and		more computers connected	8a An Operating System is the software	
2	I Firewall – stops unexpected connections		outputs.	ť	together, by cable or wireless.	which enables the computer to run. It	
i	to a network			3	A network enables computers to	manages memory, files, security and	
ç	a Harked – neonle seining arress to a	4	The parts of a computer		share hardware (e.g. printer),	supports applications. Examples include	
i	computer without normission	4a	The case of the computer holds		software (e.g. Word) and to	Windows 7 and Apple OS.	
¢	comparer without permission.		everything together.		communicate data (e.g. email).	7b Applications software is used to carry	
v	g ASUII (American standard Code for	4	The power supply provides	ğ	A Local Area Network (LAN) is	out tasks. These include work	
	Information Interchange) is a way that		electricity.		where computers near to each	processors, internet browsers,	
	text/symbols are turned in to binary.	Ą	The Central Processing Unit (CPU)		other are connected together (like	databases. spreadsheets and	
ŝ	Types of computer		calculates, sorts and searches data.		in the school).	publishing/graphic design software. On	
ŝ	3 Some computers are portable e.g. laptop,	4 d	The motherboard connects the	9	A Wide Area Network (WAN) is	a phone, these are called Apps.	
	tablet, netbook.		parts of the computer together		where computers far apart are	7c Utility software helps your computer	
ភ	b Some computers are designed to stay in		and allows data to travel around.		connected together (like in a chain	run smoothly e.g. virus scanner, firewall,	
	one place e.g. desktop, Home Theatre PC.	4 e	The hard drive is where data is		of shops).	spyware.	
ň	c Computers which are powerful (have lots		stored until it is deleted.	å	The biggest WAN is the internet.		1
	of memory and processing speed) are	4	The Random Access Memory	đ	Networks can get viruses or be	8. Binary data measurement	
	called high-end computers.		(RAM) is where the computer		hacked. They are difficult to run,		
ы	d Computers which carry out basic,		stores data for the task currently		cost a lot and will stop working if	nibble = 4 bits	
	everyday functions are called mid-range		being worked on.		the server breaks down.	hute = 8 hite	
	or basic.	4 8	Fetch, decode and execute is the	39	In a ring network, the computers	bilohutoo /Lh) = 1024 hutoo	
പ്	 Some computers are designed for 		phrase used to describe what a		are connected in a circle. And the	$r = 1000 \text{ m}^2$	
	particular purposes e.g. home theatre,		computer does when it is given an		data travels quickly.	Megabytes (Mb) = 1024kilobytes	
	on-board car computer.		instruction. Data is fetched from	6	In a star network each device is	gigabytes (Gb) = 1024Megabytes	
ភ	The choice of computer will depend on		the hard drive, stored in RAM and		connected to a hub. This is	terabytes $(TB) = 1024Giaabytes$	
	the user's needs.		used to carry out the instruction.		expensive but reliable.	minhain my fail minhain	

Binary explained		C
	Understanding Binary	Writing Binary Numbers
Understanding Denary	It is possible to count in twos.	We write binary numbers by placing a 1 or 0 in
We count in tens.	01	each place. This shows whether we want 1 of that
0123456789 Then 10.11	Then what we think of as 2 is written as two digits	
Then to is written as two digits .	10	For example
Then 10 x 10 = 100 (three digits) 10 x 100 = 1000 (four digits), and so on.	This is because we add a place value every time we multiply by 2. 10 in binary is 2 in denary.	128 64 32 16 8 4 2 1 1 0 1 0 1 0 0 0 0
The place value is calculated by multiplying by 10.	The place values are like this	1010 1000 is Remember
For example, the number 1253 is:		
1 thousands 2 hundreds		1 x 128 A binary number 1 x 32 is united as 2
5 tens	EXAMPLE	1×8 Is writterias a
3 units	To convert 81 in denary to binary	= 168 in denary
Denary Thousands Hundreds Tens Units	1. 64 is the biggest number which goes in to	
number	81. Write 1 in this place.	Adding himmid
1253 1 2 5 3	128 64 32 16 8 4 2 1 1 <th>0 1 1 binary These examples</th>	0 1 1 binary These examples
Converting denary to binary	2. 81-64=17	+01 +01 adding denary
To change a denary number in to a binary number,	16 is the next biggest number which goes in to 17. Write 1 in this place.	1 1 1 1 1 1 1 1 1 1
source by rooking for the biggest place value that goes in to the number. Write a 1 in this place.	128 64 32 16 8 4 2 1 1 0 1 <td>you have to carry a number.</td>	you have to carry a number.
Take this number away from the denary number. Keep moving one place to the right, putting 0s	3. 17-16=1	Jokelli
under each, until you get to another number	Put 0s in all remaining places except the 1.	
which is smaller than what you have left. Put a 1 in	128 64 32 16 8 4 2 1	There are 10 types of people in the world
this place. Take this number away, and repeat.		Those that understand binary, and those that don't.

Unit 7.2 is about how computers work. By the end of the unit you will understand what goes on inside a computer and how computer networks are set up.

<u>Data</u>

Data is information which we can input in to a computer. The technology we use to enter data are called **input devices** (e.g. keyboard, mouse, microphone). The computer will **process** the data, which means it will re-organise it and use it to do tasks. The computer will communicate data back to us using an **output device** (e.g. monitor, printer). This process is known as **IPO**, which stands for Input – Process – Output. In simple terms, this is what any computer system does. The input and output devices are collectively known as **peripherals**. All the parts of a computer system (including the computer itself) are known as **hardware**.

When a computer carries out an instruction it fetches the information it needs, works out what it needs to do, and then does it. This is known as the **fetch-decode-execute cycle**.

There are specialist types of input devices called **sensors**. These sense the environment (e.g. moisture, heat, movement). Sensors do not need humans to input the data.

The only way computers can understand data and process it is by turning it in to a series of zeros and ones (0s and 1s). This is because computers work using electric signals. Either there is an electric signal (1) or there isn't (0). This form of data is called **binary** and the programming language which uses binary is called **machine code**. When we input information in to a computer it is turned in to binary. For example, when we type a letter on a keyboard the computer will turn this in to a binary number. Binary numbers are made up of 1s and 0s and look like this...

1011 0111

We measure the amount of data and how much memory needed using terms like **bit** (1 piece of data), **byte** (8 bits), **kilobyte** (1024 bytes) and **megabyte** (1024 Kb).

The parts of a computer

Computers have **components** (parts), each of which does something different. There is a **Central Processing Unit (CPU)** (which works things out, like your brain), a **motherboard** (which connects everything together) and two types of memory. The **hard drive** stores information for long periods of time and the **Random Access Memory (RAM)** stores information whilst it is being processed.

Types of computer

We use different computers for different things. If we need a portable computer we might buy a **tablet**, **laptop**, **smart phone** or **netbook**. We can buy a **high-end** computer if we need lots of processing power or a **basic** or **mid-range** computer for everyday use. There are computers designed for specific purposes, like a **home theatre PC**.

Computer networks

When we link two or more computers together it is known as a **network**. If this is within a business or home it is known as a **Local Area Network (LAN)** and if it is across a larger geographical area it is known as a **Wide Area Network (WAN)**. The largest WAN is the **internet**.

The computers can be networked in different ways; these are called **topologies**. Examples are a **star**, **ring** and **bus** network. When we choose a topology we think about what speed we require, how expensive it will be and how easily it might break down. If a network operates without cables we call it **wireless**.

Software

Software is the term for computer programs which enable us to do things on the computer. All computers need an **operating system** which allow the user to manage files, run other software and control the order the computer carries out tasks. An operating system will include a **graphic user interface (GUI)**, which makes it easy for a user to interact with software (e.g. by clicking on things and opening 'windows').

Utility software helps you maintain the computer, for example by preventing **viruses** and **hackers**, or blocking unwanted adverts.

To carry out tasks on a computer we use programs called **application software** (apps for short if on a phone). Some examples include a **word processor**, **spreadsheet**, **database**, **presentation software**, **website design** software and **desktop publishers**. Each piece of software will be useful to do a different type of task. Businesses produce their own versions of these types of software. For example, Microsoft is a business which sells software all over the world. It has products such as **Word** (a word processor), **Excel** (a spreadsheet) and **PowerPoint** (presentation software). It is important to remember that the **brand** (product) name is not the same as the **generic name** (type of software).

Using computers

We need to look after ourselves if we use computers regularly so that we do not get **eye strain** or **repetitive strain injury (RPI)**. We can do this by adjusting how we sit and how high a near the computer and peripherals are to us. We can also take regular breaks and look away from the screen. We must also protect ourselves from other people whom we may come in to contact with. Staying safe online will be covered in PSHE and Computing lessons later in the year.

Summary

It will be difficult to understand this unit description before studying all these topics. However, you should understand it by the end of the unit. You will learn what all the specialist words mean, how to calculate in binary and be able to make decisions about which software and hardware to use for different tasks. This knowledge is the beginning of becoming a **computer programmer** and an effective user and manager of computers and computer systems.

1: What is meant by a 'peripheral'? - provide an example to support your answer.

.....

Identifying Input & Output

2: Create a Word Document with the title Inputs and Outputs

Create and complete a table like this:

Peripheral	Input or Output?	What Does it Do?
Digital Camera	Input	A digital camera stores images digitally. The picture can be downloaded to a computer. The picture can also be edited.
Printer		
Scanner		
Monitor		
Mouse		
Keyboard		
Webcam		
Sensor	Image	How Does it Work?
Sensor name 1		
Sensor name 2		
Sensor name 3		

3: Select 3 example of sensors that can be used for everyday items & explain how they work as part of a system using IPO (Input, Processing, Output)

Here's a reminder of the different sensors: Note: think about how you will present your findings?

- Light
- Temperature
- Moisture

- Pressure
- Motion
- Smoke

SCREEN PRINT AND PASTE YOUR INPUT, OUTPUT AND SENSORS

Using the worksheet provided by your teacher, cut (electronically) around the dotted lines and paste (electronically) the parts back together correctly below.

Body Part	Description	Computer Part
	1. The case of the computer holds everything together similar to the way your skeleton keeps your body together!	
	2. Just like your heart pumps blood around your body, the power supply pumps electricity around the computer.	
	3. The processor is like your brain, it's where all the processes are carried out (like thoughts in your head)	
	4. The motherboard is like your central nervous system it sends messages to all of the components inside the computer like your nerves send signals to different parts of your body.	
	5. The hard drive is where all of your documents, pictures, programs etc. are stored on the computer, similar to all of the long term memories in your brain.	
	6. Random Access Memory (RAM) is where the computer stores the current task that is being carried out. This is like your short term memory when you are thinking about what you are about to say or what you have just eaten.	

Human Computer part II

Using the worksheet provided by your teacher, you are required to work in groups of 3 or 4 (selected by your teacher). Add an example of the key components that make up a computer.



Activity 3 – Identifying different computer types

Task 1: Fill in the missing words - Fetch, Decode and Execute

1: When a teacher asks you to do something, you listen (.....), work out what you are being asked to do (.....) and then do it (.....).

Task 2: Spotting the differences between different types of computer

1: Look at this list of computers

Know the difference between your computers...



A **High-End Desktop** is ideal for people who like playing games or doing lots of video editing. They are big powerful and expensive They use a lot of electricity



A **Tablet** is really good for portable use when doing things like surfing, watching media and video. They last for hours and are very light. They are quite expensive



A **Mini** is ideal as a second computer or for situations where space is a problem. They are quite expensive and not very powerful so are really suited to basic tasks



A **Netbook** is ideal if you need to do basic tasks but need to be able to take the computer with you. They are cheap, light and small but not very powerful



A **Mid Range Desktop** is ideal for people who do basic tasks like surfing the net, office work, presentations, photo editing. They are big but quite cheap to buy



A **High End Laptop** is ideal if you need to the same sorts of tasks as a High end Desktop PC but you want to be able to take it with you. They are expensive & don't run for long



A **Basic Laptop** is ideal if you need to the same sorts of tasks as a Mid range PC but you want to be able to take it with you. They are cheap but don't run for very long



A **Home Theatre PC** is ideal for people want a powerful computer in their lounge to watch TV and other media but don't want it to look like a computer. Expensive

2: **Read** the brief description and put the computers into the following categories.

What I'm looking for	Computer	What I'm looking for	Computer
1: Easy to move about		5: Small in size	
2: Usually stays in one place		6: Takes up a lot of space	
3: Expensive to buy		7: Basic	
4: Cheap to buy		8: Powerful	

Task 3: How to select a computer to meet the needs of a user

In this activity you will use your computer sheet (previous task) and you should work with a partner to try and complete the activity below. Complete the decision tree diagram and meet



the needs of the user (USING THE NEXT PAGE)

Option	Image – Selected Computer System
1	

2	
3	
4	
5	
6	
7	
8	

Task 4: Selecting a computer to meet user's needs

Select the most appropriate computer system to meet the needs of the user. You can use the computer decision tree to help you with this task.

The User and Activity	Type of Computer that best meets the needs	Reasons for your choice (hint: back up your points)
Jenny runs a small hotel. She needs a computer to write letters to customers. She recently had a web site set up for her and needs to be able to access the internet to update the site from time to time.		
Jack is a science teacher. As part of his science lessons he produces a lot of slide shows. He needs to show and edit videos to get points across to pupils. He wants a computer he can use at home and work		
Janet works for an estate agent and they need a computer to hold house sales data and photographs of the properties they sell. It would be really handy to have a computer that she could take to appointments but it has to work all day long.		
Joe loves to watch movies and films, he listens to music at home all the time as he often works from home. The problem is that his wife doesn't want to have the lounge cluttered with an ugly PC!		
Jane likes to use the internet at school. She would like a computer that she can do her work on (essays, PowerPoint presentations). She uses e- mail and Facebook all the time. She doesn't have much money to spend so the computer has to be		

The **<u>common units</u>** for measuring digital data, computer file sizes and computer memory.

Unit	Size	Size in "bytes"
Bit	A bi nary digi t , 1 or 0	
Nibble	4 bits	
Byte	8 bits	
1 Kilobyte(kB)	1024 bytes	1,024
1 Megabyte(MB)	1024 kB	1,048,576
1 Gigabyte(GB)	1024 MB	1,073,741,824
1 Terabyte(TB)	1024 GB	1,099,511,627,776
1 Petabyte(PB)	1024 TB	1,125,899,906,842,624

Activity 4 – Binary conversion

Task 1: Converting denary to binary

Convert the following numbers from denary to binary

A: 9

128	64	32	16	8	4	2	1	TOTAL
								9

B: **47**

128	64	32	16	8	4	2	1	TOTAL
								47

C: 167

128	64	32	16	8	4	2	1	TOTAL
								167

D: 253

128	64	32	16	8	4	2	1	TOTAL
								253

E: 95

128	64	32	16	8	4	2	1	TOTAL
								95

F: **195**

128	64	32	16	8	4	2	1	TOTAL
								195

G: **255**

128	64	32	16	8	4	2	1	TOTAL
								255

Task 2: Converting binary to denary

Convert the following numbers from binary to denary

A: 00001001

128	64	32	16	8	4	2	1	TOTAL

B: 00001100

128	64	32	16	8	4	2	1	TOTAL

C: 00010001

128	64	32	16	8	4	2	1	TOTAL

D: 00010101

128	64	32	16	8	4	2	1	TOTAL

E: 01111101

128	64	32	16	8	4	2	1	TOTAL

F: 11001010

128	64	32	16	8	4	2	1	TOTAL

• We'll use the number 200.

- Now we need to do a little mental arithmetic. Starting from the left, we see that the number 128 can go into 200. 200/128 = 1 with a remainder of 72.
- Let's write a 1 below the 128

128	64	32	16	8	4	2	1
1							

- We're left with a 72 remainder.
- We now move to the next number 64. 64 can go into 72. 72/64 = 1 remainder 8
- Let's write a 1 below the 64

128 64 32 16 8 4 2	2 1
--------------------	-----

1

1

- We're left with an 8 remainder.
- We now move to the next number 32. 32 can not go into 8.
- So we write a 0 below the number 32

128	64	32	16	8	4	2	1	
-----	----	----	----	---	---	---	---	--

1 1 0

• We still have the remainder 8. 16 cannot go into 8

128	64	32	16	8	4	2	1
1	1	0	0				

• We still have the remainder 8.8 can go into 8 with a remainder of 0.

1 1 0 0 1	128	64	32	16	8	4	2	1
	1	1	0	0	1			

• As all we have left is 0, we can add trailing 0's to our number.

128	64	32	16	8	4	2	1
1	1	0	0	1	0	0	0

So our binary number is 11001000

How to convert binary into written text

How	How to convert binary to denary (regular numbers):										
STE Enter	STEP 1 Enter all of the ones and zeroes (ie 01001000) into a table like this:										
	128 64 32 16 8 4 2 1										
	0 1 0 0 1 0 0 0										
STEI Add (STEP 2 Add up the numbers above the ones:										
	128 <u>64</u> 32 16 <u>8</u> 4 2 1										
	0 1 0 0 1 0 0 0										
64 + 8 = 72 STEP 3 Look up the total in the Ascii table on the next page.											
				72 =	Н						

ASCII Table

Number	Letter	Number	Letter
65	A	97	a
66	В	98	Ь
67	С	99	С
68	D	100	d
69	E	101	е
70	F	102	f
71	G	103	g
72	н	104	h
73	I	105	i
74	L	106	j
75	К	107	k
76	L	108	l
77	m	109	m
78	N	110	n
79	0	m	0
80	Р	115	ρ
81	Q	113	q
82	R	114	r
83	S	115	s
84	Т	116	t
85	U	117	U
86	V	118	v
87	W	119	ω
88	×	120	x
89	Ŷ	151	y
90	Z	122	z

Task 1: Decode the secret message

Decode the message:

- 1. Convert the binary number to a decimal number
- 2. Look up the **decimal number** in the **ASCII table** to find the equivalent letter.



Use the help sheet called "Decoding Binary Messages" to decode the secret message you have been given.

128	64	32	16	8	4	2	1	TOTAL	ASCII
	1	1	1						

Task 1 continued: Write the secret message here.

Task 2: Writing your name in binary

Using a pen, write **YOUR First & Last NAME**:

128	64	32	16	8	4	2	1	TOTAL	ASCII
					-		-		

Now, write your name using **BINARY CODE** in box below: use the ASCII table and binary table above to help.

NOTES: Adding binary numbers is pretty much the same as adding denary numbers.

Example 1: 01101 + 10111

- 1 + 1 = 0 (carryover the 1)
- 0 + 1 = 0 (don't forget you are carrying 1 from previous)
- 1 + 1 = 1 (carryover the 1)
- 1 + 0 = 1 (you are carrying 1 from previous) + (carryover the 1)
- 0 + 1 + 1 = 10 (you are carrying 1 from previous)

	0	1	1	0	1
+	1	0	1	1	1
1	0	0	1	0	0

Example 2:

- 1 + 1 = 0 (carryover the 1)
- 0 + 0 = 1 (you are carrying 1 from previous) + (carryover the 1)
- 1 + 1 = 1 (you are carrying 1 from previous) + (carryover the 1)
- 1 + 0 = 1 (you are carrying 1 from previous)
- 0 + 1 = 10 (you are carrying 1 from previous)

	0	1	1	0	1
+	1	0	1	0	1
1	0	0	1	1	0

Activity 6 continued: Adding Binary

Try performing the following additions

A:

	1	0	0
+	0	1	1

B:

	1	0	0
+	1	0	0

C:

	0	1	0	0
+	1	1	0	1

D:

	1	1	0	0	1
+	1	0	1	0	1

E:

	1	0	0	1	1	0
+	0	1	1	1	1	0

F:

••						
	1	1	0	1	1	0
+	0	1	1	1	0	0

Activity 7: Putting it all together

Finally, convert the denary (below numbers) to binary, add them together and then covert the answer back to binary – **You must show your working out!**

Δ: 26 ± 16	
A. 20 + 10	
B· 72 ± 172	
C: 11 + 16 + 19	
0.41 + 10 + 18	

D: 60 + 19 + 43 + 14

E: 89 + 12 + 34 + 63

Task 1: Networking Research

Answer the following questions in the boxes provided. For questions with onext to them you will need to use The Internet to help you.

1. What is a computer network?

2. Name the two types of computer network we have been looking at today:

3. Complete the following table

Scenario	Network Type
The Internet	
International Bank	
Lloyds Bank	
Secondary School	
Farmor's School	
Local Library	
University Campus	
Gloucestershire University	
Supermarket	
Sainsburys	

4. Provide three advantages of having a network in school
--

1	 	
2	 	
3	 	

5. Give three *disadvantages* of having a network in school?

1	 	 	
2	 	 	
3	 	 	

6. Computers can be connected in different ways. These are called **Topologies**.

a: Name 3 different network topologies.

1	
2	
3	

Task 1: Take a look at some of the inhabitants of **Survey Street** – they all use software to carry out tasks in their work and daily lives. Study each inhabitant and use the information to help you complete the worksheet.

House 2	Bob - 42, Solicitor	"I find Microsoft Word really useful for carrying out tasks like writing letters and reports. My children use it to type up their homework. Most of the work I do with the Word Processor is text based, you can format the text and change the fonts and font sizes. Copy and paste is really useful when you are writing similar letters, and my children find the spell-checker helps them correct their work. We can save and print all of our work. I've also discovered that I can use mail merge to insert addresses that are stored in a table into letters. This is really useful when I want to send the same letter to lots of people."
House 4	Martha - 35, Teacher	"We ran a competition at school for the students to create a website following an adventure week away. They used some software called Dreamweaver or WebPlus, and it let them see the code, make the web page and also see how the web page would look on the internet. When they were on the view where they could make the webpage, they could add text and images and also tables. They could also add hyperlinks and set the colours on the page."
House 6	Dave - 37, Sales Rep	"I use presentation software a lot for my work. We have to stand up in front of clients to persuade them to buy our products. I make a presentation and run it from my computer. I can create different slides with text and pictures on them, and then I can run the slide show to present it to the client. I can even add animation, sound and video when I want"
House 8	Brian - 23, Video Shop employee	"We use a database to keep records of all of our customers and of all our videos. We can enter the data about the customers into tables, and we can enter all the film details into another table. We keep a record of which customer has rented which film. If we want to search for a certain customer or film, we can run a query to pull out the information. The manager asks us to print out reports from the database every week - for example, the films that have been rented that week organised by type of film"
House 10	Lizzie - 15, at school	"We had to use a drawing program called DrawPlus to create a logo at school for our GCSE course. The package we used had a palette of different colours, and you could select different brushes and line thicknesses. There was a fill tool to fill an area with colour, and shape tools. You could select an area and copy and paste it. If you needed to, you could zoom in on your work for extra detail."
House 14	Louise - 32, At home with kids	"I keep a spreadsheet of all of our household expenditure because we want to save to extend the house and we want to keep track of our money. I use a spreadsheet because it lets me enter text, numbers and dates in as the details of what we have spent. I put the information into the cells on the spreadsheet. I can use formulas to calculate our weekly expenditure, and there are some functions that we use as well. I can copy and paste the formulas so I don't have to type lots in."

2: Complete this table by exploring the "**Survey Street**" (*previous page*). Fill in any gaps, and note down the main features each type of applications software has:

House	Application Software	Example	Why?
2	Word Processor	Microsoft Word	Good for writing letters and reports.
4	Web design software		
6			
8		Microsoft Access	
10			
14		Microsoft Excel	

Operating systems – Researching/Reading

To use applications and create and access files, we use operating systems on our computers – *Windows 7 PRO* being the one you use at school.

Operating systems:

1. Let you manage your files – copy, move, delete, rename them

- 2. Provide an interface to the applications and saved files you can click on icons in windows to open a piece of software or a file
- 3. Control the order in which jobs are done on the computer (e.g. if you are trying to do two operations at once windows can multitask)

It's like a manager – it runs things and manages all the actions you do with the computer.



Utility software

Other kind of software is designed to help maintain your computer and ensure that it runs smoothly, used to complete specific tasks, often to do with file management on the computer.

Examples:

- Virus scanner
- Firewall A firewall is a piece of software that prevents access to a network or computer from hackers.
- Spyware / Ad blocking



1: You also need to know about other types of software. Read previous page and complete this table in *your own* words:

Other category of software	Brief Description of what the program does (don't forget to support your answers)
Operating System	
Utility Software	

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