

Database Knowledge Organiser

| ID | First Name | Surname | Title | Gender | Date of Birth | Address | Town |
|----|------------|----------|-------|--------|---------------|----------------------|----------------|
| 1 | Layla | Fong | Mrs | F | 20/07/1982 | 27 Park Lane | Birmingham |
| 2 | Paige | Turner | Prof | F | 14/03/1988 | 78 Manor Road | Chertsey |
| 3 | Americk | Patel | Dr | M | 14/04/1988 | 14 York Avenue | York |
| 4 | Terry | McDougal | Dr | M | 19/04/1988 | 19 South Avenue | London |
| 5 | Sam | Smith | Prof | M | 15/04/1988 | 65 Park Road | Crediton |
| 6 | Mark | Smith | Prof | M | 08/01/1954 | 38 The Lane | Worthing |
| 7 | Sarah | Scott | Miss | F | 11/09/1990 | 76 Alexander Road | Burdon |
| 8 | Mark | Smith | Mr | M | 20/02/1990 | 44 School Road | Tombridge |
| 9 | Richard | Dean | Prof | M | 08/08/1978 | 2 Main Road | Deeside |
| 10 | Bethany | Jones | Miss | F | 07/04/1987 | 68 Cross Hand Road | Peterborough |
| 11 | Chloe | Thomas | Dr | F | 15/01/1975 | 62 York Lane | London |
| 12 | Veronica | Brown | Prof | F | 16/02/1974 | 68 Netherlands Close | Woking |
| 13 | Stephen | Jones | Prof | M | 01/04/1987 | Windsor Street | Liverpool |
| 14 | Leah | Jackson | Dr | F | 04/06/1984 | Highwayman Road | Benhill-On-Sea |
| 15 | Simon | Morgan | Prof | M | 24/08/1978 | 47 Winchester Road | Croydon |
| 16 | Stephen | Douglas | Mr | M | 20/02/1988 | 70 Main Way | Liverpool |
| 17 | Nichola | Wilson | Prof | F | 17/04/1963 | 18 Main Lane | Bradford |
| 18 | Emily | King | Prof | F | 11/05/1962 | 51 Kings | Wallsend |
| 19 | Chloe | Davies | Prof | F | 27/03/1968 | 55 Park | Wallsend |
| 20 | Liam | Wright | Dr | M | 01/12/1957 | 50 Main | Wallsend |

| | Advantages | Disadvantages |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Paper based | <ul style="list-style-type: none"> • Can carry them around with you. • Don't need training to learn how to use them. • Cheap to set up. | <ul style="list-style-type: none"> • Can be lost. • Can't easily make backup copies. • Hard to update or make changes. |
| Computerised | <ul style="list-style-type: none"> • Can easily make backup copies. • Can easily make changes. • Can easily sort data into order e.g. Alphabetic. • Can search for particular records very quickly. | <ul style="list-style-type: none"> • Can be expensive to set up if you have to get a professional to make it. • If there is a power-cut, you can't use it. • You need to have a computer. |

| Key terms | Definition |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Flat file database | When a database has only one table and everything is stored in that one table it is called a "flat-file database". |
| Relational database | Many databases which are used in organisations are known as "relational databases". This means that the database contains more than one table and these are linked together. |
| Unique/primary field | A "Primary Key" is a field which allows the user to uniquely identify a record in a table. |
| Foreign Key | A link to a primary key in a relational database table. |
| Entity | An object, eg a person or film. In databases, entities are the subjects whose attributes are stored as records. |
| Query | A search or question performed inside a database. |

| Data Types | | |
|-------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------|
| Type | Examples | Description |
| Text | Smith, Red, PE23 5AW | Strings of letters or a mixture of letters and number or just numbers that do not need to be used in calculations |
| Number | 1, 23.67, -0.23 | Numbers can include positive or negative numbers and decimal places |
| Date/Time | 15/2/2001, 12:45 am | Dates in many different formats or time values |
| Currency | £45.99 | Numbers including the symbol for monetary values |
| Boolean | Yes or No, True or False | Values which are either Yes or No, True or False or On or Off |
| AutoNumber | 1,2,3 | Generates a number automatically |

Hardware needed to connect to the internet:

A computer network is: Two or more computers connected together to share information and resources.

Hub
A device that connects nodes together.
Not intelligent – data is sent to all nodes across the **whole of the network**.
Cheap devices – **USB hubs** useful in home computer installations.

Switch
• A device that connects nodes together.
• An **intelligent device** that can send data to the nodes that the data is intended for.
• This **reduces network traffic** because making the **network run faster**.

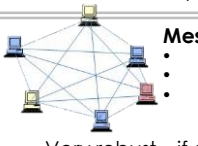
If the LAN is to connect to the Internet, a router is needed.
Routers work by sending data between networks (e.g. over the internet)

WAN -Wide Area Network
• Covers a large geographical area – may be worldwide
• Devices may be provided by telecoms companies like phone lines and satellites

A LAN is a **Local Area Network**.
• It is a connected set of computers and other devices.
• Each device is called a node (e.g. computer, printer, etc.)
• A LAN is installed on one site.
• Relatively small
• It is owned by the organisation

Advantages
• It allows communication between workers or students
• It allows data to be shared
• It allows peripherals (e.g. printers) to be shared
• It allows computers to be upgraded more easily
• It allows distributed processing – the ability for a single program to be run simultaneously at various computers.

Disadvantages
• Expertise required to set up and maintain a large network (costly)
• Security issues from unauthorised access to data
• Measures to secure a network include:
• Passwords – strong passwords use a range of character types
• Changing passwords frequently
• Not allowing users to install software
• With wireless access, use encryption



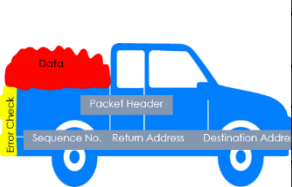
Mesh topology
• Each node relays the data it receives to other nodes within reach.
• There is **no** central node in a mesh network.
• Using cables means the network would become too expensive. However, using wireless a mesh offers a lot more advantages over a star network, such as:
○ Very robust – if one node fails the other nodes within range allow data transmission around the network to continue.
○ Excellent wireless range.

Advantages:
Lower Cost – no need to purchase hardware or software licences and you only pay for what you need.
Better Performance – Processing time on demand.
Less maintenance – somebody else manages the servers and core software.
Unlimited storage capacity – Use it when you need it.

Disadvantages
Requires a constant connection – if the connection is lost then the system will not work.
Loss of control – The problem of somebody else controlling the hardware and software may result in security concerns.
Unpredictable cost – the cost may fluctuate each month which may cause problems with budgeting in the future.



Data Packets:
Files are split into millions of **data packets** when sent across a network or the internet. Packets get sent by different routes according to availability. When you send a file online, the parts of the file might travel one way around the world and the other parts may go in the opposite direction! Packets are reassembled at receiving end.
Typical packet structure:



Y8: Networks and Technology

| Key term | Definition |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Network | Two or more computers connected together to share data and devices |
| LAN | A network over a small (local) area (building or site) |
| Network Interface Card | A piece of hardware which converts computer signals into a form that can be sent over a network (and convert them back when network data is received) |
| Switch | A device which passes networked data to the correct nodes |
| Peripheral | Something that is on the edge of or attached to the computer, e.g. printer, mouse, keyboard, etc. |
| Local area network (LAN) | This is a network within a single building. |
| Wide area network (WAN) | This is a network over a wider geographical area such as in different buildings, cities or even countries. |
| Internet | The Internet is a huge world wide network which allows computers to communicate and share information. |
| Modem | This stands for Modulator Demodulator. It converts a digital signal (that the computer uses) into an analogue signal which can be transferred down traditional telephone lines and then converted back into a digital format at the other end so that the computer can read it again. |
| Network Card | This is a card which is built into the computer and slots into the motherboard. It provides a socket at the back of the computer for the network cable or to receive the wireless signals. |
| Internet Service Provider (ISP) | The company that provides you with access to the internet – depending on the service it might be free or involve making regular payments to subscribe. |
| Internet protocol (IP) | IP stands for Internet Protocol, which means the rules that networks have agreed to so that they can communicate easily with each other. |
| Data Packets | These are created from the splitting up of a file when data is sent across the internet. It is reassembled at the receivers' end to reform the file. |
| Computer virus | A computer virus enters your system without your knowledge and can then copy itself to other computers. They are usually transferred to other computers and can be caught by transferring files through a USB drive or more commonly through attachments sent with emails. Most computer viruses will alter, delete or damage the files in the computer system. |
| Virus Checker | Antivirus software should be installed on your system to scan for threats and quarantine potential viruses. |
| Worms | Worms can do as much damage as viruses but the important difference is how they are spread around a system. They creep around the network automatically, copying themselves and slowing it down. |

| | |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Trojan horse | A Trojan horse is software that pretends to be something useful, so the user downloads it, but actually it does something else. |
| Spyware | Spyware collects information about users so that it can be used for fraudulent purposes. |
| Keylogger | Keylogger software is used to record the user's keystrokes and can find out peoples passwords, bank details, etc. |
| Adware | Adware is software that is automatically downloaded and installed on your computer so you are directed to advertising material. |
| Input device | Input Devices: these are used to control the computer and are used to put data into the system. |
| Output device | These get something out of the computer for instance data or sound. |
| Storage device | These are used to save data onto and can be inside the computer or portable so the data can be taken with the user. |
| Operation Software | Used to control the workings of a computer, e.g. Windows 10 |
| Application software | Installed onto the computer to perform a specific task such as creating documents or spreadsheets. |
| Utilities software | These carry out specific tasks which help the computer system run efficiently such as virus checking and Winzip. |
| Cloud computing | The practice of using a network of remote servers hosted on the Internet to store, manage, and process data, rather than a local server or a personal computer. |
| Workstation | This is a desktop computer, where you complete your work. It is connected to the network. |

When you analyse two or more existing websites you have browsed, you can normally comment on:

- **House style** – How the website uses image, colour, etc. to portray their organisation.
- **Audience** – Who the website is aimed at.
- **Size** – How many pages there are on the website (try to find something called a 'site map').
- **Techniques** – What design skills were used in producing the web pages.
- **Search** – You can look at search engine rankings when you search for a website and you can look at the accuracy of a search box on the website itself.

HomePage

| Test | User Requirement Addressed | Expected Result | Actual Result | Pass / Fail | Date | Corrective Action |
|--------------------------------|--------------------------------------------|-----------------------------------------------------------------------------------|---------------|-------------|----------|-------------------|
| Logo Displayed | The website uses the companies house style | CompuTech logo is displayed | As expected | Pass | 01/12/09 | None |
| Navigation Bar Appears | Website is easy to navigate | Navigation bar appears | As expected | Pass | 01/12/09 | None |
| Navigation Bar Drop Downs Work | Website is easy to navigate | When mouse goes over labels - menus drop down | As expected | Pass | 01/12/09 | None |
| Navigation Bar Hyperlinks Work | Website is easy to navigate | When mouse goes over turns to red and can click on it to take you to correct page | As expected | Pass | 01/12/09 | None |

Test plan table: example

| Key term | Definition |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Accessibility | This is the capacity of a website to be used by people with disabilities, including visually impaired visitors using screen readers, hearing impaired visitors using no sound, colour blind people, or those with other disabilities. A website with low accessibility is going to be potentially impossible for those with disabilities to use. |
| Anchor Text | The words that appear clickable in a text link. Usually used to take the user to top of the page or bottom of page when clicked. |
| Browser | This refers to the program a website visitor is using to view the web site. Examples include Safari, Firefox, Google Chrome, Opera, and Internet Explorer. |
| Navigation | Navigation refers to the system that allows visitors to a website to move around that site. Navigation is most often thought of in terms of menus, but links within pages, breadcrumbs, related links, pagination, and any other links that allow a visitor to move from one page to another are included in navigation. |
| Site plan | A site map is a model of a website's content designed to help both users and search engines navigate the site. |
| House style | How the website uses image, colour, etc. to portray their organisation. |
| Navigation bar | A series of common menus or buttons should be added to each page for consistency |
| Hyperlink | Hyperlinks enable you to move from one page to another page. These can be graphical (whole-image links), hotspots (where different parts of an image take you to different pages), rollover buttons (buttons which change colour when you move your cursor over them), or polygon links (links using different shapes). We can also use anchors to take us to different parts of one, very long web page. |
| Banners | These are usually animated advertisements. Leader board banners appear at the top of each page and skyscraper banners appear down the side. |
| Hotspots/image maps | Where different parts of an image take you to different pages |
| Rollover images | Buttons which change colour when you move your cursor over them |
| Radio buttons | A radio button is an element of the graphical user interface (GUI) which allows a user to select a single item from a predefined list of options. |
| Drop-down menus | A drop-down menu, drop menu, pull-down list, picklist) is a graphical control element, similar to a list box, that allows the user to choose one value from a list |
| Templates | Master pages enable you to create a basic outline of how each page on your site will look. All new pages can then use this template to create a consistent structure. |
| Homepage | This is the first page visitors will see and should link to the other pages. |

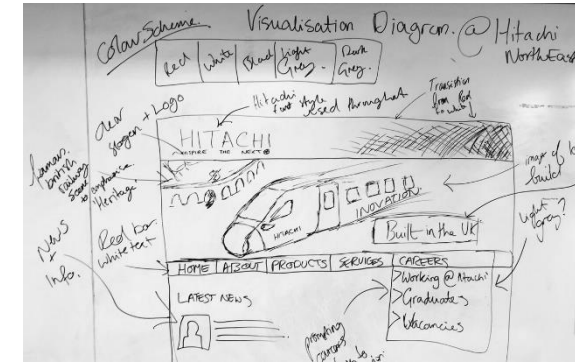
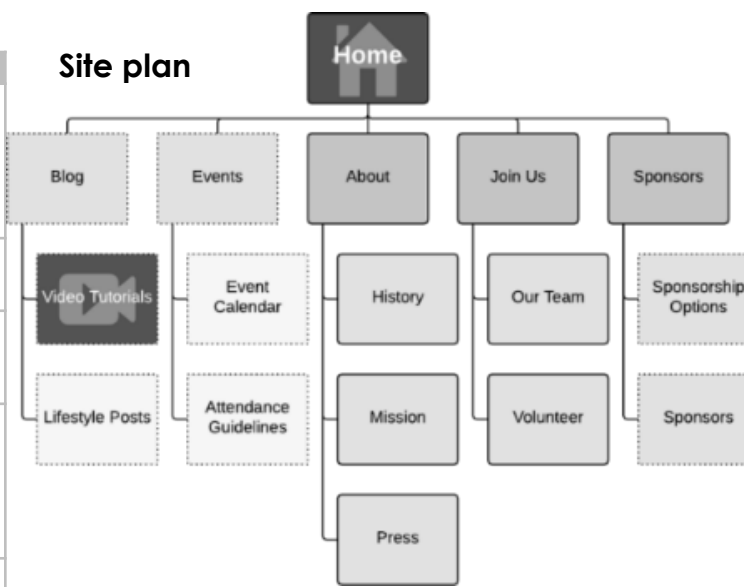
Y8: Websites

Visualisation Diagram

| Key term | Definition |
|----------|------------|
|----------|------------|

| | |
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Site plan



Work Plan

| Task Name | Duration | Start | Finish |
|-------------------------------------------|--------------|--------------|-----------|
| 1 Preliminary Tasks | 17 days? | Mon 8 09:03 | Tue 30 09 |
| 2 Analysis tasks | 50 days? | Mon 8 09:03 | Fri 14 11 |
| 2.1 gather data | 50 days? | Mon 8 09:03 | Fri 14 11 |
| 2.2 analyse data | 1 day? | Mon 8 09:03 | Mon 8 05 |
| 2.3 develop business requirements report | 1 day? | Mon 8 09:03 | Mon 8 05 |
| 2.4 develop technical requirements report | 1 day? | Mon 8 09:03 | Mon 8 05 |
| 3 Design tasks | 1 day? | Mon 8 09:03 | Mon 8 09 |
| 3.1 develop site map | 1 day? | Mon 8 09:03 | Mon 8 05 |
| 3.2 develop storyboard | 1 day? | Mon 8 09:03 | Mon 8 05 |
| 3.3 develop navigation map | 1 day? | Mon 8 09:03 | Mon 8 05 |
| 3.4 document and submit design | 1 day? | Mon 8 09:03 | Mon 8 05 |
| 4 Implementation tasks | 144 days? | Mon 8 09:03 | Fri 26 03 |
| 4.1 develop templates | 1 day? | Tue 24 02:04 | Tue 24 02 |
| 4.2 develop navigation systems | 0.5 days? | Fri 27 02:04 | Fri 27 02 |
| 4.3 develop scripts | 0 days? | Fri 26 03:04 | Fri 26 03 |
| 4.4 develop multimedia elements | 0 days? | Fri 26 03:04 | Fri 26 03 |
| 4.5 develop pages | 1 day? | Mon 8 09:03 | Mon 8 05 |
| 5 Testing Tasks | 224.33 days? | Mon 8 09:03 | Fri 16 07 |
| 5.1 test against technical requirements | 0.33 days? | Fri 16 07:04 | Fri 16 07 |
| 5.2 conduct usability testing | 0 days? | Fri 16 07:04 | Fri 16 07 |
| 5.3 conduct client acceptance test | 1 day? | Mon 8 09:03 | Mon 8 05 |

Assets table

| Asset | Where found | P/S * | Details of permission if used | Details of editing (how assets have been developed to make them suitable) | Where used (be specific, which part of the game have you used the asset?) |
|-------|---------------------------------------------------------------------------------------------------------------------|-------|-----------------------------------------------------------|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | https://www.flickr.com/photos/lexturex/8412862833/ | S | It was labeled for re-use so I have permission to use it. | I have cropped it so it fits the size that game maker uses. | I used it for the background of my main menu screen, loading, backstory, instruction, winner and looser screen. It is also used for my instruction manual and my banner for my website. |
| | I created this on adobe illustrator. | P | I made it so I own the copy rights over it. | I made it using various different shapes. | I used it as my logo so is on my main menu screen, loading, backstory, instruction, winner and looser screen. |

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Y8: Flowcharts and sequencing

Christmas lights flowchart

Key term and definition

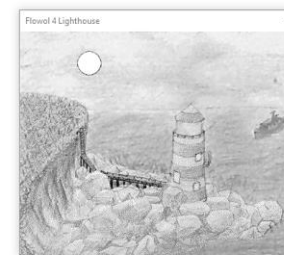
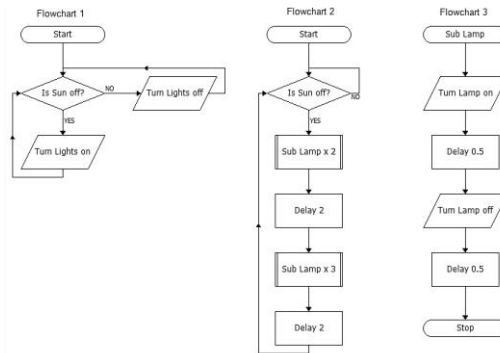
| | |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Application | A device or program enabling a user to communicate with a computer. |
| Mimic | Controllable pictures which respond visually and realistically to commands the user has inputted. |
| Control | Computer control means that a computer is part of the control system. The computer is normally used to run the control program. |
| Monitoring | The process of being aware of what is happening around you, in this case the computer system monitors the control system to check it is working correctly. |
| Sensor | A sensor is a device which is designed to measure some physical quantity in its environment, an example is a heat sensor that measures the room temperature. |
| Subroutine | In computer programming, a subroutine is a sequence of program instructions that perform a specific task, packaged as a unit. |
| Actuator | A hardware device that moves or controls a mechanism. A motor is an actuator. |
| Sequence | Sequencing is the specific order in which instructions are performed in an algorithm. |
| Selection | A decision within a computer program when the program decides to move on based on the results of an event. |
| Iteration | In computer programming, this is a single pass through a set of instructions. |
| Flowchart | A diagram that shows a process, made up of boxes representing steps, decision, inputs and outputs. |
| Algorithm | A sequence of logical instructions for carrying out a task. In computing, algorithms are needed to design computer programs. |

What is a system flowchart?

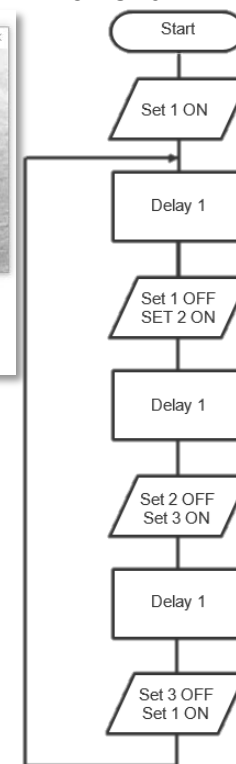
System flowcharts are a way of displaying how data flows in a system and how decisions are made to control events. To illustrate this, symbols are used. They are connected together to show what happens to data and where it goes.

Symbols linked together form a flowchart. Flowchart programming consists of:

- sequences of instructions that lead to a real-life simulation
- decisions that result in two different actions
- loops that repeat an action until a certain condition is met
- variables that store data for use in decision making



Lighthouse solution



Basic flowchart symbols

| Name | Symbol | Usage |
|-----------------|--------|---------------------------------------------------------------------------------------------------------------------------|
| Terminator | | Starts or stops a process. |
| Input or output | | An input is <i>data</i> received by a computer. An output is a <i>signal</i> or data sent from a computer. |
| Process | | An instruction or a command. |
| Decision | | A decision, either yes or no. For example, a decision based on temperature that turns a central heating system on or off. |
| Line tool | | Connects the symbols. The arrow indicates direction. |

Sensors

| Sensor | Measures | Where Used |
|-----------|------------------------------------------|--------------------------------------------|
| Heat | Temperature | Living room for central heating system |
| Humidity | Water vapour in the air | Swimming pool, greenhouse |
| Infra-red | Infra-red radiation e.g. body heat | Security alarm systems |
| Light | Light levels | External security lights |
| PH | Acid/alkali levels e.g. pH of soil | Environmental experiments, river pollution |
| Pressure | Pressure | Burglar alarm systems, automatic doors |
| Smoke | Smoke in the atmosphere | Offices |
| Sound | Levels of sound | Security alarm systems |
| Tilt | Angle of tilt | Windows in security alarm system |
| Touch | Detects if one object bumps into another | Computer controlled robots |

Computer control

Control technology is used to:

- operate systems, e.g. traffic lights
- control actions, e.g. a robot's movement
- create video games
- control manufacturing devices, e.g. laser cutters.

Computers follow instructions or sequences programmed into them. A flowchart can be used to help design a sequence.

Sensors are used to measure physical quantities such as temperature, light, pressure, sound, and humidity. They send signals to the processor. There are many items within our homes that use control systems. These include:

- electric kettles
- washing machines
- TV remotes
- TV recording devices

We **monitor** the system with the above sensors to make sure it is working properly.

Advantages

- ✓ Can operate 24 hours a day without taking a break.
- ✓ Can work without holidays or sick days.
- ✓ Will work without any wages.
- ✓ Will accurately repeat actions over and over again,
- ✓ Can process data from sensors very quickly.

Disadvantages

- x If the computer malfunctions then the system won't work.
- x If the power is cut then the system won't work.
- x The computer can't react to unexpected events like a person could.

Y8: Moose Production

| Key vocabulary | Definition |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Logo | A symbol or other small design adopted by a business to identify its products |
| Animated banner | Creating frames with timings attached to them so it appears like they are moving |
| Visualisation diagram | Plan of the final product. |
| Annotations | Labelling the diagram explain what you have done and why. |
| Formula | Mathematical expression, such as adding or averaging, that performs calculations on data in a spreadsheet |
| Functions | Predefined formula in a spreadsheet |
| Formatting | Making the spreadsheet look appealing to the user by adding colour, merging cells, etc. |
| Spreadsheet modelling | Computer models of mathematical data, such as budgets, are usually done using a spreadsheet application that processes and performs calculations on the data entered by the user. |
| House style | Consistent layout created when designing something so it doesn't draw the attention away from the message being put across. |
| Colour scheme | Looking at colours that match each other rather than just applying colours we like. |

| Operator | What does it do? | Function | Description |
|-------------------------------|------------------|-----------------|-------------------------------------------------------|
| + | Addition | =SUM(A1:A7) | This would add up the cells from A1 to A7 |
| - | Subtraction | =AVERAGE(A1:A7) | This would work out the average of cells A1 to A7 |
| * | Multiply | =MIN(A1:A7) | This would find the lowest value from cells A1 to A7 |
| / | Division | =MAX(A1:A7) | This would find the highest value from cells A1 to A7 |
| All formula must start with = | | | |

File formats

| | |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Video File Formats | <ul style="list-style-type: none"> MPG - Compressed file formats MOV - small file size MP4 - fast loading online |
| Audio File Formats | <ul style="list-style-type: none"> MP3 (compressed / small file sizes / good for devices) AIFF (uncompressed / high quality / Mac only) WAV (uncompressed / high quality / Windows only) |
| Image File Formats | <ul style="list-style-type: none"> JPG (lossless compression; photography) PNG (lossless compression; photography) TIF (large file sizes / Posters / high quality printing) PDF (un-editable/ Documents) GIF (small file sizes/ Online / web buttons) |

Client requirements

Whether you are creating something for yourself or for a client, your project will have a set of client requirements.

Purpose of client requirements:

- Provide the media developer with outline information and any constraints (timescale)
- Clear statement of what is to be produced

Content of client requirements:

- Statement of what media product is needed
- Purpose of the media product
- Target audience
- Content
- Timescale
- Restrictions
- House style

Target audience

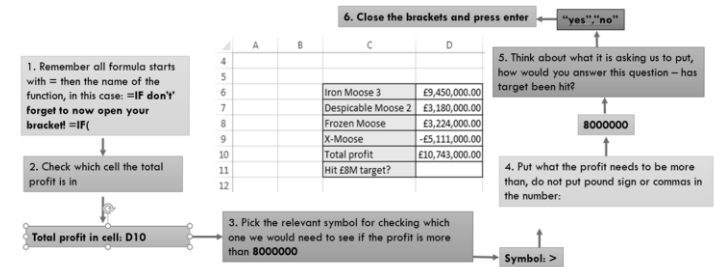
Who is the final product intended for?

Categories:

- Age - need to be clear about the age group. (E.G. 6-12, 12-18, 18-40, 40+)
- Gender
- Location - local, national, international
- Ethnicity - background, culture, race, religion, language

Moose Production IF statement

- Do an IF statement to see if the £8,000,000 target has been hit.
- Lets break this down:



Answer

=IF(D10>8000000,"Yes","No")

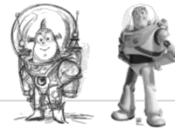
Visualisation diagrams

Purpose of a visualisation diagram:

- Plan the layout of a still image in a visual manner
- Show how the finished item may look

Content of a visualisation diagram:

- Multiple images and graphics showing size and position
- Colours and colour schemes
- Position and style of text
- Fonts to be used
- Annotation providing more detail



Research

- Primary sources: the information is obtained first hand from an original source
- Secondary sources: the information is obtained second hand where somebody else has created the data

An IF statement checks to see if a statement is **true or false** and then does one of two things depending on the result.

It looks like this in Excel: =IF(Condition check, Do this if true, Do this if false)

For example, consider this formula written in spreadsheet cell B1:

=IF(A1 > 0, "Profit", "Loss")

This checks to see if the value of cell A1 is more than zero. If it is, then the word "Profit" appears in cell B1 otherwise the word "Loss" appears.

Visualisation diagrams

Purpose of a visualisation diagram:

- Plan the layout of a still image in a visual manner
- Show how the finished item may look

Content of a visualisation diagram:

- Multiple images and graphics showing size and position
- Colours and colour schemes
- Position and style of text
- Fonts to be used
- Annotation providing more detail



Target audience

Who is the final product intended for?

Categories:

- Age – need to be clear about the age group. (E.G. 6-12, 12-18, 18-40, 40+)
- Gender
- Location – local, national, international
- Ethnicity – background, culture, race, religion, language

Research

- Primary sources: the information is obtained first hand from an original source
- Secondary sources: the information is obtained second hand where somebody else has created the data

Work plans

Purpose of a work plan:

- Provide a timescale for the overall project to be completed
- To map out against time for all the different aspects of the project

Content of a work plan:

- Tasks
- Activities
- Durations – amount of time a task is expected to take
- Timescales – how long the project will take
- Milestones – key dates when a section is completed
- Deadlines – date when something has to be done by
- Resources – what is needed
- Contingencies – back up plan, extra time if needed

Client requirements

Whether you are creating something for yourself or for a client, your project will have a set of client requirements.

Purpose of client requirements:

- Provide the media developer with outline information and any constraints (timescale)
- Clear statement of what is to be produced

Content of client requirements:

- Statement of what media product is needed
- Purpose of the media product
- Target audience
- Content
- Timescale
- Restrictions
- House style

Storyboards

Purpose of a storyboard:

- Provide a visual representation of how a media project will look along a timeline
- Provide a graphical illustration of the sequence of movements
- Provide guidance on what scenes to film or create

Content of a storyboard:

- Images
- Locations
- Camera shot types and angles
- Camera movement
- Shot length and timings
- Lighting
- Sound

Research

- Primary sources: the information is obtained first hand from an original source
- Secondary sources: the information is obtained second hand where somebody else has created the data

Year 8 KO - Graphics

Lossy and Lossless

Compression can be **lossy** or **lossless**. Lossless compression means that as the file size is compressed, the picture quality remains the same - it does not get worse. Also, the file can be decompressed to its original quality. Lossy compression permanently removes data.

| Primary Sources | Secondary sources |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> Autobiography First-hand account Diary Interview Video footage Photo Official records | <ul style="list-style-type: none"> Biography Second-hand account History textbook Magazine article Report Other people's products News broadcast |

Bitmap graphics

Bitmap graphics made with painting packages consist of many tiny dots called pixels. It is possible to edit each individual pixel. Since the computer has to store information about every single pixel (the colour for example) in the image, the file size of a bitmap graphic is often quite large. Bitmap graphics lose quality when they're resized.

Vector graphics

Vector graphics are based on mathematical relationships with control points that make up the image. Information is not stored about each pixel. These points are connected by lines and curves called vector paths or vectors.

A vector object is a shape made up of vector paths. It is possible to edit each object separately, for example, change the shape, stroke, fill, size and position. A stroke follows the outline of the vector path and a fill adds a colour to the area inside the path.

Advantages

Smaller file size
Scalable - when you resize a vector graphic the mathematical relationships mean that the image does not lose quality.

Disadvantage

Vector graphics are never going to be as lifelike as bitmaps or photos. They will always appear computer generated.

Image copyright ©

Before capturing and collecting images to use in your project, make sure you understand the law surrounding image copyright.

You can read about image copyright in the Copyright section of Managing Projects. Don't forget to acknowledge the copyright of the images you use in your project.

File formats

| | |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Video File Formats | <ul style="list-style-type: none"> MPG - Compressed file formats MOV – small file size MP4 – fast loading online |
| Audio File Formats | <ul style="list-style-type: none"> MP3 (compressed / small file sizes / good for devices) AIFF (uncompressed / high quality / Mac only) WAV (uncompressed / high quality / Windows only) |
| Image File Formats | <ul style="list-style-type: none"> JPG (lossless compression; photography) PNG (lossless compression; photography) TIF (large file sizes / Posters / high quality printing) PDF (un-editable/ Documents) GIF (small file sizes/ Online / web buttons) |