Hardware

Hardware is all the physical parts of a computer. These are the parts you can see and touch. A computer system consists of inputs, outputs, processing and storage.

Types of hardware

The following are the main types of hardware:

Input

Something that goes into the production of output

Process

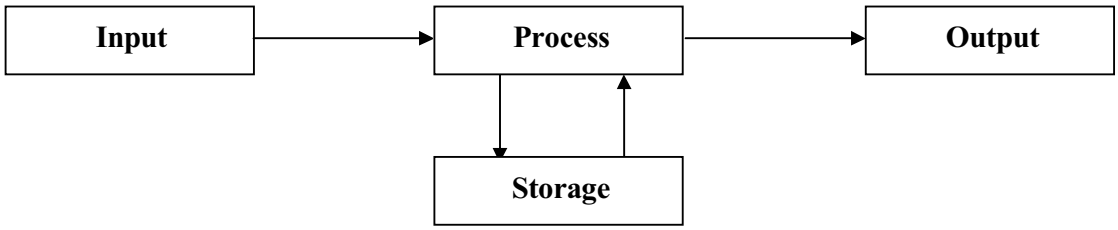
In computing, a process is an instance of a computer program that is being executed878798
a result

Storage

A storage device may hold information, process information, or both

Output

End product: final product; the things produced



I used the following hardware during this task:

Input
Microsoft QWERTY Keyboard
Microsoft Optical Mouse
Scanner

Process
Intel Core Duo Processor

Storage
120GB SATA Hardrive
1GB RAM
4GB transcend USB

Output
DAEWOO 17" Monitor (CRT)

Printer

The following table shows how a device works and also the advantages and disadvantages of the device:

e of ce	Price	The way it works	Advantages	Disadvantages
ard	£10.00	A keyboard is an input device used to enter textual information into a computer system. Computer keyboards are provided for many different languages and dialects, with different layouts for each. The most commonly known keyboard is a US Standard 102-Key Keyboard. This keyboard uses the QWERTY layout. The keyboard functions by means of electrical switches. Each key compresses an electrical switch, which closes an electrical circuit. This generates a keystroke signal, which is processed by the keyboard's onboard processing chip. This chip then converts the keystroke into what is known as a "scancode." This scancode is transmitted to the computer, which then processes the scancode into either part of a system command, or displays it in the currently selected text entry field. By pressing on the numbers and letters. (http://wiki.answers.com/Q/How_does_a_keyboard_work) (04/12/2010)	The advantages of keyboard are: 1. Keyboards have special key that perform specific functions. 2. Instead of using the mouse to move the cursor you can use the arrow key situated on the keyboard to move the cursor on the monitor. 3. Keyboard are less	The disadvantages of keyboard are: 1. The person using the keyboard have to learn how to type. 2. The frequent movement from keyboard to move and back could cause carpal tunnel syndrome.

			expensive because it comes with every computer.	
al **e**	£9.00	The optical mouse is able to work on just about any surface and without the need for a mouse pad; most optical mice use a small, red light-emitting diode (**LED**) that bounces light off that surface onto a complimentary metal-oxide semiconductor (**CMOS**) sensor. Recent innovations are laser-based optical mice that detect more surface details than comparable LED technology. This results in the ability to use a laser-based optical mouse on even more surfaces than an LED mouse. (http://wiki.answers.com/Q/How_does_a_mouse_work&isLookUp=1) (04/12/2010)	The advantages of an optical mouse are: 1: Works on a wider variety of surfaces than a normal mouse.	The disadvantages of an optical mouse are: 1: An optical mouse may have problems on glossy surfaces.
			2: They have less moving parts so they are less likely to break.	2: Higher sensitivity means that some people could find it hard to control.
			3: They are easier to maintain so they do not require cleaning.	3: Many optical mouse have lights in them, which some people find annoying.
:ore **ssor**	£259.00	In a dual core processor each core handles incoming data strings simultaneously to improve efficiency. Just as two heads are better than one, so are two hands. Now when one is executing the other can be accessing the system bus or executing its own code. Adding to this favourable scenario, both AMD and Intel's dual-core flagships are 64-bit. To utilize a dual core processor, the operating system must be able to recognize multi-threading and the software must have simultaneous multi-threading technology (SMT) written into its code. SMT enables *parallel* multi-threading wherein the cores are served multi-threaded instructions in parallel. Without SMT the software will only recognize one core. Adobe® Photoshop® is an example of SMT-aware software. SMT is also used with multi-processor systems common to servers. A dual core processor is different from a multi-processor system. In the latter there are two separate CPUs with their own resources. In the former, resources are shared and the cores reside on the same chip. A multi-processor system is faster than a system with a dual core processor, while a dual core system is faster than a single-	The advantages of Intel Core Duo Processor are: 1: Applications can harness the power of two processor cores instead of one.	The disadvantages of Intel Core Duo processor are: 1: Most software applications cannot yet take advantage of a dual-core processor design due to the newer versions.
			2: It also makes the computer run twice as fast.	2: They are also expensive on the market.
			3: A dual-core processor can accommodate more	

		core system, all else being equal. (http://www.wisegeek.com/what-is-a-dual-core-processor.htm) (04/12/2010)	applications and tasks running simultaneously.	
3	£297.79	A SATA hard drive (Serial Advanced Technology Attachment or Serial ATA) is a massive storage device that connects to the SATA on a motherboard using a SATA connector. It receives data transmission from the motherboard using the SATA connection inside the computer. In order for a SATA hard drive to work on a computer it is necessary to find out if the computer supports a SATA. One can accomplish this by checking the computer's system documentation. After confirmation, it is necessary to locate the SATA on the motherboard and the SATA connector. A system that is devoid of a SATA connection can still work with a SATA hard drive by using a SATA host adapter that is compatible to the computer and operating system. A SATA host adapter would need an appropriate device driver installed in order to work. Check the system's manual for compatibility requirements. (http://www.ehow.com/how-does_4673900_sata-hard-drive-work.html) (04/12/2010)	The advantages of using a SATA hard drive are: 1: It has a large storage capacity.	The disadvantages of using a SATA hard drive are: 1: It is fixed to one computer which makes it harder to transfer to another computer.
			2: It also stores and retrieves data much faster than a floppy disk or CD-ROM.	2: It is also difficult to set your BIOS to use SATA as boot device.
			3: The cables are only 8mm wide and it can speed up to 150 MB/s,300MB/s and 600 MB/s.	3: SATA hard drives cannot connect two devices at one time.
	£40.00	Similar to a microprocessor, a memory chip is an **integrated circuit**(IC) made of millions of transistors and capacitors. In the most common form of computer memory, **dynamic random access memory** (DRAM), a transistor and a capacitor are paired to create a **memory cell**, which represents a single bit of data. The capacitor holds the bit of information -- a 0 or a 1 (see How Bits and Bytes Work for information on bits). The transistor acts as a switch that lets the control circuitry on the memory chip read the capacitor or change its state. A capacitor is like a small bucket that is able to store electrons. To store a 1 in the memory cell, the bucket is filled with electrons. To store a 0, it is emptied. The problem with the capacitor's bucket is that it has a leak. In a matter of a few milliseconds a full bucket becomes empty. Therefore, for dynamic memory to work, either the CPU or the **memory controller** has to come along and recharge all of the	The advantages of RAM are: 1: That you can write to RAM at any time, and then erase the RAM at any time and then rewrite over it.	The disadvantages of RAM are: 1: It doesn't always make the computer run smoother.
			2: Your programs will load much faster. Like if	2: You need to constantly supply it with power or it

		capacitors holding a 1 before they discharge. To do this, the memory controller reads the memory and then writes it right back. This refresh operation happens automatically thousands of times per second. This **refresh operation** is where dynamic RAM gets its name. Dynamic RAM has to be dynamically refreshed all of the time or it forgets what it is holding. The downside of all of this refreshing is that it takes time and slows down the memory. (http://www.howstuffworks.com/ram.htm) (04/12/2010)	your decided to upgrade your RAM from 128MB to 1GB of RAM you will notice that your games will load faster as well as your applications that you are running.	will lose its information.
			3: You would be able to run multiple applications at the same time without having that annoying skip and pausing.	
end	£7.95	A flash drive has to be inserted in the USB port on the computer. Latest operating systems detect the flash drive and install the necessary drivers on their own. Once the device is detected, it can be used for storing the data. The device needs to be ejected from the computer. The system prompts you when it is safe to remove the flash drive. It can be physically ejected then. A flash drive consists of a PCB, a printed circuit board. It is covered in a plastic or rubber casing, making it sturdy. A USB connector that protrudes is covered with a removable cap. Most flash drives use type-A USB connection making it compatible with standard type-A receptacles. Hence they can be directly connected to a port on a computer. Flash drives implement the USB mass storage device class, thus do not require any additional device drivers. When a flash drive is plugged in to a computer, what is presented to it is a block-structured logical unit. This leads to an abstraction from the complex implementation details of the flash memory devices. During the early years of the evolution of flash drives, the devices used could not survive too many erase cycles. This made earlier flash	The advantages of USB flash drives are: 1: They are very easy to carry	The disadvantages of using USB flash drives are: 1: They are small, therefore they are easily misplaced.
			2: They don't require any external or internal power.	2: They are also breakable.
			3: They are also reasonably inexpensive.	3: They can also be corrupted if disconnected incorrectly or dropped.

		drives unsuitable for the data needing frequent updates. To fill this lacuna, vendors devised wear-levelling techniques that relocate writes to physical memory locations. The devices of modern times are made to survive a larger number of erases. Flash drives especially find utility in running lightweight operating systems in order to turn personal computers into network appliances. In such cases, flash drives contain the operating system and are used to boot the system. We are familiar with CDs or floppy disks used for booting purposes. But flash drives have an edge over other devices due to its low power consumption and low rate of failures. Moreover, a flash drive is small in size and portable. They enable a speedy transfer of data with less difficulty. Mostly they are plug and play devices. They demand no special training to be used. Flash drives have a large memory store, larger than memory capacities that floppies or CDs have. (http://www.buzzle.com/arti http://www.buzzle.com/articles/how-does-a-flash-drive-work.htmlcles/how-does-a-flash-drive-work.html) (04/12/2010)		
T tor	£50.00	A CRT has a large vacuum tube in the back, with a cathode containing a heated filament pointing forward, toward the viewer. This heated filament becomes an electron gun, firing off streams of electrons in response to the visual signal it receives from the computer. Ahead of the cathode, ringing it is a set of electromagnets which activate in response to the same signal. These magnets alter the course of the electron stream, aiming it. At the front of the monitor is a glass plate. On the back of this plate are millions of tiny phosphor dots. These dots are combined into groups of three--one red, one blue and one green. These groups are called pixels. When the electron stream touches the pixels, the correct combination of the phosphor dots will light up and different intensities to create any colour in the spectrum. The stream passes over the entire monitor at a rate of 50 to 100 times per second to create the continuous interactive image that we see. (http://www.ehow.com/how-does_4572304_computer-monitor-work.html) (04/12/2010)	The advantages of using CRT monitors are: 1: You can buy it relatively cheap. 2: They are also very easy to fix. 3: They are very easy to setup.	The disadvantages of using CRT monitors are: 1: They can be very hard to carry due to their bulkiness. The screen can break easily. 2: The sound quality is very low. 3: They also have a very bright glare.
: **r**	£60.00	Both types of printers, bubblejet and piezoelectric, print dots horizontally, in rows, across the page. The print head drops the correct colour ink onto the page as it rolls across it from left to right and back again. Most inkjet printers today print a minimum of 300 dots per inch of ink. Some more advanced models, such as photo quality printers, print 1200 (or more) dots per inch of ink on the paper. The higher the number of dots per inch, the more clear and crisp your image will be printed.	The advantages of Inkjet printers are: 1: The colours are perfect.	The main disadvantage of Inkjet printers is that the equipment used is generally costly.

		(http://ezinearticles.com/?Just-How-Does-an-Inkjet-Printer-Work?&id=1862571) (04/12/2010)	2: It is faster than the dot matrix, daisy wheel and laser printers.	
:d er	£41.00	A light source underneath the picture or document illuminates the image. White or blank spaces reflect more light than inked and coloured areas. A motor moves the scan head underneath the page. When the scan head is moving, it captures light that was reflected from individual areas. Light from this page is bounced around through an intricate system of mirrors that continually pivot to keep the light beams aligned with a lens. A lens focuses the beams of light into light sensitive diodes that modify the amount of light into an electric current. The amount of the current depends on the amount of light reflected. The analog to digital (AD) converter stores each analog reading of voltage as a digital pixel representing either a black or white area. Scanners that are more sophisticated can translate the voltage into shades of gray. In a colour scanner, the scan head makes three passes under the image; the light on each pass is directed through a red, green or blue filter before it strikes the original image. The digital information is sent to the PC where it is translated into a format that a graphics program can read. (http://www.catalogs.com/info/gadgets/how-does-a-scanner-work.html) (04/12/2010)	The main advantage of using a flatbed scanner is that they are very accurate and can produce reasonably high quality images.	The disadvantages of using flatbed scanners are: 1: Images can take up a lot of memory space on the computer drive.
				2: Images lose some quality in the scanning and digitising process.
				3: The quality of the final image is dependent on the quality of the original image.

Alternatives

Instead of the hardware I used, I could have used these

	lternative	**The way it works**	**Advantages**	**Disadvantage**	**Differ would if u**
	Vireless eyboard.	A wireless keyboard works just like a television remote or wireless video game controller. There is something on the computer which receives input signals and sends them to the CPU for quick processing and then finally it's displayed on the computer monitor as the appropriate result. (http://wiki.answers.com/Q/How_does_a_wireless_keyboard_work) (05/12/2010)	The advantages of using a wireless keyboard are: 1: You can carry the keyboard to different areas of the room, while still being able to use your computer.	The disadvantages of using wireless keyboards are: 1: If you need to go into the BIOS on a computer or boot to a CD/DVD to install a new Operating System, older computers won't recognize the wireless keyboard.	You ca on the compu from anywh
			2: Some wireless keyboards have a calculator built-in that you can use without turning on your computer.	2: Also they require batteries, which can need replacing as frequently as one month after installing brand new batteries.	
			3: Less hazardous due to no cables/wires.	3: Signal could be lost whilst typing and that is very annoying.	
	Vireless	Wireless mice come with a receiver station which plugs into	Advantages	Disadvantages	You ca

	ıouse.	your computer via a USB or PS/2 connection. The wireless mouse will then send a signal to the receiver. The mouse will need to be recharged, and will require the use of batteries or a recharging station. (http://wireless.lifetips.com/faq/103741/0/how-does-a-wireless-mouse-work/index.html) (05/12/2010)	of wireless mice are: 1: Wireless mice are more and more popular because they can be used without physically being connected to the computer, which gives a sensation of freedom.	of wireless mice are: 1: They could be quite expensive.	in the compu from anywh
			2: They free up desk space and elimination of mouse cord	2: Some models require batteries that need changing often.	
			3: No need for any special surfaces.	3: Since the mouse is wireless it's susceptible to wireless interference	
	ıMD 'henom™ [X6	The superior among mentioned processors, Phenom II X6 1090T, functions at frequency 3.2 GHz. The inferior, 1055T, - at 2.8 GHz. However, this is in the standard mode with an intensive multithreaded loading. AMD implemented Turbo CORE technology into their product– some kind of a response to Intel Turbo Boost. Though they function differently. Thus, CPU Phenom || X6 increases frequency to 400 GHz on condition that three or less cores are loaded. To guarantee function stability voltage being raised automatically. This kind of realization does not seem to be complicated, however, result – that is the main thing for user. Phenom II X6 1090T functioning in Turbo CORE mode works at ultimate frequency of 3.6 thus being the fastest AMD CPU (Phenom II X4 965 functions at 3.4 GHz, though it deprived of "doping"). () (05/12/2010)	The advantages of using AMD Phenom™ II X6 are: 1: They have an excellent price on the market.	The disadvantages of using AMD Phenom™ II X6 are: 1: Limited performance increase over previous top-of-the-line AMD CPU	AMD Phenoı X6 is f and mo compa PCs tha Intel D Proces
			2: It has unlocked multiplier for easier overclocking.	2: Outperformed in key areas by similarly-priced Intel chips.	
			3: Works in	3: Six core	

			almost all current AMD motherboards.	processor doesn't perform as well on some tasks.	
	120GB SATA Hard drive.	OCZ Vertex 2 Pro SATA-II 2.5" Solid State Drive 200GB	Based on a cutting-edge new architecture, Vertex 2 Solid State Drives raise the bar once again and deliver unprecedented performance for the complete gamut of gaming and professional multimedia applications. OCZ designed the Vertex 2 to surpass the competition where it counts most, pushing the limits in both sequential and random read/write rates. With spectacular performance in 4k file writes up to 50,000 IOPS, these latest drives take productivity to the next level with over ten times the performance of the previous generation. Using the latest controller technology, Vertex 2 not only provides a faster, more responsive PC experience, but promotes cooler, quieter, and more energy efficient conditions compared to traditional mechanical hard drives. (http://www.ocztechnology.com/products/solid-state-drives/sata-ii/2-5--sata-ii/performance-enterprise-solid-state-drives/ocz-vertex-2-sata-ii-2-5--ssd.html) (05/12/2010)	Advantages of using OCZ Vertex 2 Pro SATA-II are: 1: They are available in 40GB to 400GB. 2: They normally have a very long warranty.
	1GB RAM	2GB RAM	Similar to a microprocessor, a memory chip is an **integrated circuit**(IC) made of millions of transistors and capacitors. In the most common form of computer memory, **dynamic random access memory** (DRAM), a transistor and a capacitor are paired to create a **memory cell**, which represents a single bit of data. The capacitor holds the bit of information -- a 0 or a 1 (see How Bits and Bytes Work for information on bits). The transistor acts as a switch that lets the control circuitry on the memory chip read the capacitor or change its state. A capacitor is like a small bucket that is able to store electrons. To store a 1 in the memory cell, the bucket is filled with electrons. To store a 0, it is emptied. The problem with the capacitor's bucket is that it has a leak. In a matter of a few milliseconds a full bucket becomes empty. Therefore, for dynamic memory to work, either the CPU or the **memory controller** has to come along and recharge all of the capacitors holding a 1 before they discharge. To do this, the memory controller reads the memory and then writes it right back. This refresh operation happens automatically thousands of times per second. This **refresh operation** is where dynamic RAM gets its name. Dynamic RAM has to be dynamically refreshed all of the time or it	The main advantage for RAM is that you can "write" to RAM at any time, and then erase the RAM at any time and then "rewrite" over it. —

		forgets what it is holding. The downside of all of this refreshing is that it takes time and slows down the memory. (http://www.howstuffworks.com/ram.htm) (05/12/2010)	
1GB USB.	CD-ROM	A laser burns small grooves into the surface of the CD. The grooves have pulses in them which can later be read by a laser and detector. The pulses represent data, ones and zeros. Computers only know ones and zeros, so that works out just fine. The groves are organized into concentric circles. Some of the groves have special purposes and are there to identify the location and size of data stored on the CD-Rom. When your computer wants to read a file of a specific name, it searches the file TABLE, for the location and size of the named file, then the "read head" moves to that location and reads pulses that represent the data. (http://wiki.answers.com/Q/How_does_a_CD-ROM_work) (05/12/2010) _____	The advantages of using CD ROMs are: 1: no slow download times: sound, large graphics, animations and video clips can be easily used, with complete user interactivity. 2: using it costs nothing, whereas in many parts of the world, Internet access remains slow and expensive paid for by the minute.
CRT Monitor.	Plasma Screen	Plasma screens are made of 2 sheets of glass with 2 gases stored between the sheets. The gases are xenon and neon and they fill thousands of tiny chambers. Behind each chamber are a series of red, blue and green phosphors. When electricity connects to the plasma chambers the coloured phosphors produce the right colour on your screen. They work in a very similar way to fluorescent tubes used for lighting. Plasma screens may seem to be a new technology but actually they have been around since 1964 but only 2 colours could be produced then. Now we have high definition Plasma screens up to 150 inches in size. Japanese engineers are currently working on a 270 inch model.	Advantages of using Plasma Screens: 1: Plasma TV's have more pixels per inch than the old fashioned CRT screens so they can produce a much sharper image

		(http://ezinearticles.com/?How-Does-A-Plasma-Screen-Work?&id=1149108) (05/12/2010)	2: If you look closely at a Plasma screen you will not see any lines. 3: As technology has advanced Plasma screens have a much longer life and you should expect 30,000 hours of use
Inkjet Printer	Laser printer	When a text or image is entered into the CPU, it produces a series of varying voltages. This controls a LED (light emitting diode) in the printer. This emits flashes of laser, when it falls on a charged photo conducting drum. The area corresponding the text or image will either be neutralized or oppositely charged. A toner which has the same charge as the background is sprayed onto it. It only sticks to the text or image and is repelled by the background. A fresh paper is now pressed onto the toner and is slightly heated so that it sticks firmly on the paper.... (http://wiki.answers.com/Q/How_does_a_laser_printer_work) (05/12/2010)	You can print all sorts of stuff.
Flatbed Scanner.	Sheetfed Scanners	When a user loads documents in a sheet fed scanner, the documents are placed in sequence in a hopper where they are queued before being fed into the scanner one at a time. As each page's turn comes, a series of rollers specially spaced for the thickness of a single page pulls the waiting document into scanner. As the document enters the machine, a viscid conveyor pulls the document completely in and moves it to the scanning surface. With the original document in place on the scanning surface, it is ready to be converted into a digital copy. A scanning wand moves underneath the scanning surface, shining a light onto the original document. The reflected light is interpreted by the scanner and converted into a series of ones and zeros--a digital representation of the document. The scanning wand generally moves from the top of the document to the bottom; the speed depends on the make and model of the scanner. When the document has been scanned, it is ready to be ejected.	The advantages of using sheetfed scanners are: 1: Sheetfed scanners are great for scanning large documents like manuals or transcripts. 2: Very effective and efficient for businesses.

		When scanning is complete, the same conveyor that brought the document to the scanning surface again goes into motion and pulls the document off of the scanning surface. A series of rollers and gears pushes the document out of the scanner and either into the back of the waiting queue or into a designated receptacle. If more original documents are waiting in the hopper, the next original is pulled in using the same process described in Section One above. (http://www.ehow.com/how-does_5132634_do-sheetfed-scanners-work.html) (07/12/2010)	3: It is sm~~all~~er in size than a flatbed scanner and uses much less desk space.

Software

Software is the written programmes and associated documents pertaining to the operation of a computer system. This is stored in the read/write memory.

There are two main types of software:

1 .Operating Software (O.S)

An Operating System is a software program or set of programs that mediate access between physical devices (such as a keyboard, mouse, monitor, disk drive or network connection) and application programs (such as a word processor, World-Wide Web browser or electronic mail client).

2 .Application Software

Application software, also known as software application, application or app, is computer software designed to help the user to perform a singular or multiple related specific tasks. Typical examples are word processors, spreadsheets, media players and database applications.

There are two main types of operating software (O.S):

1. GUI- Graphical User Interface
2. CLI - Command Line Interface

Type of O.S	The Main Functions	Advantages	Disadvantages
GUI	GUIs lets someone interact and communicate with the computer	- GUI applications are very easy to use. - Most modern computers now use GUI applications. - Colour of GUI applications attract people's attention	- When it is not properly built, it can be very difficult to work with. - It generally requires more memory resources than a non-graphical one. - It might require the installation of additional software, e.g., the "runtime environment" in the case of java. - Depending on the programmer, it might require more time to be implemented.
CLI	CLI lets you type in your own commands so the computer can	A CLI interface can be implemented on far fewer resources. The	Command line interfaces require recall memory for

		CLI is far better for scripting and automated purposes, as well as issuing simple commands. Finally, a CLI interface is generally not subject to copyright, whereas GUIs are.	routine functions that are repeated many times a day, instead of recognition memory,
	bring it promptly.	If the user knows the correct commands then this type of interface can be much faster than any other type of interface. This type of interface needs much less memory (RAM) in order to use it than other user interfaces This type of interface does not use as much CPU processing time as the others do.	For someone who has never used a command line interface it can be very confusing. Commands have to be typed in precisely, if there is a spelling error the command will fail. If you miss-type an instruction, it is often necessary to start all over again.

The operating software that I am using is GUI (Graphical User Interface) because it is very easy to use.

If I would be using an older version such as Windows 98, everything would be much slower and it would crash frequently, but because I am using Windows 7, internet and the different applications such as Microsoft Word (2010) are much faster.

If I used CLI (Command Line Interface) then it would require the user to know the exact commands needed to use it and to have some experience of using computers. It would be difficult to use it because I don't have any experience in using it. This is also very time consuming.

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Application Software

1. Word (Microsoft)
2. Access (Microsoft)
3. Paint
4. Internet Explorer

This table shows the application that I am going to use, also there advantages and disadvantages.

Name of Application	Price	Main Functions	Advantages	Disadvantages
Microsoft Word 2010	£91.99	The main functions of Microsoft Word are that you can write and create things.	It has Grammar Check; this makes it very easy for you to rectify your mistakes.	You can't draw pictures very easily.
			Lists can be easily created and formatted.	You can't make paragraphs easily when you carry on the paragraphs and you want to separate it.
			Compatible with a large number of standard document formats.	You can't make presentations.
Microsoft Access 2010	£94.99	This application is used for creating databases for large amount of data. You can also use it for creating switchboards.	You can create switchboards in many ways.	It might be the cheapest software but it is still expensive.
			It has all the applications to make a database so it is very professional.	The bad thing is that it is very hard to maintain once the database grows to become very huge
			It is very easy to use.	Procedures have to be taken before login out.
Internet Explorer	Free with Microsoft computers	Surf the web and find information, facts, watch TV programmes and many more	It is very fast.	Children can get bad stuff of the internet.
			It is very cheap.	It can also download virus and crash your computer down.
			You can get anything of the internet, you can do research and get loads	You can lose connection; this could cause problems because if you want to do

			information.	research you won't be able to do it.
Paint	Free with Microsoft computers	The main use of paint is that you can create drawing on the computer and you can also design stuff as well.	You can draw pictures to you likings.	The disadvantage of paint is that your drawing isn't accurate if you have a steady hand.
			It is very easy and straight forward to use.	You cannot use it in any advanced data.
			Everyone can use paint to create anything.	Some people may find it very childish and might not like it.

Alternatives

This table explains the alternative applications I could have used.

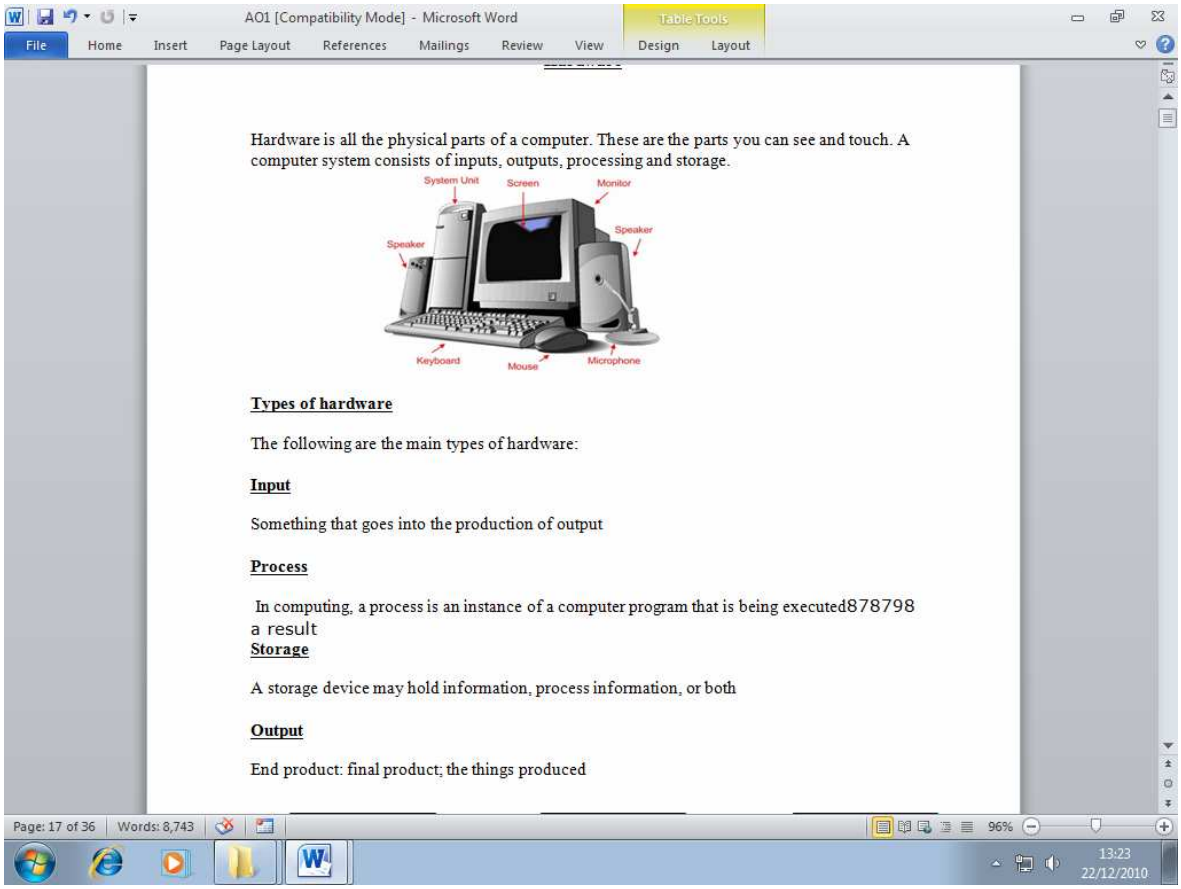
Name of Application	Alternative Application	The way it works	Advantages	Disadvantage	Difference it would make if I used it
Microsoft word	Open Office writer	It is exactly like windows word but has extra few features such as automatic correction and automatic word completion and also corrects automatically grammar mistakes and changes decimals into fractions	If you are used to automatic word completion and correction then you can type a lot faster.	It will take a lot of practice to get used to some of the main functions.	There is not much difference.
			You will not have to go through your work searching for mistakes if you have auto correction on	Does not come for free on the computer.	
			Work will look a lot more formal i.e. no grammar etc. mistakes		
MICROSOFT ACCES	OPEN OFFICE BASE	It can create and edit forms, reports, queries, tables and views.	Easy installation through the openoffice.org	In it difficult to convert files.	It is very hard to use.
			No need to go through a hassle to go through additional connector.	It is very hard to get.	

			No need to install or configure a driver manager.	It has a lot of complicated tools.	
Paint	Photo filter	Allows simple and advanced adjustments to images.	Simple and intuitive to use.	No adjustment layers for non-destructive editing	it will be a lot easier for people to edit out photos
			Has a vast range of filters.	Has a lack of dodge and burn tools.	
			Has an easy learning curve	Does not come for free with the computer and others paint soft wares are a lot better than photofilter	
Microsoft Access	Wave maker.	Wave Maker is a visual, drag and drop development platform for building web applications. Wave Maker generates standard Java application that can run in any java server. OSALT.com 07/12/2010	Can build web applications really quick.	The studio runs in a browser	It will be a lot easier to make web application but the servers they run on will be limited.
			Creates plain Java applications that run in the Wave Maker platform or in any other Java server	Can be slow.	
			Easy drag and drop assembly of an Ajax application complete with database access and web services	Can only be used for certain application servers.	
Paint	Photoshop	It is the same as paint but	It has more tools to improve your picture	Does not support layers.	It is better than paint more features.

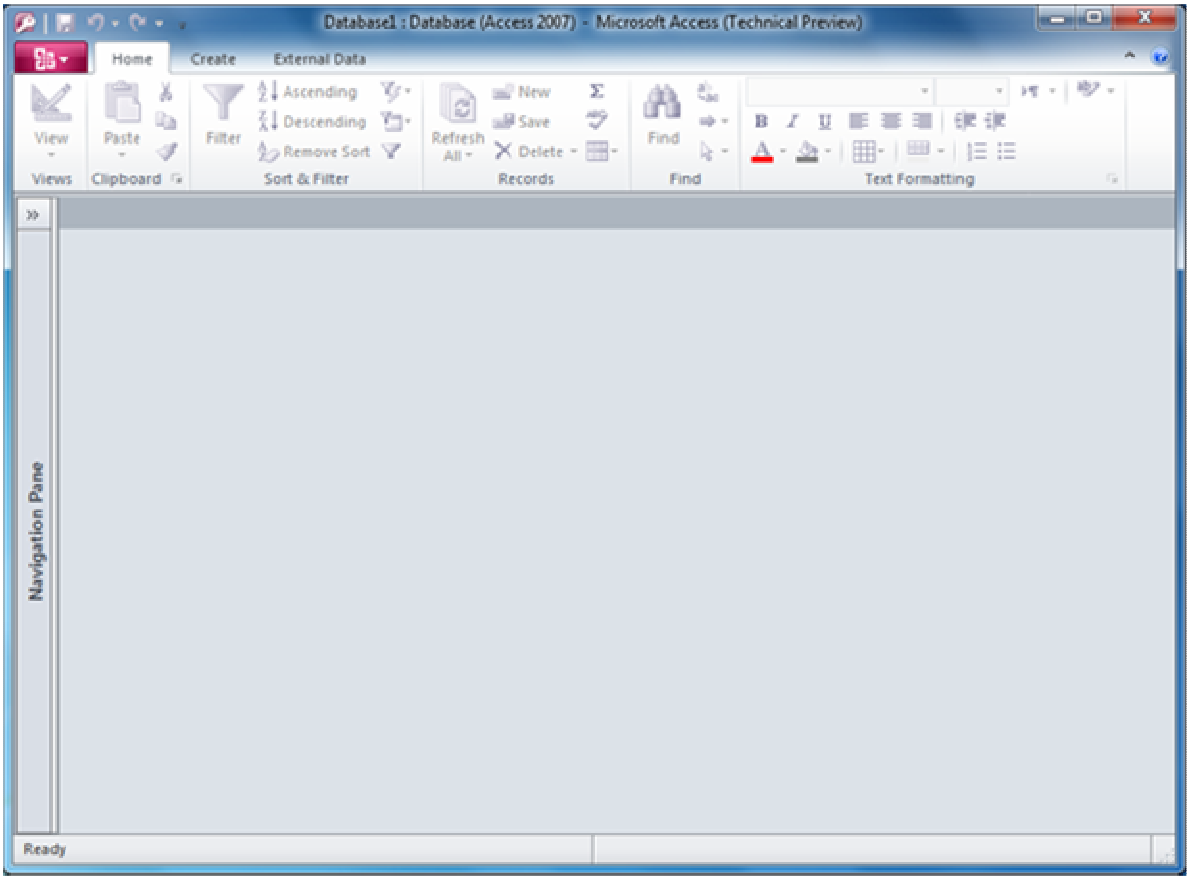
		more advanced.	It loads images fast	No support for Photoshop filters.	
			It is very to use.	It has some tools which are very hard, this makes it long to figure it out.	
Internet explorer	Fire fox	Firefox, for the most part, is a stable browser. However, even the most stable browsers crash. Firefox 2.0 has a great feature built in called "Session Restore". With older versions of Firefox you had to install the Session Restore extension to gain this functionali ty. In the event of a browser crash or accidental shutdown, you are given the option to restore all the tabs and pages	Internet explorer	Fire fox	Firefox, for the most part, is a stable browser. However, even the most stable browsers crash. Firefox 2.0 has a great feature built in called "Session Restore". With older versions of Firefox you had to install the Session Restore extension to gain this functionality. In the event of a browser crash or accidental shutdown, you are given the option to restore all the tabs and pages that you had open before the browser prematurely closed. This feature alone makes Firefox very attractive.
			Fire fox Is free.	Not all sites are compatible with it.	
			Fire fox size is very small compare to internet explorer.	There aren't many fonts you can do of paint.	

		that you had open before the browser prematurely closed. This feature alone makes Firefox very attractive.			

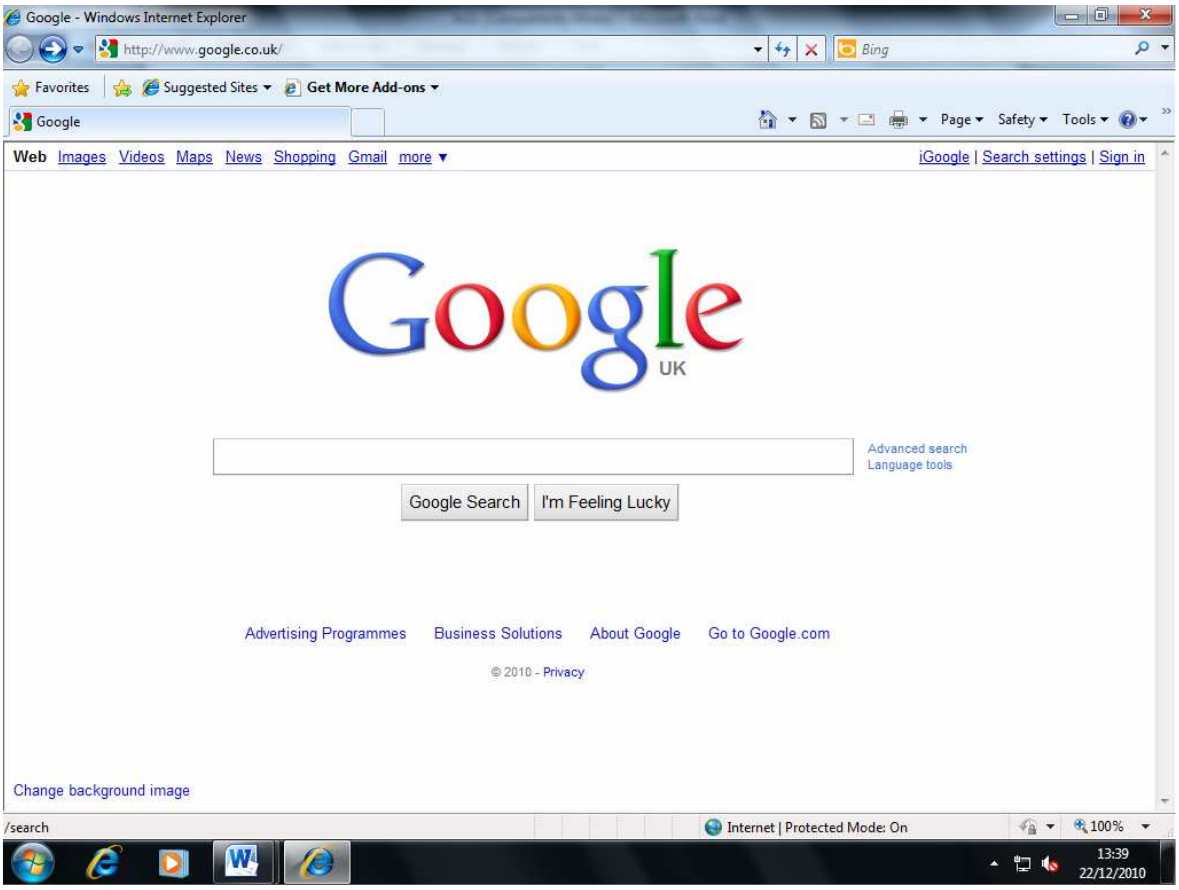
Microsoft Word



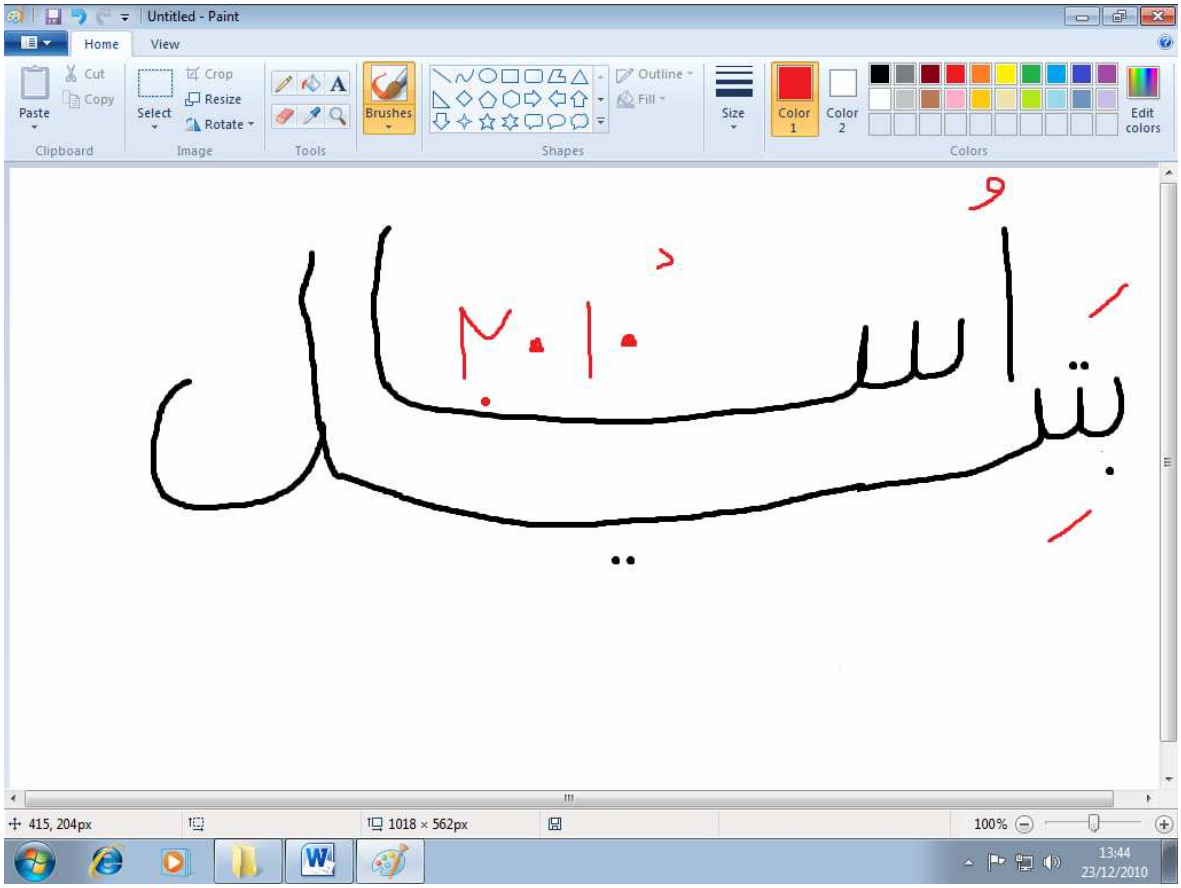
Microsoft Access



Internet Explorer


Google - Windows Internet Explorer
http://www.google.co.uk/
Bing
Favorites
Suggested Sites
Get More Add-ons
Google
Page
Safety
Tools
Web Images Videos Maps News Shopping Gmail more
iGoogle | Search settings | Sign in
Google
UK
Advanced search
Language tools
Google Search
I'm Feeling Lucky
Advertising Programmes
Business Solutions
About Google
Go to Google.com
© 2010 - Privacy
Change background image
/search
Internet | Protected Mode: On
100%
13:39
22/12/2010

Paint


Untitled - Paint
Home
View
Paste
Cut
Copy
Select
Crop
Resize
Rotate
Brushes
Outline
Fill
Size
Color 1
Color 2
Edit colors
Clipboard
Image
Tools
Shapes
Colors
415, 204px
1018 × 562px
100%
13:44
23/12/2010

Input

The input devices that I am going to use are keyboard, mouse and scanner because these help me to create a database.

Device	Speed	Errors that can be made	Way to correct errors
Keyboard	The speed of the keyboard depends on the typ	The errors that can be made is that when someone is typing too fast or normally then they can press the wrong buttons and then the word becomes the wrong spelling which can lead to problems such as, if you spell the name wrong then the ticket can be addressed to the wrong person and also if you enter the address wrong then the ticket will be sent to a different address. This will cause a lot of hassle.	The ways to correct this is asking the customer what he has said and to reassure that he has said the right things and if the customer has said a letter then you can use phonetics like “a” for “apple.”
Mouse	The speed of the mouse depends on how fast the user actually moves the mouse.	The errors that can be made with a mouse is that you click on the wrong thing and this could also lead to a lot of difficulties because if someone booking a ticket to a certain place then if an employee clicks on the wrong place or the wrong time it will cause a lot of havoc.	The ways to prevent these mistakes is by when the employee is talking to a customer then he should double check that what he is clicking also another way you can prevent these thing is by having shortcuts and switchboard so that there is less chance of clicking the wrong thing.
Scanner	The speed of the scanner depends on how powerful the scanner is like if it is powerful then the scanner will be quick for scanning.	The errors that can be made on a scanner is that if someone is accidentally put the paper the wrong way round then the picture that appears on the screen will be also the	The ways to prevent this is by double checking first if the paper is the right way round and that the lit of the scanner is shut properly and to see if you have typed in the

		wrong way round this will be trouble for the company because if their logo is the wrong way round then the they will put their logo up and when they do that the customer will see that the company is not professionally trained and then customers might not join the company.	right settings and that you give the scanner enough time to scan.

Keyboard

To detect errors in my work I used spelling and grammar checker, which showed me the errors that I had made in my work. I also proof read the work to make sure there were no errors.
To correct errors in my work I used spelling and grammar checker which gave me suggestions for my errors. I corrected some errors manually by reading through the work and then correcting the errors and I also right-clicked on the mistake and chose from the matching/possible spellings.
To prevent errors from happening in my work I checked and read everything whilst typing to make sure no errors were being made. To prevent any errors in typing I used the validation technique to ensure that the data entered was valid. I also used drop down boxes to limit the search to make it easier to find the data.

Mouse

To detect errors in my work I checked that there were no extra/unwanted lines or marking made and that no other program or tool was clicked besides the one that I wanted. I corrected the errors in my work by using the eraser to erase unwanted lines or markings and I closed the program that had opened accidentally and opened the one that I needed for my work. To prevent errors from happening in my work I drew everything carefully and slowly and did the drawing step by step to make sure no unwanted markings/lines were made. I also clicked items carefully to make sure that no other programs or tools were opened or clicked. I also used specific buttons to automatically draw a proper line or to direct me exactly to the location I wanted to reach.

Scanner

To detect errors in my work I used spelling and grammar checker and proof read the work to make sure there were no errors. I also checked that the scanned image/text was exactly the same way around as the original piece. To correct errors in my work I used spelling and grammar checker to correct the mistakes and rotated the image/text back to its original form if it had been scanned upside down. To prevent errors from happening in my work I made sure that the paper was put the right way around on the scanner glass and the cover was closed properly to prevent smudging of letters.

Data	Effect	Way it can be prevented
Spelling mistakes in website	If a person gets spelling mistake in the website then when a customer is browsing on your website then he will think it is very unprofessional and the company will lose out customers also there be a hassle caused there if some words are spelt incorrectly.	The way you can prevent this that you can get another person to check this.
Hyperlinks not linked correctly	If the hyper link is not linked correctly then it will go to a	A way to check this is by after you made this hyper

Effects of Inaccurate Data

	different page and by this the web page would look unprofessional and it would not attract any customers, hence the company would lose on customers and in long term they would lose out on money.	link then always double check the link; also you can install software where it tells you where the link leads to.
Validation is not done properly.	The effects of this is that when the customer goes on the website, after this he/she wants to book a ticket then the customer enters he/she details in the form given, after this the computer won't accept the information it has been given due to that the validation has not been done properly, hence the company will start to lose their customers.	The way this error can be prevented is that when you actually inputting the data for validation double check and make sure that they are in the correct table.

The overall best way is to use the technique of validation and verification and also double check your data.

Validation

When someone is entering data into something it is very vital for you to enter it correctly. This is why validation comes in. The actual meaning of validation is to make sure the data is allowable like when you get a database and when it says enter gender and if you enter something besides "male" or "female" then it does not allow you this what validation it. I need validation for my database because when someone uses it then there is less chance that someone will make an error this is why I going to use validation.

Verification

(It was mentioned earlier that validation cannot make sure data that you enter is correct, it can only check that it is sensible, reasonable and allowable. However, it is important that the data in your database is as accurate as possible. Verification can be used to help make sure that the data in your database contains as few mistakes as possible.) This is from Teach me ICT. Com by this you can see that when verification is the like the second step of validation that make sure that you most likely not to get a mistake and lowers the chance to get a mistake.

Output

This table is about the output I am going to use and their advantages and disadvantages.

Device	Type	The way it works	Advantages	Disadvantages	Best place to use it
Printer	Laser	The laser printer is used for printing the work that you done on the computer into paper.	The advantage of a laser printer is that they are very quiet and produce very high quality print.	The disadvantage of the laser printer is that the cost of the laser printer is a lot more expensive than other printers such as inkjet and Dot-matrix.	The best place to use this is a office since it is very quiet and it is very fast so it is much faster and it will be suitable for an office.
			Another advantage is that it is very quick and sufficient to print.	It is more expensive to repair than the ink-jet printer.	
			Also the laser printer produces work very smoothly.	Also another disadvantage of a Laser printer is that the ink-cartridges cost more than a normal printer.	
	Inkjet	The way it works is that when you press a certain button then the motherboard sends messages to the printer to print an exact or almost exact copy want you wanted on paper. The way it does is by it	The advantage of a ink-jet printer is that it is more much cheaper than the laser printer and the ink cartridges are also cheaper than the laser printer.	The disadvantage of an ink-jet printer is that it is nosier than the laser printer and the colour printing can still smudge after it has been printed.	The best place to use this is in your house or school because it is quite noisy but also it is quite cheap as well so it good to use in your house and it produces good quality work.
			Another advantage of an ink-jet printer is that it is more compact than the laser printer and it is also quite fast	Also another disadvantage is that the colour printing can be very slow at printing than the laser printer and if you don't us	

		drops extremely small droplets of ink onto the paper to create an image.	compare to the dot-matrix printer.	the ink-jet printer in a while than the ink could get dried up	
			Also the inkjet printer most homes and school have because it is decent and efficient because it produces good quality work.	Also the inkjet printers cost of printout pages are more expensive than a laser printer.	
	Dot-matrix	The dot-matrix is an old fashion type of printer which has the letters on each pi and when pressed in imprints the letter into the paper.	The advantage of a dot-matrix is that the printer is versatile which means you can change if the you want the writing in italic or in bold.	The disadvantage of a dot matrix is that it is very slow and it takes it time to print and for printing pictures it is very inaccurate.	There best place to use it is probably a factory because it bad quality of printing and the amount of time it takes to print. Also you cannot print out colour copies but it is best to use it in a garage or a factory because it doesn't need fantastic type of document.
			Another advantage is that the dot-matrix printer it is very cheap.	Another disadvantage is that it cannot produce a colour print which means that for companies it is very bad.	
			Also the dot-matrix can work very well in bad condition such as in a garage or a factory.	Also another disadvantage is that the printing quality is very poor standard and it is not suitable to give important printed documents to managers or customers.	
Monitor	TFT	The way it works is that a screen that receives messages	The advantage of a TFT is that takes up less space in your room/ or on a desk.	The disadvantage is that the screen is more fragile than the CRT monitor.	The best place to use this is in offices because in a offices you need all the

		from the computer and puts it into such a form that is we can understand it.	Another advantage is that it causes less heat and less noise so you can concentrate more.	Another disadvantage of the TFT monitor is that is more expensive than the CRT monitor.	space you can get and since this is faster, better and smaller the office will obviously use this one.
			Also it has high quality graphics so you can see everything clear and good graphics.	Also the TFT is quite hard to setup and for beginners it will be quite difficult for them to setup.	
	CRT	The way it works is that a screen that receives messages from the computer and puts it into such a form that is we can understand it.	The advantage of a CRT is that because of it size it is quite difficult to damage it.	The disadvantage is that it takes up too much space on your desk.	The best place to use this is in primary schools because the children cannot damage the CRT because of its size and it will be very suitable for them.
			Another advantage is that it is now very cheap.	The disadvantage of a CRT is that it makes quite a lot of noise so when someone is working it can disturb them easily.	
			Also some school use them because it is hard to damage and children will not be able to damage it that much.	Also another disadvantage is that if it is in a office, because it makes quite a lot of heat them room will become hot quite easily.	

After I had been looking at the output devices my work hasn't actually been affected that much but I have used the best output devices that I can and the devices I was used very good and I can now do my work easily.

Conclusion

The system that I used was the right one for this task because I was able to do my work quickly, and efficiently, and I think the company would need one more hardware, which is a headphone for every employee so when they talk to the customers it would be more easier to talk and type.
Also, all the hardware I used was the right one as it made me finish my task on time, and it was the right, or quicker time to finish on.. Also I do not think I will need anymore other hard wares because I used the most appropriate hard ware that I can.

Name of Hardware	The way it works	The way it will be used by the company
Headphones	The system sends the sound through the wire and to the headphone so you can hear	The company will use this when there are a lot of customers and they will have used it when they are talking to the customers.
Web-cam	With a web-cam you can see the person who you are talking to and it is a customer then it is better because you can see them also you can talk to your friends all over the world.	The way the company might use this to communicate with the customer and it will be easier.

Choosing and Describing Applications = 3
Describing using Hardware = 3
Describing using Software = 3
Characteristics, Benefits, and drawback of each system = 6

Demonstrate use of Input Methods = 1
Comment on their speed, accuracy and validation = 4

Describe your system outputs = 1
Comparing Output devices Alternative outputs and drawbacks to your system= 4