Task 1 – Hardware and Software Report

Introduction

In this task (task 1) will be introducing you to the modern computer. There are no bad Personal Computer systems. The least powerful system available today is better than the most expensive system of a few years ago. High quality components are produced in such large numbers and at such low prices, that there is no profit building a computer yourself!!! Each year the same amount of money will buy more and faster memory, larger disks, and faster DVD writers than last year slower/lesser hardware.

Today's computer consists of two main parts of the computer and then other small but important parts in which, those part consists of. The main Parts of the computer are called the Hardware and Software, with out these the computer wouldn't be a computer. The software runs the programs and the hardware runs the software and Computer and also other components. Here are some examples of the many components which the hardware and software are:

FACT: Hardware is the part you can touch and handle and the Software is the program you can see that runs the desktop but can't touch.

1. The CPU (Central Processing Unit)-Is the main Part of the computer; it's the brain
2. Input Devices- It enable data to enter the computer (e.g. USB)
3. Output Devices-These are the things that show the information the computer has processed and results (e.g. The monitor, printer)

4 Operating Systems-These are the programs and devices that run the computer internally; they run the hardware purely (e.g. Windows, Linux).
5 And Communications Devices-Used for communication between people like the line, internet and the modem.

Hardware

Hardware is the term used for the main computer Part and it literally runs the computer. It stores the information, runs software and programs and power the whole computer itself.

Types of Hardware:

2 The CPU
3 Input devices
4 Output devices
5 Backing storage
6 RAM
7 The Hard disk drive
8 The Floppy disk drive
9 Power supply unit
10 Modem
11 Graphics card
12 ROM
13 Mother board
14 And more

CPU

The CPU is the Central Processing Unit it is the brains of the computer. Sometimes referred to simply as the processor or central processor, the CPU is where most calculations take place. The CPU **is** the most important Component of a computer hard ware.

Prices and about the different Intel CPU's:

1. Pentium 4 Plugs into a socket with 478 or 775 pins and transfers data at 200 MHz clock (Which is fast). And it can run at a speed around 3 GHz. Prices run from £90 to £1000 per chip.
2. Celeron is a cheaper version of the Pentium 4 that plugs into all the same boards. It has slower internal speed, slower FSB (Front Side Bus) speed, and smaller memory. Celeron prices, however, are well cheaper at around £60.
3. Centrino is a less powerful chip that allows longer battery life. Cost: £250 to £390 pounds.
4. Xeon. Plugs into a socket with around 600 pins. An ordinary Xeon can run in a server or with other CPU chips! A more expensive version called the Xeon MP can run on main boards with more CPUs. Currently the Xeon doesn't beat the Pentium 4 with an FSB of only 533 MHz. Price: About £2200 to £3000.

ABOUT INTEL

Intel has about 82% of the CPU market. Its only rival is AMD with about 15% of the market. For a number of years, AMD matched Intel's best performance with a less expensive chip. AMD's design could not quite keep up with Intel's CPU's speed, but the AMD Athlon chips had more processing units and more memory. So an AMD chip running at 2 GHz could perform as well as an Intel Pentium 4 running at 2.4 GHz, but, that was the maximum speed that AMD could do.

FACT: AMD has its own version of each of the four types of CPU chips. The Mainstream processor is an Athlon 64. The Server processor is an Opteron.

Input Devices

Input devices are used to put data into a computer; it's any machine that feeds data into a computer. Data can be put in the computer though a load of different devices.

Here are a few examples of input devices:

- The keyboard
- The mouse
- Web cam
- Digital Camera
- Scanner
- Microphone
- Cd drive
- Floppy
- USB
- Serial ports

ABOUT:

The keyboard

The trusted keyboard is one of the main input devices. It's used to input numbers, letters and commands into the computer and is shown in the monitor. The standard QWERTY keyboard (first 5 letters of the keyboard) comes with most, if not all, computers and plugs in the ps2 slot, which is normally situated at the back the computer. But there it not JUST these standard keyboards there are others like **"The Comfort Keyboard"** which uses the familiar QWERTY key arrangement, but has a difference! It is separated into three sections which can be adjusted for an individual's needs and comfort, cool or what? And an optional foot pedal can be programmed to represent any key (or keys) on the keyboard! It doesn't come cheap though one of these keyboards can set you back £450, whereas, a

standard QWERTY keyboard will only cost around £20.

The Mouse

The mouse is mainly used to fiddle around with selections and options on the screen. It is classed as an input device because you are mainly inputting movement on to the screen and others. The standard mouse is made to fit in to the hand naturally and move via a little ball in the bottom of the mouse or now-a-days an optical mouse which works with a sensor in stead of a ball. They normally cost about £5-£10 but, like the keyboard the mouse also has different varieties like the **"Goldtouch Mouse"** is designed to support the hand in a relaxed, more natural and neutral posture.

Output Devices

Output devices are used in outputting data from a computer; these devices display information that has been held or is within a computer. Data can be outputted from the computer though a load of different devices.

Here are a few examples of output devices:

-Printer

-Monitor

-USB

-Speakers

-Memory stick

-Modem

-Floppy/ cd writer

ABOUT:

The Printer

You can print out information that is in the computer onto paper. By printing you create you make a physical object Hard Copy). There are many different kinds of printers which vary in their speed and print quality; the two main types of printer are impact and non-impact.

Non-impact

Non-impact printers are much quieter than impact printers as their printing head do not make compact with the paper. There are several different types of non-impact printer to create a variety.

The main types of non-impact printer are:

- Thermal Printer
- Laser Printer
- Ink Jet Printer

Impact

Impact Printers use a print head with lots of little metal pins which strike an inked ribbon which is between the printing head and the paper. Examples of impact printers are the dot-matrix printers, daisywheel printers, and a few more. Impact printers are noisier and slower than non-impact printers, such as ink-jet and laser printers, but are cheaper; ink jet printer cost a least £70-£80 and dot-matrix you can buy for next to nothing!

Communications Devices

These are the devices that allow you to connect and communicate with other computers and their users. Communication is done by transferring data from one system to another like the network in this school network. Examples of communication devices would be the modem which connects the computer to the telephone line. Other

examples of communication devices are:
-The LAN cards, which connects several computers on a LAN network.
-The Wireless LAN card, similar to the LAN cards but is wireless; no cable involved.
-The Infrared port.

Software

Software is the part of the computer which we all use but we can't actually see or touch. Hardware cannot work without software and vice versa. Even a simple mouse need some software to work, we call it the mouse driver.

Software comes in the form of a program, which has been written for a certain piece of hardware in mind. For example the software written for an XBOX will be different from the software for a play station. Or different video cards (hardware) require different "video cards" (software) to work properly.

Software comes to us on CD-ROMs or DVD-ROMs, or downloaded the internet; it is then installed on to the hard drive.
Some examples of Software are: Drivers, Operating systems, drawing packages, word processors, games and all the various programs which we install in our computer.

Operating Systems

Operating systems are the most important programs that runs on a computer. Every computer must have an operating system to run other programs. Operating systems perform basic tasks, such as recognizing input from the keyboard, sending the picture to the display screen, keeping track of files and controlling printer, scanner etc.

Linux: Linux is an operating system mostly used in servers and it normally cost around 300 pounds.
Windows: Windows it the normal operating system as used at this school and is normally used in most computers at home. It is my person best as most people use it and it is fairly cheap at about 200 pounds for window xp. Window also has different types of it: windows xp, windows 2000, window 98, 95 and a few more; xp being the best and my favourite as it is clear to read and helpful as it has little pop-ups helping you.

Utility Software

Application software are programs written to solve a particular problem. Examples of application software include:

- word processors
- spreadsheets
- accounting packages
- graphics software used for design

Application software works with the operating system to sort out the computer task.