To: Managing Director
From: David Healan
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Subject: hardware and software

1.0 *Introduction*

In this report I am going to discuss how hard ware and soft ware of a C.P.U (central processing unit) could help a supermarket like Tesco.

2.0 *Findings*

2.1 KEYBOARD

Keyboards are used to input letters or numbers in to a computer. A keyboard can also be used to random tasks such as switch between programs, close program windows and to restart computers. So computers come with short cut buttons at the top of the keyboard these are active keys. There are two different types of keyboards and these are the QWERTY keyboards, which is a standard keyboard, which everyone uses, and then concept keyboard, which is used in MacDonald's, which on the keys has names of the meal you, can order.

2.2 MOUSE

A mouse is used to selected programs and options in programs it is also used to highlight text in Microsoft Word and other text based programs. There are different types of mice, there is the roller ball, which has a scroll button between the two main keys, and there is the infa red mouse, which can be used from a distance with no wires connecting it.

2.3 SCANNER

A scanner is used to scan images and documents onto the computer hard drive and then can be edited through certain programs and you can also email the document or images to other people you know.

2.4   DIGI CAM

A digi cam is short for digital camera and a this device is used for taking pictures and uploading them on to the computer and can be sent to other people, it can also double as a web cam witch lets people on the internet see you on there computer.

2.5   MICROPHONE

A microphone is used to record sound of a persons voice e.g. for memo to reminder that person of what to do. It can also be used on the Internet for people to hear you it can also be used with the digital camera so it's like you are having a full conversation.

2.6   JOYSTICK
A joystick is used to control games on your computer. The joystick consists of a hand held stick which moves 360 degrees and has to buttons on it and it also has a y-axis and an x-axis which is used to level out the configuration on the joystick.

2.7   OMR-OPTICAL MARK READER

An OMR is a machine that reads paper with marks on and prints it out in a more easy to read form. The national lottery uses this machine, when you mark the numbers on the paper it reads the paper and prints out the numbers.

2.8   OCR-OPTICAL CHARACTER READER

This is used to read text that you have written by freehand and then print out the text you have written into plain and easy to read text.

2.9 MICR-MIGNETIC INK CHARACTER RECONTION

This machine is used in banks to read the bar code on the checks and they are also used in super markets and shops to read the bar code of the products you are buying.

2.10 SENSORS

Sensors are used in many different ways e.g. in alarms systems if the sensor is tripped the alarm will sound. There are also infa-red sensors that banks and places that have a rare of expensive item.

2.11 MONITOR/VDU

A monitor/VDU is used to display pictures and your files in your hard drive, with the VDU you can draw and navigate around the Internet and your system. All together the VDU is one of the main points of your computer. VDU stands for visual display unit.

2.12 PRINTER

There are three different types of printers: -
- ➢ Laser
- ➢ Inject
- ➢ Impact

The laser printer prints out only black and white and it prints at a high speed.

The inject printer prints out I colour and can sometimes be fast or slow.

The impact printer is like a typewriter that prints out in a dot matrix style.

2.13 SPEAKERS

Speakers are used to listen to sound on the computer e.g. music you download or some Internet sites have sound on them or they are used for sound on games and software.

2.14 MOTOR/LAMP/SWITCHES

These are very rarely used and can be controlled by sensors. The motors can be used to move an object; the switches can be used to switch something on and off.

2.15 PLOTTER

A plotter is like a printer it draws out diagrams and design images for a project you make in D.T. it uses different coloured pens to draw with.

2.16 INDUSTRIAL MACHINES

These machines are used in school in a cad cam room. These machines makes thing that you design on the computer. These machines consist off: -
- Cam 1
- Cam 2
- CNC Lathe

The cam 1 machines is used to cut card of plastic, the cam 2 is used to cut plastic and the CNC lathe is used to cut or shape metals like aluminium. All of these machines can cut 3-d and 2-d shapes.

2.17 HARD DRIVE

The hard drive is where all your files images and software is store. The hard drive is the biggest piece of storage. With the hard drive you can move files and folders and also create new folders.

2.18 FLOPPY DISC

A floppy disc can't store much stuff on it its is many used to store documents and small programs. About 10 years ago you could buy full games on them. They are also used to store back up files for your computer.

2.19 CD ROM

A CD ROM is used to store files, folders, programs and what ever else you want. You can buy blank CD's in two different forms, CD-RW and CD-R. CD-RW stand for compact disc which is re-write able which means you can copy stuff to the disc and then delete it of it and use it again. CD-R stands for compact disc that can have files or folders copy to it but not deleted from it.

2.20 DVD

DVD stands for digital videodisc, which means that you can have movies or programs on a disc. You can either buy DVD's blank or with the program or movies on them for shops.

2.21 MAGNETIC TAPE

This is used to back up a large part of network computer e.g. in schools with all the pupils accounts and there files which are backed up on a big real of magnetic tape. This tape is also used in cinemas to stores the films on.

2.22 RAM-RANDOM ACCESS MEMORY

This is the memory that is used when you are on the computer it is only temporary and is deleted when you turn the computer off.

2.23   ROM-READ ONLY MEMORY

This is the memory that is permanent and can only be deleting when you delete it your self.

2.24   NETWORK INTERFACE CARDS (NIC)

These are placed in stand-alone computers to make it a terminal that can be used in a network. They plug into the main circuit board of the CPU. These cards change the form of the data into a different type to can be passed down a cable.
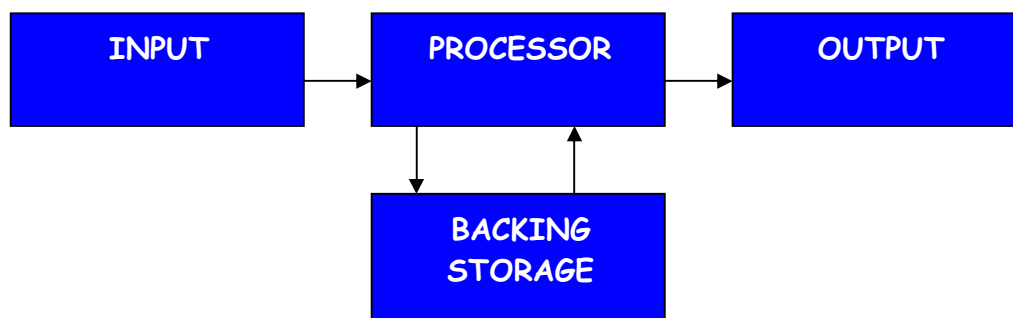
2.25   CABLES

Cables are used to connect hardware devices to the CPU such as Keyboards, monitors, scanners and mice. If computers were in a network these cables would be used to connect them all in one. These cables can consist of metal or fibre optic cables.

2.26   PORTS

These are external points on a computer where input, output and other devices can be connected.

2.27   UNIVERSAL SERIAL BUS (USB)

USB is used to connected hardware like scanners and printers to the computer easily.

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┌──────────┐      ┌──────────┐      ┌──────────┐
│  INPUT   │ ───> │PROCESSOR │ ───> │  OUTPUT  │
└──────────┘      └──────────┘      └──────────┘
                    │    ▲
                    ▼    │
                 ┌──────────┐
                 │ BACKING  │
                 │ STORAGE  │
                 └──────────┘
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3.0   Conclusion

In this world of hardware and software it can help a growing chain store like Tesco by: -

The checkouts don't just need keyboards to input the information of the products that people purchase you can use sensors or scanners, OMR, OCR and MICR.

A supermarket could also use RAM and ROM. They could use the RAM for deals of the day, which are a one-day off, and the ROM to store the prices of the entire product in the shop.

At Tesco they would use printers to print the receipt and use speaker to send messages to employees and customers; they can use a monitor/VDU to see the prices of the products that are being purchased.

In the3 supermarket the security could use a joystick to move cameras around in the shop. They can use a microphone to tell customers the special deals of the day or week and they could use digi cams to find thieves.

The supermarket would use ports on their checkouts to connect the receipt printer and the MICR to the main computer and cables would connect all of these and sometimes they might use USB.