

3B

Bookshop Manager

A bookshop manager uses technology in many different ways in their work.

Jeremy Hamilton is a bookshop manager, and works in a bookshop on Charing Cross Road.

Computer

A computer is a general-purpose machine that processes data according to a set of instructions that are stored internally either temporarily or permanently. The computer and all equipment attached to it are called hardware. The instructions that tell it what to do are called software. A set of instructions that perform a particular task is called a program, or software program.

The data on all the books in the shop is stored on a computer. When a customer comes to the shop and asks about a book, Jeremy can check on the computer and find out if they have got it in stock, and also the what genre it is under, and the price.

It works well for a general-purpose machine, and can be moved around the shop. But because is it a laptop computer, it may overheat if left on too long, and may damage itself. This is not good for a computer that should be on at all working hours, because unexpected shut downs (what usually happens when a computers CPU overheats), could cause the loss of many important files that may have been open at the time.

As computers progress, files get larger, and larger hard drive space is needed, and 20GB is probably well below average size, so if Jeremy wanted to increase the size,

he would have to buy a new computer, because trying to fit in a new hard drive would be very difficult, expensive and unwise. If Jeremy was to get a new computer for the shop, it would be wise to get a desktop computer, for the following reasons:

1. More space inside the computer's box prevents overheating
2. Space for more memory and for hard drives
3. Can be on most hours
4. Much more easy to replace/add components than on a laptop
5. Easier to use

It would be advisable to get a computer with a Pentium 4 or an AMD Athlon processor, because they are more powerful and reliable than others.

Also a physical memory (RAM) size of at least 512MB, this is so more applications can be used at the same time. A hard drive of at least 40GB – 80GB is advisable, because it may be necessary to have large files and records of books.

The advantage about this system is that it is fast and efficient. But the disadvantage is that with all the information on every book that comes into the shop, Jeremy and the staff has to enter it all onto the system, and this is a difficult process. It may be a good idea for the shop to hire a professional IT specialist, who can deal with technical issues or problem, they have not done this because Jeremy is very familiar with computers and the rest of the staff are proficient, but a professional could help them, and save time for the others.

The bookshop also takes orders, and holds books for people who cannot buy them straight away. This shop, as a company, has registered with the information commission, which means they can store information on their customers, but only information that relates to there primary use of it. In this case, it is to do with contacting their customers, and knowing addresses for deliveries.

All of the names of these people are stored on the computer that they have, and it has their addresses and other information.

This data is private, and the shop cannot give this data to someone without permission, it breaks rules in the Data Protection Act (1998), and if a person has hacked in, they are breaching the Computer Misuse Act (1990).

Using the computer too much may cause health problems, like hand and back problems, if a worker is forced to be subjected to this; it goes against the Health and Safety at Work Act (1974).

Because it is a relatively small bookshop, it only has one till. So there is one computer upstairs for general use, and one downstairs in the offices, to be used for more important, special reasons, such as watching eBay. The problem is that they are not linked together. If they were linked together in a network, communication and transferring data would be much easier. At the moment, they use a zip drive to transfer data, and walkie-talkies to communicate.

On a network, messages can be sent, and data can be stored on the chosen central server computer, and can be accessed by both.

Internet

The internet is a global network connecting millions of computers.

It connects in a way so that computers can access data on other computer, and when people say 'Internet', they are most probably referring to the World Wide Web which is an information system using the Internet to access information stored on computers worldwide.

If Jeremy wanted to find out about a book, or to find the price it should be sold for, he can go online onto a specialist book website, and if he wanted to, he could buy books from Amazon or EBay. However he should be careful when he buys things off of EBay, because they may steal your money, or your item, which is illegal theft. He should make sure the seller is to be trusted.



Jeremy has a 56K modem in the shop, an Askey 1456VQL1V-1 (INT) which they use to connect to the internet. A modem is an electronic device that converts computer signals into analogue signals in order to transmit data over a telephone.

He is on Onetel, which is a cheap internet service provider. They have an unlimited download limit, and a 10MB upload limit. A modem's connection is measured in bandwidth; bandwidth is the amount of data that can be transmitted in a fixed amount of time. For digital devices, the bandwidth is usually expressed in bits per second, (bps) or bytes per second. For analogue devices, the bandwidth is expressed in cycles per second, or Hertz (Hz).

The advantage to this is that you can use any phone line to access the internet, and at any time. The disadvantages are that only one computer at any time can access the Internet, and it is charged by the minute, so bills could rise to a very high figure if it is not turned off. Another disadvantage is that 56 kilobits per second is quite a slow connection, and these days, a connection can go up to about 4 megabits (4,000,000 bits) per second.

Having a small bandwidth affects Jeremy greatly, because using the internet in conjunction with his work is very important. To be on higher ground it would be better for Jeremy to get broadband; broadband refers to communications medium that uses wide-bandwidth channels for sending and receiving large amounts of data, video or voice information. On broadband, multiple channels can be used, so many people can be on at the same time, and it is not a phone line, it is a digital cable that is specifically for internet connections.

An example of a broadband provider is NTL; they provide broadband speeds from 768Kbps, to 3Mbps, which is nearly 55 times faster than a regular dial up connection.

Probably a good connection for Jeremy is a 1Mbps connection, as it is relatively cheap, at £9.99 per month, and meets his connection and download needs.

The other advantages of broadband are that it can be on all the time, and with NTL, it is paid monthly, so they do not have to worry about extra charges. The disadvantages of broadband would be that it would have to get installed, which could cost money, and can only be used at that broadband connection, not anywhere else.

Mobile Telephone

A mobile phone is a device which behaves as a normal telephone whilst being able to move over a wide area. A signal is sent by the phone, to the nearest receiver, which then re routes the call through the mobile phone network. The other phone is found and the call is transmitted.

Mobile phones allow connections to be made to the telephone network, normally by directly dialing the other party's number on an inbuilt keypad. Most current mobile phones use a combination of radio wave transmission and conventional telephone circuit switching, though packet switching is already in use for some parts of the mobile phone network, especially for services such as internet access and WAP.



Jeremy has a Nokia 3200, which is a relatively new phone, and has many features that help him in his social life.

Jeremy is at an advantage somewhat, because Nokia is probably the most used phone manufacturer, and has many features that help him with his social life. It has multimedia messaging, which means that he can send photos and videos to other phones that are compatible.

It also has a camera, so when Jeremy finds something he wants to take a picture of, he can use his phone's camera and memory.

He is on Vodafone; this is a service provider, which he has a contract on. A service provider is the service that directs phone calls, and owns and operates mobile phone masts that pick up signals.

The advantage of having Vodafone is that they have very good network coverage, which means you get a signal almost anywhere. But a disadvantage of Vodafone is that they can be more expensive than other service providers.

There are two methods Jeremy can pay for his mobile phone calls and texts. The first is the pay as you go option, which is where you top up your phone with credit, and you can use that until it runs out. The second option is to pay monthly, where you use the phone as much as you like, and at the end of the month, you pay for how much you have spent.

The advantage of this is that you do not have to top up the phone, and you can go as high as you want, and the disadvantages are that you have to register and have the hassle of paying the bills, whereas when you get a sim card (removable card is the chip inside a GSM phone with information such as the user's phone number, phone book as well as other information related to the subscriber), you do not have to register in detail.

Jeremy uses a contact pay monthly scheme, and he has a package with 120 minutes, and 30 texts; but he does not use all of these, and finds it a hassle to pay monthly, so a good idea would be for him to change to a pay as you go, because he has access to places to top up from very near his home and his work.

Jeremy does not use his mobile phone frequently, and he would prefer to top up in small amount. For this, it is advisable to stay with Vodafone, because they offer, as well as £10 and above top up, £5 top ups, which is not very common in service providers.

However, if Jeremy wanted to get a cheaper service provider, Tesco is a viable option, although they probably have low quality service and network coverage. Also, if he wanted to have extra features and promotions, Orange would be a good option, because they have things like Orange Wednesdays, which allows Orange users to take a friend to a participating cinema for free on a Wednesday.

MSN Messenger

Jeremy uses MSN Messenger for communicating with his friends and family. MSN messenger is the .NET Messenger Service is an instant messaging system developed by Microsoft. It works together with Microsoft's Passport system to allow users to send messages to each other online. The major use of the software is for instant messaging, although other features which now come as standard include support for voice conversations, webcams, transferring files and built in multi-user online games such as Tic Tac Toe.



In a similar vein to many of MSN Messenger's competitors, MSN Messenger allows messages to be enlivened with graphical emoticons, sometimes called *smileys*, Flash-animations called winks, animated display pictures, different text styles, and with add-ons, more features.

The advantages of MSN Messenger are that it is free easy access, and does not cost extra. It is fast and efficient, and it is safe from malicious users aiming to hack. The disadvantages of MSN Messenger are that communicating over it may be vague, and too much time chatting may be a waste of good time. Another program that Jeremy could use is ICQ, or AOL Messenger. However, MSN Messenger is probably the best option, because it has a large range of users, larger than the rest. Also, Microsoft, being the richest company that has created a chat program, has more potential and professional programmers working on new ways for MSN Messenger to improve.

Television

Jeremy has a Sony 20" FD Trinitron® WEGA® TV KV-20FS120, he watches it on a regular basis.



He mainly watches it for the news and a few programs that he enjoys watching, such as Hollyoaks and The Bill. He has terrestrial television, and a VHS recorder to record and watch programs he has recorded. If he wanted to get more channels, he could get freeview; which is a digital service operating at Ultra High Frequencies (UHF), opposed to his current VHF terrestrial, and is a very good technology to have, because all that needs to be bought is the freeview box, and no subscription charges have to be paid. This would also be good for Jeremy because he likes watching the news, and on freeview, there are at least three regular news channels, and one sports channel, so he can watch the news at any time of the day. It has surround sound, which Jeremy enjoys, but there are only two speakers, and to get the full surround sound effect, he would have to have more speakers, spread around the room. An example of a technology that he could buy could be Acoustic Energy Aegis Evolution 3b. This is a powerful surround sound system with 6 speakers and a high power usage, which increases volume, and it has excellent quality. But this is a very expensive technology, so Jeremy would not buy it, but go for a lower priced, more economised version.