User side and server side factor

In this report, I will describe and explain about user side and server side factor that can influence the performance of a website and state particular server side capabilities with consideration for limitation of equipment and software customer may be using to browse the website.

User side factor:

Hardware: The speed of computer system can influence the performance of the website. If the computer system is slow so the user will take a long time to load full website. The speed of computer depends on speed of RAM, ROM and CPU.

Ram is plugged into RAM slots on the motherboard. It is used to storage data while Pc is on. It is volatile and temporary. There are many types of RAM kinds. Examples are: SDR RAM, DDR R AM, DDR2 RAMaˆ¦

Rom is different to Ram. It already is designed and connected with the motherboard. So the users don't worry to connect the Rom. Rom is only enabled to read data. It is permanent and non volatile.

CPU: is the most important component of computer system. It is located in CPU socket on the motherboard. It is used to processing data and programs. CPU read directives from RAM and realizes those directives. Computer's processing speed depends on speed of CPU, but it also depends on other systems. CPU processes data and programs in 4 steps. There are: fetch, decode, execute, and write back.

And one more important that the user must have to connect to internet is modem. Modem is the oldest interconnection devices. It is enabling

communication over conventional telephone system. The term of modem is coming from modulator and demodulator. It uses a variety of technologies to assist and improve their communication. All modems can offer asynchronous communication (which don't require a common timing to occur between two devices) and synchronous communication (which is a continuous timed transmission). Modem can not affect to computer speed but it affects to internet speed.

Internet connection speed: It also is an important part that can influence the performance of website. Even the users have a good computer that has very fast speed but they have slow internet speed, they also must take long time to view and browse the website. The user also must to choose the ISP (internet service provider) that will provide the internet services for them. Broadband is a good idea for the users because it is faster than Dial-up connection.

Modem: Modem is also important part of internet connection. The users need it to connect to internet. Modem is the oldest interconnection devices. It is enabling communication over conventional telephone system. The term of modem is coming from modulator and demodulator. It uses a variety of technologies to assist and improve their communication. All modems can offer asynchronous communication (which don't require a common timing to occur between two devices) and synchronous communication (which is a continuous timed transmission)

Virus: is software of computer. It occurs when rogue code has entered the computer system. Virus hides itself inside ordinary executable code and

makes damage to data, computer system or services. Actually there are over 20000 viruses in the world. It affects the speed of computer's operation and slows down the internet connection speed.

Software: The users also need to install some software that can make the users easier and faster to connect to internet and browse the website. Examples are Firefox, internet explorer and flash player. Firefox and internet explorer are website browser that are used to browse the website. But I think the user should use Firefox because it is better than internet explorer. Firefox provides fast browsing speed, good security and many features. And flash player is application software that is necessary for browsing the website. It helps the web browser easier and faster loading video or flash on the website.

Server side factor:

Hardware: Like the user side factor, server side factor also require good speed of RAM and CPU. But server provides internet services to the users, so RAM and CPU of server should be very fast. They involve to the server speed.

Server speed:

Bandwidth: bandwidth is the capacity that a network connection can conduct at one time. It determines how much traffic can be handled by the web server and how much material is able to be downloaded at any one time. It can be thought of as a pipe from the web server to the users.

Server operating systems: It is network operation system software that is used to run computer system. For example is window server 2003. It is the current server version of Windows and Window XP is the workstation version. Window server 2003 is similar in appearance to window NT4. 0. There are many version of Window server 2003 which are Web edition, Standard edition, Enterprise edition, and Data centre edition. The different editions of window server 2003 support various hardware platforms and server role. They provide a variety of service which enables the users to interact with other users, system, and application. There are many services that are provided in window server 2003. But in this task I will explain typical services that provided by a window server 2003 directory service.

Security: There are many risks for a website. They may be virus, Trojan, hacker, spyware. They can steals customers' details and use them for fraud. The server should have security software to protect the system such as firewall, Norton internet security. Security also is the biggest worry for commercial website because they save all the details and information of customers that could be stolen. So the server should have a good security to protect them.

Port available: it is device that is used to transfer data between a computer serial port and an Ethernet local area network. It can be used with all types of serial devices and peripherals. It is possible to use Ethernet in place of serial cables, minimizing workstation clutter and also allowing serial devices to be placed far away from the computers with which they are used.

The other factors that can influence the performance of website:

Web browser compatibility:

The website will be browsed by web browser so web browser can affect to the website. The web browse should have all features which help the users to loading the website easier and faster such as flash player. Also web browser should have all compatibility that is needed for a website. For examples are viewing the website with difference font size, colour, etcaˆ¦

Image: On the website, the image may be a graphic hyperlink that is used to link to other page of website. There are 2 types of image that can be used o website. They are bitmap image and vector image.

Bitmap image is made up of pixels in a grid. Bitmap format is really easy to use for photos. It is fast to display because the monitor is already just a grid of colour dots, so to display them, the users are just changing the colour of the dots that are already there. But if the users want to stretch a bitmap, they just make all those dots in the photo bigger than the dots on their screen and the photos will be fuzzy. In general, bitmap format is ok for drawings, great for photos and best for the web. But it is hard to stretch, hard to convert to vector. Bitmap image is the file that has ending . bmp . jpeg, . jpg, . png, . psd, etcaˆ¦ And some software to edit bitmap image are Microsoft Paint, Adobe Photoshop, Corel Photo-Paint, Corel Paint Shop Pro, etcaˆ¦

Vector image is difference to bitmap image. It has a lot of virtues. It is made up of many individual, scalable objects. These objects are defined by

mathematical equations rather than pixels, so it always render at the highest quality. These objects may consist of lines, curves, and shapes with editable attributes such as colour, fill, and outline. An object can be modified not only by changing its attributes. Vector image has many advantages such as be stretched to various sizes without losing quality. But it still has some disadvantage such as unsuitable for producing photo-realistic imagery. In general, vector format is great for drawings, easy to stretch, easy to convert to bitmap but it is bad for photos and the web. Vector image is the file that has ending . svg, . wmf, etcaˆ¦ And some software to edit Vector image are adobe Illustrator, Corel draw, Xara Xtreme, Serif DrawPlus, etcaˆ¦

Sound: Sound travels in waves. These are continuous and are called analogue. The digital sound wave samples at regular intervals with gaps so small the user' ears can not perceive them. There are many types of sound file which are mp3 or wav.

Mp3: It is the good sound file. It is a compressed file and is good for internet connection. It does not require much memory. It does take too long to download and retain good quality. Finally, the mp3 file has a low sample rate and therefore produces a smaller file size. It is better than other sound file such as wav.

Wav: It has a high sample rate which means the sound quality is closest to that produced by the actual instruments but it is a relatively large file. Because it is a large file so it requires much memory and the user take too long to download it. It is not good for internet users.

Video and animation files: Video and animation files produce very large file sizes which require much memory. So they can seriously affect the speed of website. It require long time to download and control a large proportion of bandwidth for duration download even the user use a high quality internet connection. It takes a large proportion of website space and make the website slower. There are many types of video and animation files which are following:

Mp4: It is a container format which allows a combination of audio, video, subtitles and still images to be held in the one single file. It also allows for advanced content such as 3D graphics, menus and user interactivity. It can be use by many different multimedia. It has very good quality. It also allows for streaming via the internet which means the user can watch it online.

AVI: It is audio video interleave file. It is a video file that conforms to the Microsoft Windows Resource Interchange File Format (RIFF) specification. It is a large file and takes memory native to Microsoft windows. It requires a special player that may be included with the Web browser but most of PCs can play it.

WMV: It is window media video file which is preferred format for windows. It is originally designed for internet streaming applications. It can be streaming and possible to use less memory faster download.

Internet connection speed:

The speed of the user's internet connection can decide how fast the web page is loaded. There are many types of internet connection which are:

Broadband: It is a network that uses a medium that can carry multiple signals simultaneously using technique called multiplexing. The most common example for broadband communications is the typical cable television network which transmits the signals corresponding to dozen if TV channels over one cable. Finally, broadband network provide very fast internet speed. It is very good for internet users.

Dial-up: It is the traditional method of connection and remained popular for many years. It has an average speed of 56 Kbps. It uses the existing analogue telephone lines.

ISDN: It stands for Integrated Services Digital Network. It is a dial-up communications services that uses standard telephone lines to provide high speed digital communication. The two most common ISDN services are Basic Rate Interface and Primary Rate Interface. It could reach speeds of 128 KBps.