University of Johannesburg
FADA

B.Tech Architectural Management
Computer Applications 4
AAP41-1

Assignment 3
16 April 2012

Nadine Garcia
200702929

1 INTRODUCTION   .

In this assignment I will look at three different operating systems, which are most commonly used in architectural offices. The three operating systems are Windows, Mac OS X and Linux. I will be comparing the latest released versions of these operating systems and determining which is best suited for which situation.

2 WHAT IS AN OPERATING SYSTEM?   .

The operating system (OS) is the main program that runs on a computer. It is needed to allow other programs to run on the computer. The OS preforms the basic tasks on a computer, such as recognize input from a keyboard, send output to a screen, keeps track of files and directories on the hard drives, it also controls peripheral devices such as disk drives and printers. When the systems being run are much larger than a single computer operation the OS takes on bigger responsibilities, the OS makes sure that different programs and users running at the same time do not interfere with each other. The OS is also responsible for managing security on the system. (Webopedia.)

The three OS versions I will be looking at are the latest releases to date, Windows 7, Mac OS X Mountain Lion, Linux Ubuntu 12.04 LTS.

3 OPERATING SYSTEM COMPARISON .

	Windows	OS X	Linux
pros	- The largest library of programs and applications. - Almost all hardware has drivers which are compatible with Windows. - Most widely used.	- Relatively simple and intuitive interface with many advanced features. - Not a target for virus or malware attacks. - Second-largest selection of software, with many high-quality Mac-only programs in existence, such as those found in iLife. Although at one point software for certain tasks were not Mac-compatible, most software is now either Mac-compatible or has an equivalent that is. - Reliable and high performance.	- Low number of viruses and other malware. - Usually free - Large selection of Linux distributions to choose from. - Has a large amount of free and open source software equivalents to commercial Windows and Mac software - More easily customizable - Can run many Windows programs with the use of a compatibility layer such as Wine. - Reliable with good performance and low requirements.
cons	- Prone to viruses, spyware, and adware if proper steps not taken such as installation of internet security software, which reduces performance speed. - Requires regular maintenance to avoid system errors and reduced performance. Even with maintenance, issues can slowly accumulate requiring a re-installation of Windows to restore performance and fix software issues. - Purchasing a Windows license/install disk can be relatively expensive. - Windows 7, the most recent version of Windows, has high system requirements.	- Limited to Apple-manufactured hardware. - Some hardware does not have Mac-compatible drivers, though the number of this hardware has recently become small and negligible. - In some cases, it may be difficult to do cross-platform network hardware sharing for a Mac OS X based computer in a Windows network or visa-versa. For example, a printer's Mac driver may not support cross-platform printing to a Windows-connected printer, and replacement drivers may or may not exist. - Smaller library of applications in comparison to Windows.	- Advanced use and installation of some software may require more advanced knowledge than is required for use of Windows and Mac. - Many commercial programs do not support Linux - Small commercial game library
best uses	- Gamers - People who must use Windows-only software for work or school. - People or businesses looking for an inexpensive computer yet do not have the ability to use Linux.	- Students who are not required to use Windows-specific software (though Windows can easily be installed to use Windows software) - Home users looking for an easy and reliable computing experience who are willing to pay more than low-end PC prices. - Graphic designers and photographers. - Scientists.	- Experienced computer users looking for a good, free operating system. - Businesses looking for reliable and affordable computing, so long as they do not need Windows-only software and have a competent IT manager.

(Spanbauer, S. 2007.)

4 WHAT IS NEEDED FOR EACH COMPUTER   .

8x Cad Station – the cad stations in the office will need to run programs such as Autodesk Revit (Revit is increasingly on the rise as the industry standard as the modeling and detailing software of choice), which is currently only available as a Windows based program.

5x Laptops – these laptops will be used to run cad programs, they are effectively cad stations but portable. Again they will need to run the programs that are currently only available as Windows based programs.

2x Graphic Design Stations – the graphic design stations need to be operator efficient and high powered for intensive work. Most of the graphics programs are available for all the OS's. It is now up to preference and ease of integration into the network and server.

1x Receptionist Computer – does not need to run specialised software, but will require additional training for use. Some compatibility issues with basic documents could arise.

1x Accounts/Bookkeepers Computer – mainstream accounting programs will run on Windows and Mac, but native alternatives are also available for Linux operating systems. Again, it is up to integration into the network and server that will determine which operating system to run.

1x File Server – must be seamlessly compatible with the files that are to be stored and accessed from the network of computers in the office.

1x Mail Server / Gateway / Firewall – security against viruses and malware is a

high priority, this makes the Mac and Linux OS's more appealing because of their reputation to withstand attacks from viruses and so on.

1x Backup Sever (to host Backup Software and Hardware) – needs to be able to connect to the other two servers to do seamless backups, it is also important that this OS is secure.

5 CONCLUSION

The different computers in the office will run on different operating systems as the needs for each kind of computer or station are so varied.

Cad Stations = Windows 7

Laptops = Windows 7

Graphic Design Stations = Mac OS X Mountain Lion

Receptionist Computer = Linux Ubuntu 12.04 LTS

Accounting Computer = Linux Ubuntu 12.04 LTS

File Server = Wndows Server 2008

Mail Server/Gateway/Firewall = Wndows Server 2008

Backup Server = Linux Ubuntu Server

6 REFERENCE LIST   .

Rubber Duck Debugging [Cited on 15 April 2012] Available from
> http://www.rubberduckdebugging.com/ ;INTERNET

Answers.com. What is the best operating system and why? [Cited on 15 April 2012]
> Available from
> wiki.answers.com/Q/What_is_the_best_operating_system_and_why ;INTERNET

Linux. [Cited on 15 April 2012] Available from en.wikipedia.org/wiki/Linux; INTERNET

OS X Mountain Lion. [Cited on 15 April 2012] Available from
> en.wikipedia.org/wiki/OS_X_Mountain_Lion; INTERNET

Spanbauer, S. 2007. Mac, PC or Linux? Your next operating system. [Cited on 15 April
> 2012] Available from www.pcadvisor.co.uk/news/desktop-pc/9333/mac-pc-or-linux-
> your-next-operating-system/ ; INTERNET

Webopedia. Operaing Systems [Cited on 15 April 2012] Available from
> www.webopedia.com/TERM/O/operating_system.html ;INTERNET

Windows 7. [Cited 15 April 2012] Available from en.wikipedia.org/wiki/Windows_7;
> INTERNET