Course Learning Outcomes for Unit II

Upon completion of this unit, students should be able to:

2. Analyze the impact of software applications on computer software and hardware.
   2.1 Evaluate different types of software.
   2.2 Analyze security threats and security software.
   2.3 Identify different types of operating systems.

Reading Assignment

Chapter 3:
Software, pp. 118-144 and 162-169

Chapter 4:
Operating Systems and File Management, pp. 194-203

Unit Lesson

Many types of software exist: some of the software categories include music, video, graphics, mapping and location-based, number crunching, desktop publishing, personal finance, utility, and device driver software.

Application software and system software are considered the two main types of software. While application software is designed to help users accomplish real world tasks, system software is designed specifically for computer-centric tasks. iTunes is a well-known music application software.

Video software applications are tools to create video productions from scratch. YouTube is very popular and is easily available. People video almost anything and this is a great tool for all of us to share ideas and learn new skills. Videos about everything from installing computer software to changing the oil in a car can be found on YouTube. Graphics software, such as Visio, is designed to help a user create, manipulate, and print graphics.

Mapping and location-based software is the type of software used for global positioning systems (GPS). Mapping software is handy to help users find their locations and is commonly found in a car as a GPS device. Mobile devices, like phones, are now loaded with mapping software, which is very thrifty. Paper maps are almost a thing of the past, now that so much technology is available at our fingertips.

Number crunching software is designed to automate specialized tasks in a specific business application, such as payroll, accounting, and project management purposes. Some examples of number crunching software include statistical software and mathematical modeling software, such as IBM’s Statistical Package for the Social Sciences (more commonly referred to as SPSS) and the SAS Institute’s JMP (pronounced jump) statistical software. Desktop publishing software provides professional tools for producing typeset quality documents. Personal finance software such as Quicken is designed to keep track of income, assets, expenses, and liabilities in a checkbook-type fashion. Turbotax is used for tax preparation, and is extremely intuitive.

Portable document format (PDF) is a good example of a utility software that most users are familiar with. This software allows one to read documents in this format. This software is essential in order to be able to read and open PDF documents. Device driver software is essential software that helps a peripheral device establish communication with a computer such as a printer.
Office suite software is necessary for most of us to carry out our daily word processing tasks at work and home. Office suites consist of word processing, spreadsheets, databases, and PowerPoint presentations, just to name a few. The most popular type of office suite is Microsoft; Microsoft Word is the word processing software. Microsoft Excel is used for creating and manipulating data in the form of a spreadsheet. Microsoft Access is used to create databases, and Microsoft PowerPoint is used to create powerful presentations. Many other types of office suites exist, but Microsoft is the most popular.

Another type of software is Web application software, which is accessed using a Web browser. A good example of this is cloud computing, which was discussed in Unit I.

Mobile applications are used for handheld devices like smartphones and computer tablets. Mobile applications include just about anything you can think of, such as banking applications, medical applications, cooking applications, game applications, and shopping. The textbook goes into more detail about other types of applications and software.

Software copyright and licensing must be understood because it is extremely important. Have you ever noticed the small print when installing software on your computer asking you to agree before continuing? This is the licensing and copyright information and you should pay attention to it. When installing software, you will most likely incur an end-user license agreement (EULA) that you must check and accept to continue installation. Software licenses include public domain, proprietary, commercial software, demoware, shareware, open source, Berkeley Software Distribution (BSD), and General Public License (GPL). Freeware is copyrighted software that is free to the general public.

Many types of operating systems are in use today, some of these are Windows, Mac OS, Linux, Android, and iOS. Each of these operating systems has advantages and disadvantages. According to Parsons & Oja (2014), Linux and MacOS are considered more stable than Windows. On the other hand, Microsoft Windows is more popular and is the bestselling operating system in the world. It is estimated that 80% of the world’s computers are using Microsoft Windows operating systems. However, reliability and security issues have plagued every version of Microsoft Windows (Parsons & Ajo, 2014).

It is a very good idea and a good practice to use security/antivirus software on your computer system. Security software helps identify and eliminate computer viruses, worms, Trojan horses, bots, and spyware. These security threats are harmful to your computer and can steal your identity along with financial information.

Unit II covers many different subject areas and this summary just discusses some of the important concepts to consider.

References


Suggested Reading


Learning Activities (Non-Graded)

Answer question 1 in the textbook (Parsons, & Oja, 2014) on page 171. Write the answer to this question in essay format at least two pages in length, using Microsoft Word. Use proper APA style guidelines including a title and reference page to practice your skills.

Non-graded Learning Activities are provided to aid students in their course of study. You do not have to submit them. If you have questions, contact your instructor for further guidance and information.