

INFS 214: Introduction to Computing

Session 8 – Application Software

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Session Overview

- Application software is a large program which is usually designed and developed for a specific purpose with an easy to use interface. It is intended to perform a specific task. An application program is a computer program designed to perform a group of coordinated functions, tasks, or activities for the benefit of the user.
- This session seeks to discuss the types of application software and the features of the application software.

Session Overview

- At the end of the session, the student will
 - Be able to identify and explain the types of application software
 - Understand and apply the various types of application software
 - Understand and use the various types of application software for specific task
 - Be able to give appropriate examples of application software
 - Be able to differentiate between general purpose and special purpose application software

Session Outline

The key topics to be covered in the session are as follows:

- Introduction to Application Software
- Types of Application Software
- Categories of Application Software
- Features of Application Software

Reading List

- Hutchinson, S. E., & Sawyer, S. C. (2013). *Computers: The user perspective*. Boston: Irwin McGraw-Hill. (Chapter 7)
- O'Leary, T. J., & O'Leary, L. I. (2014). *Computer Today*. Boston: McGraw Hill. (Chapter 3 and 4)
- Williams, B. K., & Sawyer, S. C. (2014). *Using Information Technology: A practical introduction to computers and communications (11th ed.)*. McGraw-Hill Education. (Chapter 3)

Topic One

INTRODUCTION TO APPLICATION SOFTWARE



Introduction to Application Software

- Application software consists of programs that help users solve particular computing problems. Application software is designed to address the need of a particular organizational activity or function.
- This is a programme (software) that is designed to perform specific tasks and functions.
- The primary function of application software is to apply the power of the computer to give users the ability to solve business and scientific problems. Many different languages can be used to develop application software, each having strengths and weaknesses.

Questions

- **Individual Assignment:**
 - Differentiate between off-the shelf package and customized package.

- **Forum Question:**
 - Discuss the major differences between the types of application software

Topic Two

TYPES OF APPLICATION SOFTWARE



Types of Application Software

- Application software includes proprietary application software and off-the-shelf application software.
- **Proprietary Application Software**
- Proprietary application software addresses a specific or unique business need for a company. This type of software may be developed in-house by the organization's information systems personnel or it may be commissioned from a software vendor.
- Such specific software programs developed for a particular company by a vendor are called contract software.

Types of Application Software

- To solve a particular business requirement, a company can either develop its own software or purchase off-the-shelf software.
- It is also possible to modify some off-the-shelf software, to tailor it such that it satisfies business of the company.

Types of Application Software

- Off-the-shelf Application Software
- Off-the-shelf application software can be purchased, leased, or rented from a vendor that develops programs and sells them to many organizations.
- Off-the-shelf software may be a standard package or it may be customizable. Special purpose programs or “packages” can be tailored for a specific purpose, such as inventory control or payroll.

Types of Application Software

- The word package is a commonly used term for a computer program (or group of programs) that has been developed by a vendor and is available for purchase in a prepackaged form.

Types of Application Software

- A software package is a pre-written, pre-coded, commercially available set of programs that eliminates the need for individuals or organizations to write their own software programs for certain functions.
- Application software packages are marketed commercially. These packages perform certain functionality of a business that is required by many companies, and they are available for mainframe, minicomputers, and PCs.

Types of Application Software

- In some cases, companies modify off-the-shelf software to accommodate business requirements of the company.
- Software vendors must provide the opportunity to modify their software. Again modification can be done in house or contracted to an outside company.

Topic Three

CATEGORIES OF APPLICATION SOFTWARE



Categories of Application Software

- The following are the categories of application software:
 - Personal Application Software
 - Workgroup Application Software (Groupware)
 - Enterprise Application Software

Categories of Application Software

- **Personal Application Software**
- Personal application software includes general purpose tools and programs such as word processor, spreadsheet, graphics, database, desktop publishing, project management, computer aided design, financial management, fax, e-mail, web-browser, and so on.
- These software are purchased as off-the-shelf software. Multiple software vendors may offer any type of software.

Categories of Application Software

- **Workgroup Application Software (Groupware)**
- Groupware provides functions and services to support the collaborative activities of workgroups. It includes software for information sharing, electronic meeting, scheduling, and e-mail and a network to connect the members of the group as they work on their desktop computers.

Categories of Application Software

- Lotus Notes (renamed Domino) is a groupware, which provides companies the capability of using one software, and one user interface, to integrate many business functions. For example, it can provide a global team to work on a shared set of documents or have electronic discussion following threads.
- A thread is a series of messages in an on-line discussion that have been posted as replies to each other.

Categories of Application Software

- **Enterprise Application Software**
- This type of software benefits the entire organization. Many organizations are moving to integrated enterprise software that supports supply chain management, such as, movement of raw materials from suppliers through shipment of finished goods to customers.
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Topic Four

FEATURES OF APPLICATION SOFTWARE



Features of Application Software

- The collective set of business problems is limited, and the number of ways to solve these problems is limited too. Thus, the problems and the software solutions fall, for the most part, into just a few categories. These categories can be found in most business environments.

Features of Application Software

- **Word Processing**
- The most widely used personal computer software is word processing software. Word processing software creates text-based documents. This software lets you create, edit, format, store, and print text and graphics in one document.
- Examples of word processors are Microsoft Word, Corel WordPerfect, Lotus Word Pro. Apple iWork, Mathematica, etc. One of the most basic features for entering text is word wrap. This feature automatically moves the insertion point to the next line once the current line is full.

Features of Application Software

- There are numerous features designed to support editing or modifying a document. Some of which are:
 - Thesaurus which provides synonyms, antonyms, and related words for a selected word or phrase.
 - Locate and replace selected words using the find and replace feature.
 - Spelling and grammar checkers look for misspelled words and problems with capitalization, punctuation, and sentence structure.

Features of Application Software

- **Electronic Spreadsheet**
- Spreadsheet is used to organise business data, to enable calculations to be carried out and it is made up of columns and rows. Spreadsheet software automatically recalculates the results when a number is changed. Spreadsheet programs manipulate numeric data and create workbook files.
- Workbook files consist of one or more related worksheets. A worksheet, also known as a spreadsheet or sheet, is a rectangular grid of rows and columns. The columns are identified by letters and the rows are identified by numbers. The intersection of a row and column creates a cell.

Features of Application Software

- A cell can contain text or numeric entries. A numeric entry can be a number or a formula. A formula is an instruction to calculate or process numeric data. The formula calculates the value and displays the result in the cell selected.
- Functions are prewritten formulas provided by the spreadsheet program that perform calculations such as adding a series of cells. Spreadsheet programs typically provide a variety of different types of functions including financial, mathematical, statistical, and logical functions.

Features of Application Software

- Analytical graphs or charts are visual representations of data in a worksheet. You can readily create graphs in a spreadsheet program by selecting the cells containing the data to be charted and then selecting the type of chart to display.

Features of Application Software

- **Presentation Graphics**
- Presentation graphics create interesting and professional presentations. Features include slides, Wizards, colour schemes, slide layouts, special effects, design templates and master slides.
- Three of the most widely used presentation graphics programs are;
 - Microsoft PowerPoint
 - Corel Presentations
 - Lotus Freelance Graphics

Features of Application Software

- **Database Management**
- A database is like an electronic file cabinet. Relational databases use tables, records, and fields. Features include tools for sorting, querying, and creating reports.
- Some of the most widely used database management systems designed for microcomputers are Microsoft Access, Corel Paradox, Oracle and Lotus Approach. The relational database is the most widely used database structure. Data is organized into related tables.

Features of Application Software

- Each table is made up of rows called records and columns called fields. Each record contains fields of data about some specific person, place, or thing. DBMS provides a variety of tools to create and use databases.
- A sort tool will quickly rearrange a table's records according to a selected field. The greatest power of a DBMS, however, comes from its ability to quickly find and bring together information stored in separate tables using queries, forms, and reports. A query is a question or a request for specific data contained in a database.

References

- Hutchinson, S. E., & Sawyer, S. C. (2013). *Computers: The user perspective*. Boston: Irwin McGraw-Hill.
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