IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 2, May 2022
Impact Factor: 6.252

Application Software : Boon For Teaching and Learning

Dr. Jasmeet Kaur Tandon[1] and Dr. Sarita Sharma[2]
Principal[1] and Assistant Professor[2]
Poonamchand Gupta Vocational College, Khandwa, Madhya Pradesh, India[1]
ILVA Commerce and Science College, Indore, Madhya Pradesh, India[2]
tandon.jasmeet30@gmail.com[1] and drdheeraj25@gmail.com[2]

I. INTRODUCTION

Application software is a set of programs to carry out a specific task like word processor, spreadsheet, presentation tools, library management software, railway reservation, antivirus software, etc. Generally an application software can perform only one specific job and cannot be used for something else. For instance, a library management software cannot be used for railway reservation system or a word processing software is generally not used as a spreadsheet
Application Software can be divided into different categories depending upon their uses as follows:

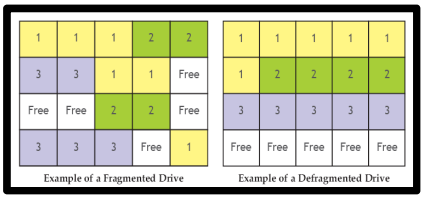
- Utility Software
- General Purpose Application Software
- Specific Purpose Application Software
- Developer Tools

1.1 Utility Software

After all the basic and necessary software like Operating System and Device Drivers have been installed, we also require some additional software to keep our computer system efficient and trouble free. Generally these software come bundled with the Operating System Software but we can also use utility software provided by other vendors. Few examples of utility software are as follows:

S.No.	TYPES	DETAIL	FIGURE
1.	**Compression Utility Software**	Using this software, you can reduce (compress) the storage size of any computer program/file while not in use. This utility comes in handy when you want to transfer a big program or computer file from one computer to another either through internet or using storage devices like Pen Drive, CD or DVD.	
2.	**Backup Utility Software**	Though computer is in general a dependable device but it is always advisable to take regular back up of important data and programs stored in the computer. In case of any damage to the system, the back-up files can be restored and the important data can be recovered from the back-up files. This utility software facilitates you to take regular back-up of important files and folders stored in a drive into another storage device like a Pen drive or CD or a DVD or another computer. This backup data can be restored in case of any unforeseen situation.	

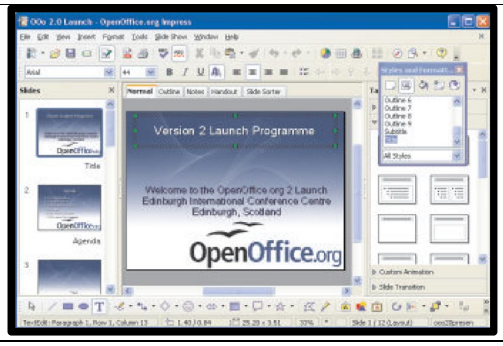
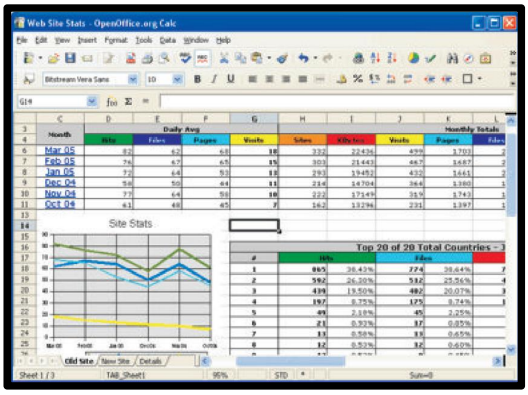
IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 2, May 2022
Impact Factor: 6.252

3.	**Disk De-Fragmentation Utility Software**	When computer system finds a file too large to store in a single location, it splits the file and stores it in pieces (called fragments), which are logically linked. This simply means that different parts of the file are scattered across the hard drive in non-contiguous locations. This type of fragmented file requires some extra time to access and slows down the system. Disk de-fragmentation utility software speeds up the system by rearranging such fragmented files stored on a disk in contiguous locations in order to optimize the system performance. For example if you have three defragmented files named 1(stored in 6 fragments),2(stored in 4 fragments) and 3(stored in 5 fragments) as shown in Figure then running the defragmentation utility will reorganize the file contents in consecutive locations as shown in Figure	
4.	**Antivirus Detection And Protection Software**	A computer virus is a computer program intended to hamper the performance of a computer system. These virus are copied into the system through some other infected programs (copied into the system) or downloaded from the internet. This utility software provides the user with a virus free work environment by restricting the entry of any unwanted program into the system.	
5.	**Text Editor**	This utility software helps one to create, store or edit a basic text file. A text file generally stores English type text and can also store numeric and special characters with little formatting. Popular examples of text editors are Notepad, Notepad2, Notepad++, G edit and K Write.	

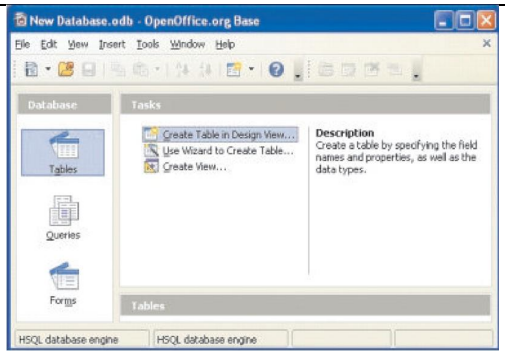
IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 2, May 2022
Impact Factor: 6.252

1.2 General Purpose of Application Software

Some of the application software are designed for general day to day applications and uses. Some of these popular general purpose application software's are discussed below:

Types of Software for General Purpose	Figure
a) Word Processor: Word Processor is general purpose application software that facilitates the creation of text documents with extensive formatting. The user can not only create a document and add lines into it but can also use different types of fonts of various sizes along with features like underlining or making a certain part of the text bold. One can also add clipart and other graphics into the document. Therefore we can use word processing software for various tasks from writing a simple document to designing special art effect. Preparing a common letter for different addressee (using mail merge feature), writing stories, applications and designing posters (using clip art and graphics) are some of the common applications of a word processor. Popular examples of Word processing software are Microsoft Word and Writer (open office).	
b) Presentation Tools: Presentation Tool is general purpose application software that facilitates the creation of presentations on any particular topic like Uses of Internet, Global Warming, Social networking or any topic of social interest and importance. It allows one to not only create a presentation and add slides into that but also allows use of various formatting features like adding different types of background, different fonts, animations, audio, video, clipart and other graphics. Popular examples of Presentation tools are Microsoft Power Point and Impress (open office).	
c) Spreadsheet Tools: Spreadsheet Tool is general purpose application software that facilitates creation of tabular forms where some text and numerical values can be stored. A spreadsheet tool not only allows one to create a document and add data into it but also allows creation of different types of charts and graphs based upon the numerical data stored in a worksheet. Furthermore, all common mathematical and statistical formulae can be used on the stored numeric data and various text functions can be used on the text stored in the worksheet. Popular examples of Spreadsheet tools are Microsoft Excel and Calc (open office). A spreadsheet tool can be used by a class teacher to maintain the marks scored by different students. This will enable her to statistically analyze the performance of the students both individually and collectively. Similarly spreadsheet is used by almost all professionals to maintain and statistically analyze data.	

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 2, May 2022
Impact Factor: 6.252

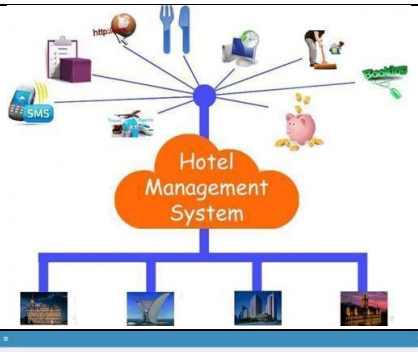
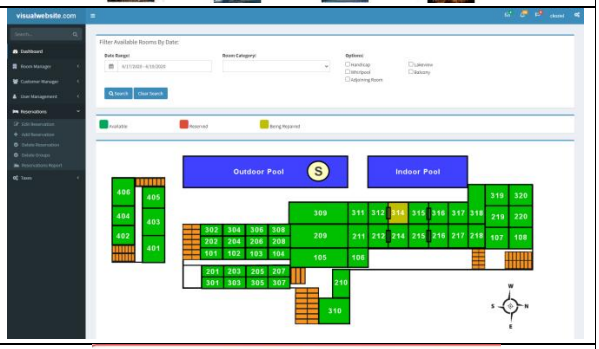
d) Database Management System: Database Management System is general purpose application software that facilitates creation of computer programs that control the creation, maintenance, and the use of database for an organization and its end users. It allows the user to not only store data but also control the addition, deletion, management, and retrieval of data in a database. It also allows importing and exporting the data to many formats including Excel, Outlook, ASCII, dBase, FoxPro, Oracle, SQL Server, ODBC, etc. Popular examples of Database Management System are Base (Open Office) and Microsoft Access.	 **Open Office Database Management System (Base)**

1.3 Specific Purpose of Application Software

Some application software are made for performing specific tasks generally used by the institutions, corporate, business houses, etc. and such software come under the category of specific purpose application software. The usage of few specific purpose application software is explained below:

Types of Specific Application Software	Figure
a) Inventory Management System & Purchasing System: Inventory Management System is generally used in departmental stores or in an institution to keep the record of the stock of all the physical resources. For example, a school keeps record of the number of computers, printers, printing sheet, printer cartridge available in the school's computer department. Maintaining this kind of data also helps the administration to place purchase order when the current stocks of consumables like printing sheet or printer cartridge is less than the critical limit	
b) Payroll Management System: Payroll Management System software is used by all modern organizations to encompass every employee of the organization who receives a regular wage or other compensation. All different payment methods are calculated by the payroll software and the appropriate pay checks are issued.	

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 2, May 2022
Impact Factor: 6.252

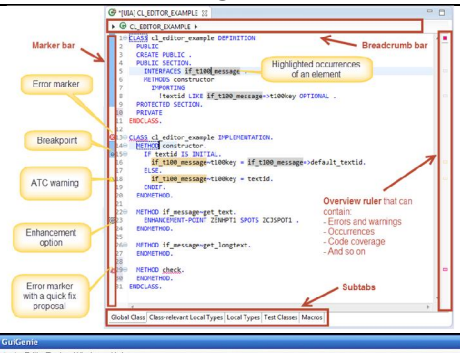
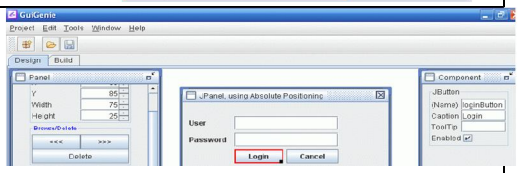
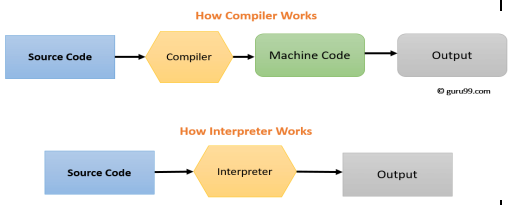
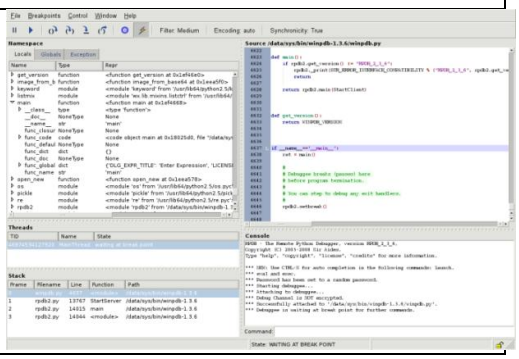
c) Hotel Management: Hotel Management software refers to management techniques used in the hotel sector. These can include hotel administration, accounts, billing, marketing, housekeeping, front office or front desk management, food and beverage management, catering and maintenance.	
d) Reservation System: Commonly seen at railway reservation offices, this software helps the concerned department to automatically check the availability of the seats or berths of any train for any particular date with incomparable speed. Now a days using the internet and this software one can book or reserve tickets of any train for any dates with in no time.	
e) Report Card Generator: This software is commonly used in schools by the examination department to prepare and generate the report card of students. It performs all possible mathematical calculations and checks whether a student can be promoted to the next class or not. It can also be used to calculate the class wise ranking of a student.	

1.4 Developer Tools

When a programmer starts the process of writing a program to develop software for any type of application, he/she requires a series of software developing tools like code editor, debugger and compiler. A platform where all these software developing tools are bundled into a package is known as **Integrated Development Environment (IDE)**. An Integrated Development Environment (IDE) is an application program that consists of all required software developing tools required for developing software as part of a single interface. It typically consists of the following tools:

- Source Code Editor
- Graphical User Interface (GUI) builder
- Compiler / Interpreter
- Debugger
- Build Automation tool

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 2, May 2022
Impact Factor: 6.252

Software Developing Tools	Figure
a) Source Code Editor: A **source-code editor** is a text editor program designed specifically for editing source code of computer programs. It may be a standalone application or it may be built into an integrated development environment (IDE) or web browser. Source-code editors are a fundamental programming tool, as the fundamental job of programmers is to write and edit source code.	
b) GUI Builder: A graphical user interface builder (or GUI builder), also known as GUI designer, is a software development tool that simplifies the creation of GUIs by allowing the designer to arrange graphical control elements (often called widgets) using a drag-and-drop WYSIWYG editor. Without a GUI builder, a GUI must be built by manually specifying each widget's parameters in source-code, with no visual feedback until the program is run.	
c) Compiler/Interpreter: A compiler is a computer program that transforms code written in a high-level programming language into the machine code. It is a program which translates the human-readable code to a language a computer processor understands (binary 1 and 0 bits). The computer processes the machine code to perform the corresponding tasks. Both compiler and interpreters do the same job which is converting higher level programming language to machine code. However, a compiler will convert the code into machine code (create an exe) before program run. Interpreters convert code into machine code when the program is run.	
d) Debugger: A debugger or debugging tool is a computer program used to test and debug other programs (the "target" program). The main use of a debugger is to run the target program under controlled conditions that permit the programmer to track its operations in progress and monitor changes in computer resources (most often memory areas used by the target program or the computer's operating system) that may indicate malfunctioning code.	

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 2, May 2022
Impact Factor: 6.252

e) Build Automation Tool: Build automation is the process of automating the creation of a software build and the associated processes including: compiling computer source code into binary code, packaging binary code, and running automated tests.	

1.5 Relationship between Hardware and Different Types of Software

To quickly recapitulate all that we have learnt in this lesson that depicts the relationship between hardware and the different types of software.

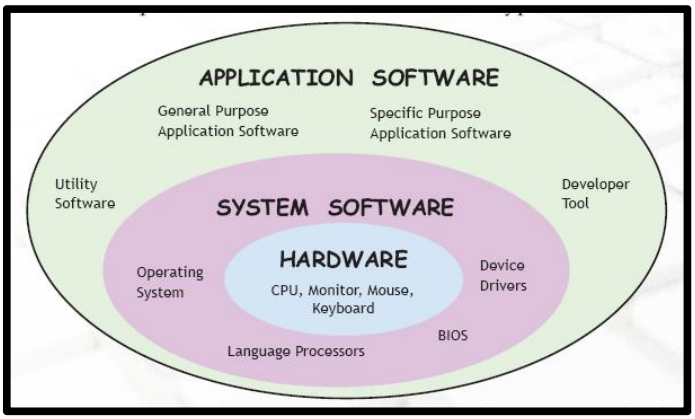


Figure: Relationship Between Hardware and Different Types of Software

II. SUMMARY

- Software is a set of programs that governs the operation of a computer system and its related devices.
- Software can be broadly divided into two categories - System Software & Application Software.
- Application software is a set of programs to carry out a specific task like word processor, spreadsheet, presentation tools, library management software, railway reservation etc.
- Utility Software are used to keep your computer system efficient and trouble free.
- Word processor is general purpose application software that facilitates creation and formatting of text documents.
- Presentation tools are general purpose application software that facilitate creation of presentations on any particular topic.
- Spreadsheet is general purpose application software that facilitates creation of worksheets that stores text and numerical data in tabular form. Performing basic statistical analysis including graphs is the main utility of this software.
- Debugging is the process of removing all errors from a program.
- An interpreter converts as well as executes a high level language program into machine language line by line.
- A compiler is a language processor which converts (or translates) the entire program written in high level language into machine language in one go.
- An Integrated Development Environment (IDE) is a platform or an application program that consists of all required software developing tools required for developing an application at one place. The various tools are arranged as separate windows integrated into one big environment.