Application software

Application software is programs that we can use to perform certain functions and tasks. There are several types of application software.

ENRICHMENT

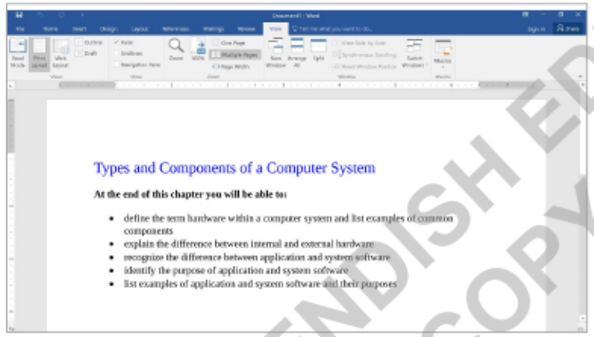
Although Microsoft Word is the most commonly used word processing software, there are other packages. Can you name them?

Word processing software

Word processing software is used for creating, editing, formatting, and manipulating text documents. Hardware devices such as a keyboard or a mouse are used for typing and inputting text.
Standard features of word processing software include the following:

- inserting, deleting, cutting, pasting, copying, searching and replacing text
- changing the size, colour and types of fonts
- checking spelling and grammar
- importing photos, images, pictures and simple drawing tools

Microsoft Word is a commonly used word processing program.



Example of word processing software.

Spreadsheet

Spreadsheet software is used to organize, analyze and manipulate numerical or text data in a tabular form. The data are arranged in a table based on a certain numbering format to denote the cells arranged in lettered columns and numbered rows. Spreadsheets use something called formulas to help manipulate and produce data. These formulas allow users to quickly compare and calculate data. Standard features of spreadsheet software include the following:

- inputting and formatting of data
- inserting formula and doing calculations
- sorting and graphing of data

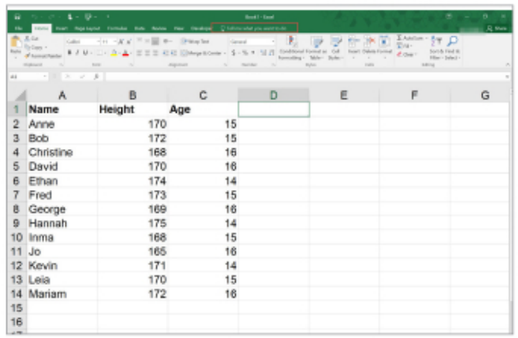
Microsoft Excel is a commonly used example of spreadsheet software. Other programs include Google Sheets, Apache Open Office, and Libre Office.

HELPFUL NOTES

Converting tabular data into line graphs, pie charts or other graphical representations makes data easier to understand.

REFLECT

Other than pie charts and line graphs, what other sorts of graphical representation of data do you know of?



	A	B	C	D	E	F	G
1	Name	Height	Age				
2	Anne	170	15				
3	Bob	172	15				
4	Christine	168	16				
5	David	170	16				
6	Ethan	174	14				
7	Fred	173	15				
8	George	169	16				
9	Hannah	175	14				
10	Inma	168	15				
11	Jo	165	16				
12	Kevin	171	14				
13	Leia	170	15				
14	Mariam	172	16				
15							
16							

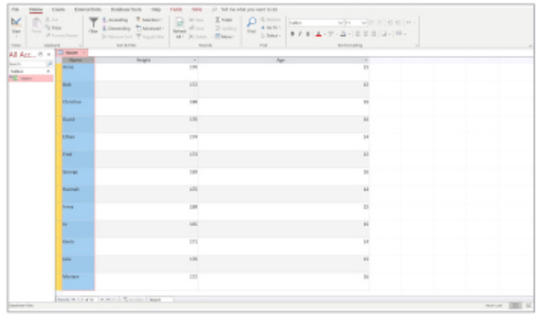
Example of spreadsheet software.

Database management software

Database management software is used to create, manage, organise, analyse and manipulate numerical and text data. The data is arranged in a table of rows and columns. Standard features of database management software include the following:

- retrieving and modifying records
- generating reports
- database enquiries and fetching of information

Libre Office Base is a commonly used database management software. Other programs include Microsoft Access and Kexi.



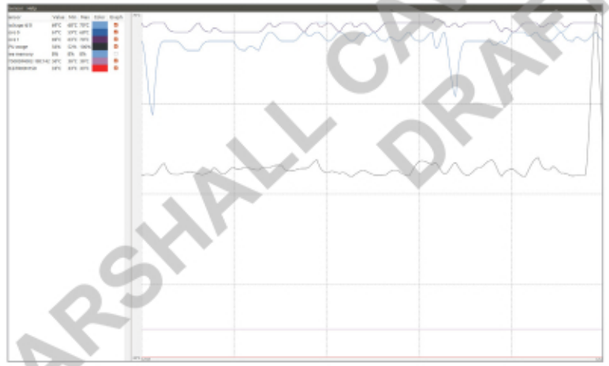
Example of database management software.

Measurement and control software

Measurement and control software captures data obtained from sensors so they can be sent to a computer for data recording and logging. Standard features of measurement and control software include the following:

- measuring physical quantities such as mass, temperature, and distances
- controlling physical processes, for example using a thermostat to regulate temperature fluctuations.

This is an example of data logger software measuring temperature.



Example of measurement and control software.

Presentation software

Presentation software is used to create presentations for personal or business purposes. The user can design their presentation in smaller, manageable sections, and run it as a manual or automatic slide show. Standard features of presentation software include the following:

- adding text, images, video and sound
- creating themes and layers
- adding transitions between sections
- creating charts and graphs from data

REFLECT

Which application software discussed in this section is proprietary and which is free or open source software (FOSS)?

DEFINITION

A database is a structured set of data stored on a computer system.

Activity

1 Complete this table with the names of application software that has the same function on a PC or laptop and on a mobile device, a phone or tablet. The first two have been added for you but add your own ideas.

Function	PC or laptop	Mobile device
Web browser		
Image editing and creation		

2 Do you use any cloud computing software? Can you think of any disadvantages of this type of software? Think about the following:
- security and privacy
- connectivity
- data charges

3 Do we still need PCs? Make a list of tasks that are better done on a PC than on a mobile device. Give a reason for each.

HELPFUL NOTES

System software is designed to run and maintain a computer system.

System software

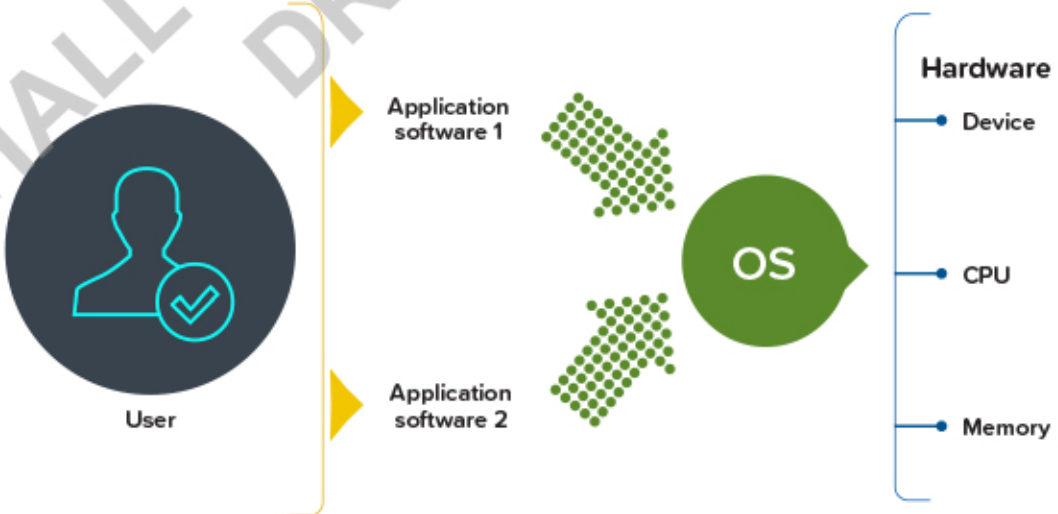
System software is designed to run a computer's hardware and application programs. It acts as an interface between the hardware and the software. System software is not normally used directly by the user, whereas application software is.

Operating systems (OS)

An operating system is software that manages computer hardware and software resources, and provides common services for computer programs. An operating system also provides the user interface, which allows interactions between the system and the user.

DEFINITION

User interface: Allows the user to interact with the computer system in a familiar layout allowing interaction with the input devices and software.



Let's Map It

HARDWARE

A computer system comprises internal and external hardware such as:

Internal Hardware	External Hardware
Central processing unit (CPU)	Keyboard
Random access memory (RAM)	Printer
Read only memory (ROM)	Mouse
Motherboard	Monitor
Sound card	Touch screen
Graphics card	USB memory stick
Hard disk drives	External hard drive

which also include external storage devices such as:

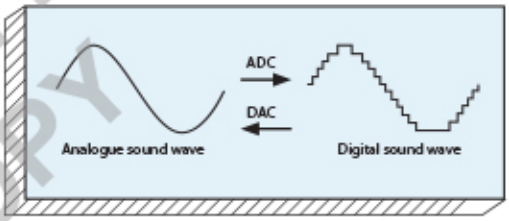
External storage devices

- USB memory stick
- CD, DVD, Blu-Ray Disk
- HDD

SOFTWARE

allows processing of data

Software refers to computer programs that allow a computer system to function. Software can be categorised as follows:



Application Software

Examples of such software include:

- Word Processing
- Spreadsheets
- Database management
- Measurement and Control
- Photo and Video Editing
- Graphic Editing
- Cloud

System Software

- Operating systems
- Compilers
- Linkers
- Device Drivers

Utility Software

- Defragmentation
- Backup
- Compression
- Encryption
- Antivirus

IMPACT OF EMERGING TECHNOLOGIES

- Artificial Intelligence
- Augmented and Virtual Reality
- Health Care