

## 14. Types of Software

### 1. Introduction

Software refers to the programs that we run on our computer systems.

Software allows the hardware to do something useful; without software, the hardware wouldn't know what it was supposed to do.

Software is made up of a series of instructions or computer code. It is these instructions which tell the hardware that it needs to print a document or save a file or display a webpage.



### 2. Software Categories

There are two main categories of computer software that you need to know about. They are:



1. **System software** – the Operating System, utility programs and drivers
2. **Application software** – the everyday programs that you use such as Microsoft Office, graphics packages and web browsers.

### 3. Operating Systems

The operating system is part of the system software. All computers have an operating system, they cannot function without one.

The operating system is a program that allows applications software to communicate with the hardware.

Examples of operating systems are Windows Vista, Windows XP, Unix, Linux and MacOS.

An operating system has many tasks. Here are just a few of them:

- Sorting out where to store data on disk drives
- Dealing with security - user names and passwords
- Organising files and folders
- Managing data transfer from the CPU to the peripherals e.g. printer, monitor
- Deals with saving, deleting, opening, closing files



## 4. Utility Programs

Utility programs are part of the systems software. They are designed to do one or two specific but vital tasks very well.

Some utility programs might be supplied as part of the operating system, others are purchased separately.

Some common tasks carried out by utility programs are:

- File compression
- File sorting
- File renaming
- File conversion (e.g. convert a sound file to MP3)
- File repair
- Disk defragmentation (defragging)



[Recovery for Outlook Express 1.1.0543](#)  
 Recovery for Outlook Express fixes .DBX files  
 95/98/ME/NT3.x/NT4.x/2000/XP

[Sentry-go Quick Disk Monitor 4.1](#)  
 Monitor free disk space on local drives  
 ME/NT4.x/2000/XP

[IsoBuster 1.9](#)  
 Data recovery from CD and DVD.  
 95/98/ME/NT4.x/2000/XP

[Allway Sync 3.2.8](#)  
 Keep your files and folders in sync.  
 95/98/ME/2000/XP

[GSplit 2.0](#)  
 Split large files into Self-Uniting pieces  
 95/98/ME/NT4.x/2000/XP

[Effective File Search 3.9](#)  
 Search any files on your PC  
 95/98/ME/NT4.x/2000/XP

[Instant File Name Search 1.4](#)  
 Instantly search files by name or wildcard  
 95/98/ME/NT4.x/2000/XP

[DiskAnalyzer Lite 1.5](#)  
 Analyze and Clean your disk space  
 98/ME/2000/XP

[Manage Folder Now 1.5](#)  
 Hide folders and fastest way to jump folder.  
 95/98/ME/2000/XP

[novaPDF Std 1.2](#)  
 Print any document to PDF file using novaPDF!  
 2000/XP

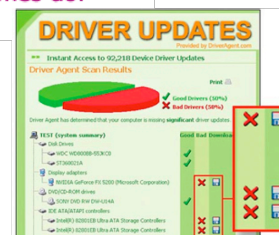
These are the kind of things Utility programmes do.

[www.teach-ict.com](http://www.teach-ict.com)

## 5. Drivers

A driver is another essential piece of system software

As we said earlier, the operating system acts as a link between the hardware and software enabling both to communicate and do their tasks.



A driver is a specially written program which translates the commands from the operating system into commands that the hardware will understand.

Each piece of hardware e.g. printer, monitor, scanner, keyboard etc will have its own driver. Printers from different manufacturers work in different ways, so a printer from manufacturer A will need a different driver than printer from manufacturer B.

If you try to use a device without the correct driver, then it probably won't work. If you do manage to get your new printer working without installing its driver, it will probably just print you gobbledygook!

This is what comes out of a printer with the correct driver installed: [This is a printout](#)

This is what comes out of the printer with the incorrect driver installed: [Jajshu fuau&\(\( 89asd 8fa8s9d](#)

### Can you spot the difference?

When a new operating system such as Microsoft Vista is first released, the software developers will have been working closely with the hardware manufacturers and so the operating system will contain all of the drivers needed for the hardware currently on the market. However, operating systems are only released every 3-4 years and so the operating system will not contain the drivers for any new hardware developed after its release.

When you buy a new piece of hardware, it will usually come with an installation disk which will load the new drivers into the operating system. Very often, you can also download the drivers from the internet.

## 6. Applications Software

Software applications work through the operating system to gain access to the hardware.

A software application carries out tasks that the user is interested in doing such as writing a letter, creating graphs, sending an email or downloading a webpage.

Application software can be classified under three main categories:

- General purpose software
- Specialist software
- Tailor made or bespoke software



## 7. General Purpose Software

A general purpose application, sometimes known as 'off-the-shelf' is the sort of software that you use at home and school.

Examples include word processors, spreadsheets, databases, desktop publishing packages, graphics packages etc.

This type of software tries to be a 'jack-of-all-trades'. It provides many features that the majority of users will want e.g. formatting text, creating charts, organising tables. But it does try to be 'all things to all people' and so there will be a vast number of features that you may never use e.g. statistical functions, mail merge. This makes the storage size of these applications fairly large.

There are several good reasons for using general purpose software:

- It is relatively cheap
- It is easily available from most computer shops
- It will have been thoroughly tested so there won't be any serious problems or bugs
- There will be lots of user support i.e. books, user guides, online help and discussion forums on the Internet



## 7. Specialist Software

Specialist application packages are generally not available in shops and they often have to be purchased directly from the manufacturer or a specialist firm.

These applications are designed to be used for specific tasks such as company payroll, stock control systems, appointment systems, ecommerce sites etc.

The applications have not been written for a specific company. They have been developed by a manufacturer to try to provide all of the features that they anticipate a company might need.

Like general purpose software, there may be many features that the company does not need, or the features which are available may not work exactly as they would like in their business.

It is possible for developers to adapt this specialist software somewhat and make it more specific for the company needs. However, they are limited in what can be changed.





## 8. Bespoke Software

Although specialist software might be the answer for many companies, there will be some organisations who find that it just doesn't do exactly what they want or it doesn't work with their current systems.

In this case, they might decide to have the software system they need designed and developed specifically for them. This is called 'tailor-made' or 'bespoke' software.

The main advantages are:

- the company will get the exact software/system that they need
- the software will work exactly how they want it to work
- the software will only have the features that they specifically need in their business.

The main disadvantages of this approach are:

- it takes a long time to develop such a system, between a few months to years
- it costs a great deal of money to develop such a system.
- the company may need to employ a team of people such as business analysts, programmers, testers etc
- there will be little in the way of user support and online help



## 9. Integrated Packages

Customers who purchase a word processor often want a spreadsheet and database package as well as a presentation package and a desktop publisher and a few others. But, each package when purchased on its own is fairly expensive and customers may find that to buy them all individually is more expensive than they can afford.

Some manufacturers decided to put a selection of the most popular general purpose software together and sell it as one package at a much cheaper price than buying each package individually.

This is called an 'integrated package'. An example of an integrated package is 'Microsoft Office' which contains Word, Excel, Access, PowerPoint and Publisher. Another example is 'Lotus SmartSuite'.

