Utility Software

A Utility program is a piece of software that performs a useful task on a computer to help it keep running effectively, or allows the user to perform an organisational task. We don't buy computers to run utility software, but these programs help our computers run more effectively.

Examples include -

Compression programs

Programs like Winzip and Winrar reduce the amount of storage space files take up. This means you can upload and download the files more quickly, and that they take up less hard drive storage space.

Defragmentation

As files get added and deleted from a hard drive, gaps are left behind. In order to fit news files into these gaps we have to split the new files into smaller parts to make them fit in.

Original files:

We delete some files:

We fill in the gaps by splitting up the new file:

Files that have been split up into parts are called 'fragmented'. However, accessing a file that has been split up into parts is slower than accessing a file that is all in the same location. Therefore, it is helpful to rearrange all the files so that everything is fitted back together, and files are contiguous (all connected together), rather than fragmented. A disc defragmenter is a utility program that does this. It is, however, a slow process, so in modern computer defragmentation is often run in the background when a computer isn't doing

anything else - this keeps the computer's hard drive well organised and operating at good speed.

Back-up

Backing up our data is an essential part of keeping data secure. Doing it manually is slow, time consuming, and we have to remember to do it regularly. Therefore utility programs exist to do it for us.

A utility program will run automatically on a schedule, and will copy the files we select to another location. This may be an external hard drive, a removable drive (like a digital tape drive - rarely used these days) or to cloud storage.

1. What files are the most important ones to back-up from a computer?
 Business

2. Which files might you not back up every day, or perhaps not back up at all?
apps

Anti-virus/Anti-spyware

Anti-virus and Anti-spyware programs scan our computers looking for damaging files, or malware. Most programs of this type will quickly examine a file before you open it, to check it isn't dangerous, but will also scan the whole of your hard drive at regular intervals - usually once a day.

With any anti-malware program it is essential that you keep it up to date - that is you make sure it downloads updates regularly. This is because they can only recognise threats they know about, and as new threats are being created all the time they have to downloaded the latest information about new viruses and spyware that has been produced.

Anti-malware programs will also try to use **Heuristics** to 'guess' whether an unknown program is dangerous or not, but this approach is never fully accurate.

1. What is a Heuristic?

Managing, repairing and converting files

Utility programs also exist for keeping your files organised (copying, deleting, renaming files), repairing damaged files and drives (e.g. diskscan on windows) and for converting a file from one type into another (e.g. changing the format of a music or video file).