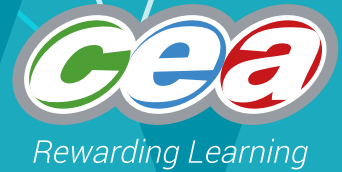


# FACTFILE: GCSE DIGITAL TECHNOLOGY



## Unit 1 SOFTWARE 2



### Introduction

#### Learning Outcomes

Students should be able to:

- Describe the following tasks carried out by the utility applications:
  - Disk defragmenting,
  - Task scheduling,
  - Backup and
  - Restoring data;
- Describe the role of antivirus software and the importance of regular updates.

#### Content

- Utility Applications
- Antivirus Software

#### Utility Applications

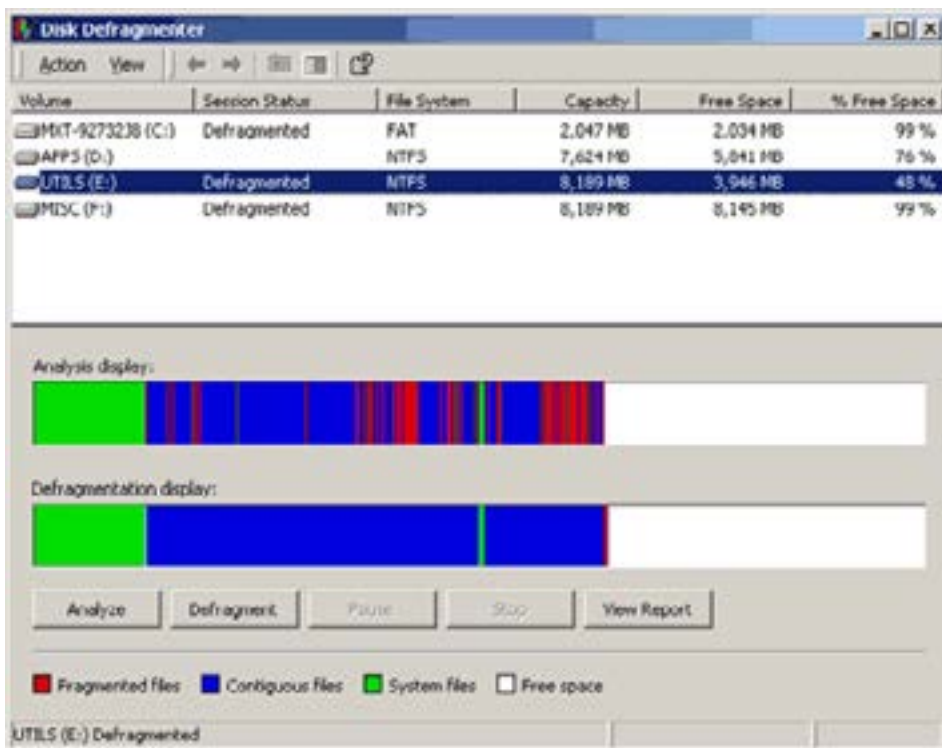
This is a program that comes with the computer system – “a *systems program*”. It performs specific tasks while the computer is operational. For example it will back up files, check for virus’ or run a compression program.

Some of the specific applications carried out by the utility program are:

- Disk defragmenting
- Task scheduling
- Backup
- Restoring data

#### Disk defragmenting

Files on a computer are stored on the hard disk. As more and more files are saved to the hard disk sections of files get stored away from each other, which causes the computer performance to slow down. The computer slows down because the hard disk has to find all the data from each file before it can be opened. When the “defrag” program is used the computer puts all the pieces of each file together again, therefore speeding up the computer.



Disk Defragmenting before and after

### Task Scheduling

This is when the CPU will allocate time for each task or program that the computer has running. This ensures that many programs can seemingly run at

the same time and that maximum usage is made of the CPU time. You can use the task scheduler to ask the computer to perform specific tasks at times you choose for example setting it to run your antivirus software.

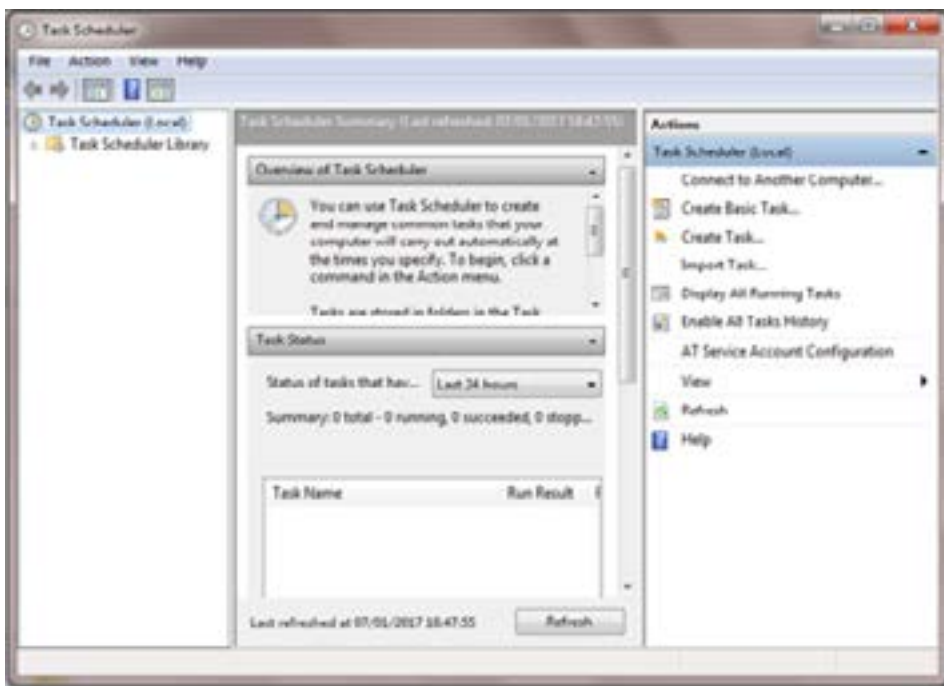


Image of a typical task scheduler

## Backup

This involves making copies of file or programs in case the original one becomes corrupted. Backups should be made at regular intervals to ensure you always have an up-to-date copy of your files. A backup of software should be stored separately from the computer to protect against dangers such as fire. There are different types of backups that can be made.

### Full Backup

This copies all files to provide a complete record of the data.

### Differential Backup

This copies files that have changed since the last full backup.

### Incremental backup

This copies only those files that have changed since the last backup. This could be a full backup or a previous incremental backup.

### Journal file

This provides a record of operations since the previous backup.

### Hard Copy

As a last resort a copy store on paper.

## Restoring Data

This is used when files or programs become corrupt. The backup system files are copied back onto the system. To return the system to the state before it failed involves restoring the latest journal file or any transactions files.

## Antivirus Software

Antivirus software is used to detect and quarantine or remove malicious software from the computer system.

Antivirus monitors are stored in the hard drive; they continually monitor the system for the presence of a virus. If one is detected the file is prevented from running and a warning message is sent to the user. The user can then decide whether to quarantine or remove the software.

Virus checking scans all files including new data read into the computer, to detect any viruses.

Disinfection is the removal of any detected viruses.

Quarantine is isolating any files that are suspected of containing a virus.

## Regular Updates

Regular updates of antivirus software are essential to ensure that the computer system is completely protected against any threats. New viruses are created everyday so it is important that the antivirus software can detect these as soon as possible and take any necessary action.

## **Bibliography**

### **Books**

BCS Glossary of Computing and ICT, 13th ed., BCS Academy Glossary Working Party pg 358

BCS Glossary of Computing and ICT, 13th ed., BCS Academy Glossary Working Party pg 81–82

BCS Glossary of Computing and ICT, 13th ed., BCS Academy Glossary Working Party pg 171–172

BCS Glossary of Computing and ICT, 13th ed., BCS Academy Glossary Working Party pg 6

### **Websites**

<http://www.teach-ict.com/glossary/D/defrag.htm>

[http://www.teach-ict.com/2016/A\\_Level\\_Computing/OCR\\_H446/1\\_2\\_software/121\\_operating\\_systems/scheduling/miniweb/pg2.php](http://www.teach-ict.com/2016/A_Level_Computing/OCR_H446/1_2_software/121_operating_systems/scheduling/miniweb/pg2.php)

### **Images**

Task Scheduler taken from own computer

<http://windowsitpro.com/windows-client/scheduling-windows-2000-s-disk-defragmenter>



## Revision Questions

**1** If your computer is processing slowly what utility program could you use to try to speed it up? (1)

.....

.....

.....

.....

**2** What is the purpose of the task scheduler? (2)

.....

.....

.....

.....

**3** Why is it important to back-up your files? (1)

.....

.....

.....

.....

**4** Name and explain 2 types of back-up

Name: ..... (1)

Explanation: ..... (2)

.....

.....

Name: ..... (1)

Explanation: ..... (2)

.....

.....

**5** Explain the difference between Utility Programs and Application Programs. (3)

.....

.....

.....

.....

**6** Why is it important to have up-to-date antivirus software? (2)

.....

.....

.....

.....

