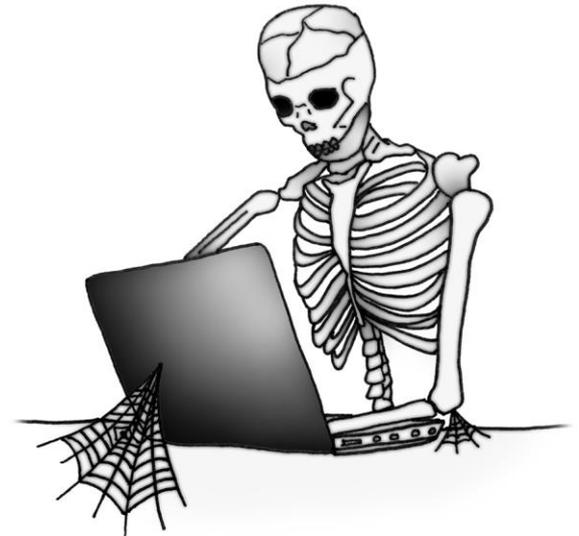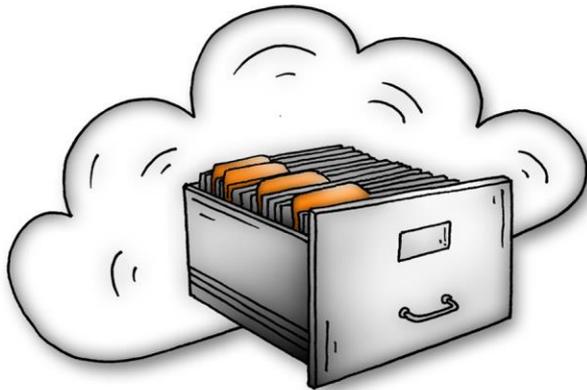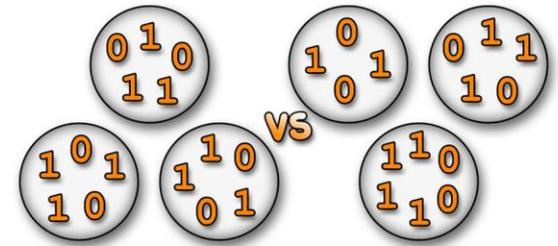**PiXL** Computing

KnowIT

SYSTEM AND APPLICATION SOFTWARE

LASER VS INKJET

Operating system

- Examine why an Operating System is essential when running applications on a computer

- Multi-tasking, Multi-user and Single-User are types of Operating System, others include:
  - Distributed
  - Embedded
  - Real-time
  Research these types of Operating system

- Research what category Windows 10 falls into

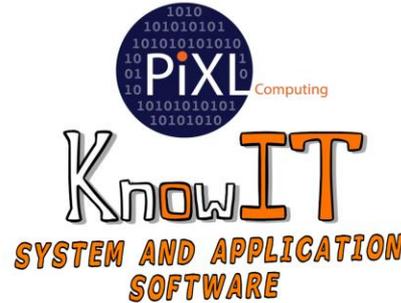### Operating system- Device drivers

- A printer is one example of a Device driver, justify the need for a Device driver for each specific printer

- Explain how having an incorrect driver installed on the computer can impact how the Computer works

- It is important to ensure a modem driver is up to date, justify why this is important and the impact it will have on the device

Operating System- Multi-tasking

- Justify the need for a Multi-tasking operating system

- Describe the types of tasks a Multi-tasking Operating system may carry out at the same time

- The Operating System must ensure each job gets enough processor time, it does this using a scheduler. Research how different Scheduling algorithms work

Application Software

- Explain the difference between an Application and a Utility

- Research Applications which may be used by a call centre

- "Some types of application software are more suited to the hardware they are being used with" discuss this statement using examples with reference to memory, speed and cost

- More and more applications are becoming cloud based, explain the benefits of using cloud based applications?

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SYSTEM AND APPLICATION SOFTWARE

Operating System- Memory Management

- "Memory management must ensure memory is used efficiently and is stored safely" discuss this statement

- There are two ways programs and data can be split by the operating system Paging and Segmentation, explain how each works

- Justify why memory management is needed

- Explain how the Operating System manages RAM

Utility Software- Backup

- Explain what a network manager should consider when deciding which Backup Utility to use

- Justify the best time for a bank to complete a backup

- Write a Backup policy which could be implemented in a school

- "It is a good idea to back up on an external device", discuss this statement

- Explain how Backup and Compression Software can work together

Utility Software- Encryption

- "It is important for Encryption software to be used especially for online banking and payments" To what extent do you agree with this statement?

- Research examples of Encryption Software, how do they work?

- Justify why Encryption is essential for sending data over a network securely

- Examine the use of Symmetric and Asymmetric Encryption

Utility software- Defragmentation

- Defragmentation speeds up file access on a hard disk, explain why this is the case

- "You should not use defragmentation software on a SSD", justify this statement

- "The more fragmented the hard drive becomes the slower it will perform," justify this statement

- Research examples of Defragmentation Software, how do they work?