

Topic 4: Software

Keyword sheet - Cambridge IGCSE Computer Science 0984. Tick each term once you can define it from memory.

Keyword	Definition	Know it?
System software	Software that manages and runs the computer, e.g. the operating system and utilities.	
Application software	Software that allows users to carry out specific tasks, e.g. word processor, web browser.	
Operating system (OS)	System software that manages hardware, memory, files, processes, users and security, and provides a user interface.	
OS functions	Managing files, memory, processes (multitasking), peripherals, security, user accounts and the user interface.	
Utility software	System software that performs maintenance tasks, e.g. antivirus, backup, disk defragmentation.	
Device driver	Software that allows the OS to communicate with and control a hardware device.	
Firmware	Permanent software stored in non-volatile memory in a hardware device that controls its basic operation.	
Bootstrap / bootloader	Small program in ROM that starts the computer and loads the operating system.	
Interrupt	A signal to the CPU from software or hardware requesting attention; the CPU pauses its current task, services the interrupt, then resumes.	
Interrupt service routine (ISR)	Code that runs to deal with a particular interrupt.	
High-level language	Programming language close to human language and independent of hardware; must be translated; e.g. Python.	
Low-level language	Language close to machine code, specific to a processor type; includes assembly language and machine code.	
Machine code	Binary instructions executed directly by the CPU.	
Assembly language	Low-level language using mnemonics (e.g. ADD, LDA) that map closely to machine code instructions.	
Assembler	Translator that converts assembly language into machine code.	
Compiler	Translates the whole source code into machine code before it is run, producing an executable; reports all errors together.	
Interpreter	Translates and executes source code one statement at a time; stops at the first error; slower to run.	
IDE	Integrated development environment: software offering a code editor, translator, debugger and other tools for developing programs.	
Debugger / breakpoint	Tool that helps find errors; a breakpoint pauses execution at a chosen line so values can be examined.	