Programming

A-Level Computer Science · Vocabulary in context

Word	Example
flowchart /ˈfləʊtʃɑːt/	A **flowchart** shows the steps as boxes and arrows.
structured English /ˈstrʌktʃəd ˈɪŋglɪʃ/	**Structured English** writes the steps in short, simple sentences.
pseudocode /ˈsuːdəʊkəʊd/	Write the algorithm in **pseudocode** first.
variables /ˈveərɪəblz/	Name and Age are **variables**. Name Age
data types /ˈdeɪtə taɪps/	INTEGER and STRING are **data types**. INTEGER STRING
assignment /əˈsaɪnmənt/	Total ← 0 is an **assignment**. Total ← 0
constant /ˈkɒnstənt/	A **constant** such as Pi never changes. Pi
identifier /aɪˈdentɪfaɪə/	Total is the **identifier** of the variable. Total
array /əˈreɪ/	An **array** stores many values under one name.
operators /ˈɒpəreɪtəz/	+ and − are **operators**. + −
precedence /ˈpresɪdəns/	AND has higher **precedence** than OR. AND OR
function /ˈfʌŋkʃn/	A **function** returns a value.
library routines /ˈlaɪbrəri ruːˈtiːnz/	**Library routines** are ready-made and tested.
insert /ˈɪnsɜːt/	The exam **insert** gives extra information for some questions.

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parameters /pəˈræmɪtəz/	The procedure has two **parameters**: a name and an age.
program library /ˈprəʊgræm ˈlaɪbrəri/	A **program library** holds code that many programs can use.
concatenation /kənˌkætəˈneɪʃn/	**Concatenation** joins “Hello” and “World”. ”Hello” ”World”
selection /sɪˈlekʃn/	An IF statement is a kind of **selection**. IF
nested /ˈnestɪd/	A loop inside a loop is a **nested** loop.
logic error /ˈlɒdʒɪk ˈerə/	A **logic error** gives the wrong answer but does not stop the program.
trace table /treɪs ˈteɪbl/	A **trace table** shows the value of each variable at each step.
iteration /ˌɪtəˈreɪʃn/	A loop is a kind of **iteration**.
count-controlled loop /kaʊnt kənˈtrəʊld luːp/	A FOR loop is a **count-controlled loop**. FOR
pre-condition loop /priː kənˈdɪʃn luːp/	A WHILE loop is a **pre-condition loop**. WHILE
post-condition loop /pəʊst kənˈdɪʃn luːp/	A REPEAT loop is a **post-condition loop**. REPEAT
dry run /draɪ rʌn/	Do a **dry run** with a pen and paper.
procedure /prəˈsiːdʒə/	A **procedure** is a named block of code.

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structured programming /ˈstrʌktʃəd ˈprəʊgræmɪŋ/	**Structured programming** uses procedures, functions and loops.
subroutines /ˈsʌbruːtiːnz/	Split the program into small **subroutines**.
return value /rɪˈtɜːn ˈvæljuː/	The function's **return value** is the total.
arguments /ˈɑːgjuːmənts/	Pass the **arguments** 5 and 3 to the function. 5 3
pass by value /pæs baɪ ˈvæljuː/	**Pass by value** gives the procedure a copy of the variable.
pass by reference /pæs baɪ ˈrefrəns/	**Pass by reference** lets the procedure change the original variable.
global variable /ˈgləʊbl ˈveərɪəbl/	A **global variable** can be used anywhere in the program.
local variable /ˈləʊkl ˈveərɪəbl/	A **local variable** is used only inside its procedure.
scope /skəʊp/	The **scope** of a variable is where it can be used.
decomposition /ˌdiːkɒmpəˈzɪʃn/	**Decomposition** breaks a big problem into small parts.
signature /ˈsɪgnɪtʃə/	The function's **signature** gives its name and parameters.
format /ˈfɔːmæt/	Show the date in the **format** DD/MM/YYYY. DD/MM/YYYY
Validation /ˌvælɪˈdeɪʃn/	**Validation** rejects an age of 200. 200
run-time error /rʌn taɪm ˈerə/	Dividing by zero causes a **run-time error**.

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invariant /ɪnˈveərɪənt/	The loop **invariant** is true every time the loop runs.
linear search /ˈlɪnɪə sɜːtʃ/	A **linear search** checks each item one by one.
syntax error /ˈsɪntæks ˈerə/	A missing bracket is a **syntax error**.
IDE /ˌaɪ diː ˈiː/	An **IDE** helps you write and test code.
breakpoint /ˈbreɪkpɔɪnt/	The program stops at the **breakpoint**.
single stepping /ˈsɪŋgl ˈstepɪŋ/	**Single stepping** runs one line at a time.