Topic 07

IGCSE Computer Science · Vocabulary in context

Word	Example
program development life cycle /ˈprəʊgræm dɪˈveləpmənt laɪf ˈsaɪkl/	The **program development life cycle** has four stages: analysis, design, coding and testing.
analysis /əˈnæləsɪs/	**Analysis** finds out what the program must do.
design /dɪˈzaɪn/	In the **design** stage, you plan the program.
coding /ˈkəʊdɪŋ/	**Coding** means writing the program.
testing /ˈtestɪŋ/	Use **testing** to compare actual and expected answers.
abstraction /əbˈstrækʃn/	A map uses **abstraction**: it leaves out small details.
decomposition /ˌdiːkɒmpəˈzɪʃn/	**Decomposition** breaks a big problem into small parts.
sub-systems /sʌb ˈsɪstəmz/	Break the system into **sub-systems**.
structure diagram /ˈstrʌktʃə ˈdaɪəgræm/	A **structure diagram** shows how a system breaks into parts.
iterative testing /ˈɪtərətɪv ˈtestɪŋ/	**Iterative testing** tests each part again after every change.
test data /test ˈdeɪtə/	**Test data** checks the model on examples it has not seen.
flowchart /ˈfləʊtʃɑːt/	A **flowchart** shows the steps as boxes and arrows.
pseudocode /ˈsuːdəʊkəʊd/	Write the algorithm in **pseudocode** first.

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algorithm /ˈælgərɪðəm/	An **algorithm** is a list of steps to solve a problem.
input /ˈɪnpʊt/	input() reads **input** that the user types. input()
processing /ˈprəʊsesɪŋ/	**Processing** happens between input and output.
output /ˈaʊtpʊt/	The **output** of print(2 + 3) is 5. print(2 + 3) 5
validation /ˌvælɪˈdeɪʃn/	**Validation** checks that an age is between 0 and 120. 0 120
range check /reɪndʒ tʃek/	A **range check** makes sure a value is between limits.
length check /leŋθ tʃek/	A **length check** counts the characters.
type check /taɪp tʃek/	A **type check** makes sure the data is the right type.
presence check /ˈprezəns tʃek/	A **presence check** makes sure the field is not empty.
format check /ˈfɔːmæt tʃek/	A **format check** makes sure the data follows a pattern, like a date.
check digit /tʃek ˈdɪdʒɪt/	The last number in a barcode is a **check digit**.
verification /ˌverɪfɪˈkeɪʃn/	**Verification** checks that data was copied correctly.
visual check /ˈvɪʒuːəl tʃek/	A **visual check** means looking at the data on screen.
double entry /ˈdʌbl ˈentri/	**Double entry** means typing the data twice and comparing.
trace table /treɪs ˈteɪbl/	A **trace table** follows the values of variables line by line.

Word	Example
normal /ˈnɔːml/	**Normal** test data should be accepted.
abnormal /əbˈnɔːml/	**Abnormal** test data should be rejected.
extreme /ekˈstriːm/	**Extreme** test data is at the very edge of the allowed range.
boundary /ˈbaʊndəri/	**Boundary** data tests values just inside and just outside the limits.
linear search /ˈlɪnɪə sɜːtʃ/	A **linear search** checks each item one by one.
bubble sort /ˈbʌbl sɔːt/	**Bubble sort** swaps two items next to each other if they are in the wrong order.
totalling /ˈtəʊtəlɪŋ/	**Totalling** adds up values in a loop.
counting /ˈkaʊntɪŋ/	**Counting** adds one each time something happens.
maximum /ˈmæksɪməm/	Find the **maximum** mark in the class.
minimum /ˈmɪnɪməm/	Find the **minimum** mark in the class.
average /ˈævrɪdʒ/	The **average** is the total divided by the count.

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