AQA Computer Science GCSE
3.2.11 Robust and Secure Programming

Flashcards

What is robust programming?

What is robust programming?

Writing code that handles unexpected input or behaviour without crashing.

What is secure programming?

What is secure programming?

Writing code that protects data and prevents unauthorised access.

What is data validation?

What is data validation?

Checking that input data is sensible and acceptable before using it.

Name 3 common validation checks.

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Length check, range check, presence check.

What is authentication?

What is authentication?

Verifying a user's identity (e.g. username and password).

What are the 3 main types of test data?

What are the 3 main types of test data?

Normal, boundary, erroneous.

What is normal test data?

What is normal test data?

A typical value within the valid range.

Example: 5 for range 1–10

What is boundary test data?

What is boundary test data?

A value at the edge of the valid range.

Example: 1 or 10 for range 1–10

What is erroneous test data?

What is erroneous test data?

An invalid input that should be rejected.

Example: "one" or "abc" when expecting a number

What is a syntax error?

What is a syntax error?

A mistake in the code that breaks language rules (e.g. missing colon).

What is a logic error?

What is a logic error?

Code runs but produces an incorrect result due to a mistake in logic. E.g., < used instead of <= in selection.

Why is testing important?

Why is testing important?

To find bugs, check correctness, and make the program more reliable.

What should you do when choosing test data?

What should you do when choosing test data?

Select normal, boundary, and erroneous inputs—and justify each one.