Your notes

Cambridge National IT: revision notes

Data and testing

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Data and information

- **Data** is raw facts and figures with no context, such as 12, 15 and 9. **Information** is **data** that has been processed so it has meaning, such as 'the average temperature this week was 12 °C'.
- Common **data** types: text, number (integer or real), currency, date/time and Boolean (yes/no).

Collecting data

- **Primary data** is collected first-hand for a purpose, using questionnaires, surveys, interviews, observations or sensors. It is relevant and up to date, but takes time and money to collect.
- **Secondary data** was collected by someone else, such as websites, books, published statistics or existing databases. It is quick and cheap to get, but may be out of date, biased or not exactly what you need.

Storing and checking data

- **Data** can be stored in spreadsheets, flat-file databases (one table), relational databases (linked tables) or files such as CSV files.
- **Validation** checks that **data** is sensible: range, type, length, presence and format checks, and lookup checks (against a list of allowed values). It can't check that the **data** is actually correct.
- **Verification** checks that **data** was entered or copied correctly: double entry (typing it twice) and visual checks (proofreading against the original).

Testing

- A **test plan** lists each test, the test **data**, the expected result and the actual result. Test **data** should be normal, extreme (at the edges of the valid range) and erroneous (should be rejected).

- Testing checks that a product works and meets the user requirements. In user acceptance testing, real users try the product to check it meets their needs.

Key terms

Data	Raw facts and figures with no context.
Information	Data that has been processed so that it has meaning.
Primary data	Data collected first-hand for a specific purpose.
Secondary data	Data that has already been collected by someone else.
Validation	Checking that data is sensible and allowed.
Verification	Checking that data has been entered or copied correctly.
Test plan	A list of tests with the test data, the expected results and the actual results.
Extreme data	Test data at the edges of the valid range.

Quick questions

Cover the answers and test yourself: remembering is what makes it stick.

1. What is the difference between data and information?
2. Which of these is primary data?
3. What is one advantage of secondary data?
4. What does validation check?
5. What is double entry?
6. Which validation check stops a field from being left empty?
7. What is a lookup check?
8. What does a test plan include?

Answers

1. Information is data that has been processed and given meaning
2. Answers from a questionnaire you wrote
3. It is quick and cheap to get
4. That data is sensible and allowed
5. Typing data twice to check that both copies match
6. Presence check
7. Checking data against a list of allowed values
8. The test data, expected results and actual results

What to do next

Practise 12 questions on this topic

Try 4 exam questions, with mark schemes

Read the lesson, one step at a time

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