

OCR Computer Science AS Level

2.2.2 Software Development

Flashcards



Identify the common stages of software development life cycles (SDLCs).



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Analysis, Design, Development, Testing, Implementation, Evaluation and Maintenance.



Define white box testing.



Define white box testing.

A form of testing carried out by software development teams in which the test plan is based on the internal structure of the program. All of the possible routes through the program are tested.



What is TELOS?



What is TELOS?

A method of analysis used by designers to evaluate the feasibility of a project. It considers technical, economic, legal and operational aspects of the project, as well as scheduling.



What are agile methodologies?



What are agile methodologies?

A collection of methodologies which aim to improve the flexibility of software development. They respond quickly to changes in user requirements.



Identify the advantages of waterfall programming methodologies.



Identify the advantages of waterfall programming methodologies.

- Straightforward to manage.
- Clear structure.
- Clearly documented.



Give three disadvantages of extreme programming methodologies.



Give three disadvantages of extreme programming methodologies.

- High cost due to two people working on one project.
- Teamwork and good communication is essential.
- End-user must be present throughout the duration of the project.



What type of projects are spiral programming methodologies suited to?



What type of projects are spiral programming methodologies suited to?

Large, risk-intensive projects with a high budget.



What type of projects are Rapid Application Development (RAD) programming methodologies suited to?



What type of projects are Rapid Application Development (RAD) programming methodologies suited to?

Projects where high usability is required and user requirements may not be clear from the outset or are continually changing. Suited to projects of a small to medium size with a relatively low budget and short time-frame.



Define an algorithm.



Define an algorithm.

A set of instructions used to solve a problem.



State three key qualities or considerations good algorithms should make.



State three key qualities of algorithms.

- Inputs must be clearly defined - what is valid and what is invalid?
- Must always produce a valid output for any defined input.
- Must be able to deal with invalid inputs.
- Must always reach a stopping condition.
- Must be well-documented for reference.
- Must be well-commented so modifications can easily be made.



Identify the three types of data
programmers must consider when
testing.



Identify the three types of data
programmers must consider when testing.

Normal, boundary, erroneous.



Define boundary data.



Define boundary data.

Data that falls at either of the ends of the valid data range.



What is a dry-run?



What is a dry-run?

A test strategy in which programmers manually work through the code and produce a trace table. The trace table records when and which variables are updated.



What is the purpose of testing?



What is the purpose of testing?

To identify flaws in the software.

