

Topic 12: Software Development

Keyword sheet - Cambridge AS & A Level Computer Science 9618. Tick each term once you can define it from memory.

Keyword	Definition	Know it?
Software development life cycle	Stages of developing software: analysis, design, coding, testing, deployment and maintenance.	
Requirements specification	Document listing what the system must do.	
Waterfall model	Sequential life cycle: each stage completes before the next begins; well-documented but inflexible.	
Iterative model	Development in repeated cycles of design, build and test, refining the product each time.	
Rapid application development (RAD)	Prototype-based development with continual user involvement.	
Prototyping	Building early working models to gather feedback.	
Structure chart	Hierarchical diagram of program modules and their relationships.	
State-transition diagram	Diagram of states of a system and the events that cause transitions.	
Test plan	Set of tests with test data, expected outcomes and actual results.	
Black-box / white-box testing	Testing outputs against inputs without code knowledge / testing internal logic and paths.	
Integration testing	Testing that separately tested modules work together.	
Alpha / beta / acceptance testing	Testing by developers / by selected users / by the client to confirm requirements are met.	
Stub	Simple placeholder for an unfinished module during testing.	
Maintenance types	Corrective (fix faults), adaptive (new conditions), perfective (improve performance), preventive.	
Documentation	User documentation (how to use) and technical documentation (how it works).	