

Testing

Key Words		Purpose of Testing	Test Data											
black box testing	Another name for final or terminal testing.	- To ensure there are no errors (bugs) in the code. - To check that the program has acceptable performance and usability. - To ensure that unauthorised access is prevented. - To check the program meets the requirements	- To test a program effectively, it is necessary to identify suitable test data and the expected outcome required for that data. - Test data should cover the following situations:											
boundary data	Test data that is at the very edge of what is acceptable.		<table><tr><td>Valid (Normal)</td><td>Test data that is a typical input for the system.</td></tr><tr><td>Valid (Boundary)</td><td>Test data that is valid but at the extreme end of the range of acceptable inputs.</td></tr><tr><td>Invalid</td><td>Test data that is out of range and should be rejected.</td></tr><tr><td>Invalid Boundary</td><td>Test data that is invalid but only just outside the limit for being acceptable.</td></tr><tr><td>Erroneous</td><td>Test data that should be rejected because it is the wrong type of input.</td></tr></table>		Valid (Normal)	Test data that is a typical input for the system.	Valid (Boundary)	Test data that is valid but at the extreme end of the range of acceptable inputs.	Invalid	Test data that is out of range and should be rejected.	Invalid Boundary	Test data that is invalid but only just outside the limit for being acceptable.	Erroneous	Test data that should be rejected because it is the wrong type of input.
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final testing	Testing to check that the whole program functions as expected.													
invalid data	Test data that is out of range and should be rejected.													
iterative testing	The process of testing the program at every stage of the development process.	Types of Testing - Iterative Testing - The process of testing the program at every stage of the development process. - Often called white box testing. - Programs are tested at a modular level to ensure the individual components function as expected. - If programs are not tested at a module level, it is often more difficult to find errors later on. - Final Testing - To check that the whole program functions as expected. - Often called black box testing. - Checking with a range of data that the program produces the required results.	Example of a test table for this program is shown below											
logic error	The program will compile and run but it will not work as the programmer intended.		<pre>validAge = False age = 0 WHILE not validAge INPUT age If age >=-13 AND age<=120 THEN validAge = True ELSE OUTPUT "Invalid Age" ENDIF ENDWHILE OUTPUT "Valid Age"</pre>											
syntax	The rules of a language.													
syntax error	An error where the rules of the language have been broken. The program will not execute until all syntax errors are fixed.													
test data	The values used to test a program.													
test table	A table containing a set of tests to be carried out including the input data and the expected output.													
testing	To ensure that there are no errors in the code and that the program has acceptable performance and usability.	Types of Errors - Logic Errors - The program will compile and run but it will not work as the programmer intended. - Syntax Errors - The syntax of a language is the rules of a language - A syntax error can occur if the rules of the language are not followed - A program will not execute until all syntax errors are fixed												
white box testing	Another name for iterative testing during development.													

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