

N5 COMPUTING SCIENCE

TYPES OF ERRORS

SYNTAX	
Description	These errors occur when you break the rules of the programming language. They are usually identified before the code is run.
Stage of the SDP that the error occurs	Implementation
Examples	Misspelt command words: IMPUT, LOOPP, REPEET,
	Missing brackets: MsgBox("Must be a number between 1 and 100")
	Missing inverted commas: LET password="letmein
Error Messages Reported?	Yes – BEFORE THE CODE IS RUN
Debugging	Programming language will identify and report the line number causing the error allowing the programmer to correct it.

EXECUTION	
Description	These errors occur when the programmer tries to do something that is not possible. The program needs to be running before these errors occur.
Stage of the SDP that the error occurs	Implementation Testing
Examples	<ul style="list-style-type: none"> • Dividing by 0 • Attempting store a string/real in an integer variable • Trying to store 11 items in an array that has been set up to store 10 • Calling a subroutine that has not been written
Error Messages Reported?	Yes – WHEN THE CODE IS RUNNING
Debugging	Programming language will identify and report the line number causing the error allowing the programmer to correct it.

LOGIC	
Description	These errors will produce the wrong output. They do NOT produce any error messages but the program does not produce the expected results.
Stage of the SDP that the error occurs	Design Implementation
Examples	<ul style="list-style-type: none"> • Using > instead of < • Using the wrong mathematical symbol e.g. area = length - breadth • Using the wrong logic operator e.g. AND, OR, NOT
Error Messages Reported?	No
Debugging	The programmer usually finds these errors by printing out the code and examining each line, recording the values of each variable in a table. This is called a DRY RUN.