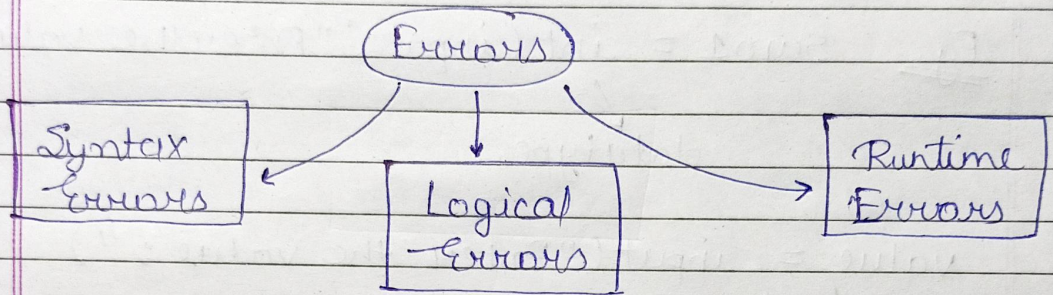




## \* Debugging :->

The process of identifying and removing errors from a program is called as Debugging. Sometimes, program may not execute due to errors.



- (i) Syntax errors :-> Every programming language has some rules of writing code which are to be followed while writing a program known as Syntax. If they are not followed, syntax error arises.

eg.

$a = (12 + 10)$



$a = (7 + 6$



$\therefore$  parenthesis not closed

- (ii) Logical errors :-> Some programs due to wrong logics misbehave and doesn't give desired output due to presence of logical errors. Its presence doesn't affect the



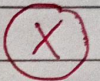


execution but gives undesired / wrong result.

Eg. while finding average, foll. is written.

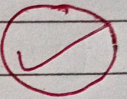
$$a = 10 + 12 / 2$$

Output  $\Rightarrow$  16



$$a = (10 + 12) / 2$$

Output  $\Rightarrow$  11



Expected output  $\Rightarrow$  11

(iii) Runtime errors  $\Rightarrow$  The errors which are caused due to abnormal termination due to interpreter. Although, the code was written correctly but interpreter could not execute it.

Eg. In division, if denominator is zero, then it produces a runtime error.