Runtime/Execution Error

(Programming Error)

Linking Error

(Programming Error)

Rounding Error

(Programming Error)

Logical Error

(Programming Error)

Syntax Error

(Programming Error)

Truncation

(Programming Error)

- occurs when the program is **running**
- so **no error when** the program is **compiled**
- *e.g.* program tries to *store a data file* but there is *not enough disk space* available so program crashes.

- occurs when a program **calls a function**
- but its **library has not been linked** to that program
- *e.g.* the *random number function* is called but the *random library* has *not been linked* to the program.

- occurs when a number is **rounded** to **nearest whole number** (or tenth/hundredth/thousandth, etc.)
- *e.g. 16.5 rounded to nearest whole number is 16, an error of +0.5*

- occurs when there is a mistake in the program instructing the program to do the **wrong thing**
- so the **program works but produces the wrong output**
- *e.g.*   Total = Price **-** VAT instead of   Total = Price **+** VAT

- occurs when there is a **mistake in the rules or grammar** of the program
- so the program **cannot be converted into an executable form** (can't be compiled)
- *e.g. 'Print' in Python should be 'print'*

- occurs when the program **truncates a real number to a fixed number of decimal places**
- loses some information so the **number becomes less accurate.**
- *e.g. 3.125 truncating to 3.12*