Day 3

BODMAS

B - Brackets - $\{\}, [], ()$

O - Order $2^2, \sqrt{2}$

D - Division

M = Multiplication

A = Addition

S - Subtraction

TO LEARN CODING

ORDER OF PRECEDENCE

$6 \times 3 + 5/2 \times 7 = 35.5$

BOX

D

M

A

S

$= 6 \times 3 + 2.5 \times 7$

$= 18 + 17.5$

$= 35.5$ //.

$\rightarrow 6 - 5 \times 3 / (2 + 5) \times 6$

$\rightarrow 6 - 5 \times 3 / 7 \times 6$

$\rightarrow 6 - 5 \times 0.42 \times 6$

$\rightarrow 6 - 12.6$

$\rightarrow -6.6$

BODMAS

$5^8 - (2^{16} + 9 \mid 8) \mid 2 \times 7$

B

$\rightarrow 5^8 - (65536 + 9 \mid 8) \mid 2 \times 7$

O

$\rightarrow 5^8 - (65536 + 1.125) \mid 2 \times 7$

D

$\rightarrow 5^8 - 65537.125 \mid 2 \times 7$

M

$\rightarrow 390625 - 65537.125 \mid 2 \times 7$

A

$\rightarrow 390625 - 32768.56 \times 7$

S

$\rightarrow 390625 - 229379.5$

$\rightarrow 161245.5$

functions in Maths :

$$f(a,b) = a^2 + 2ab + b^2$$

$$5 / 3 \times (7 + f(2,3) / (f(2,2))$$

$\Rightarrow 5/3 \times (7 + 25/16)$

$\Rightarrow 5/3 \times (7 + 1.56)$

$\Rightarrow 5/3 \times 8.56 \Rightarrow 1.66 \times 8.56$

$\Rightarrow 14.2096$

$f(2,3) = 25$

$f(2,2) = 16$

Takeaways:

functions in programming are similar to functions in maths.

→ $f(a, b)$ = { a is int, b is int } (arguments) → return - is int

```
int factorial (int i) {
    int x;
    for(x = 1; x < i; x++) {
        i = i * x;
    }
    return i;
}
```

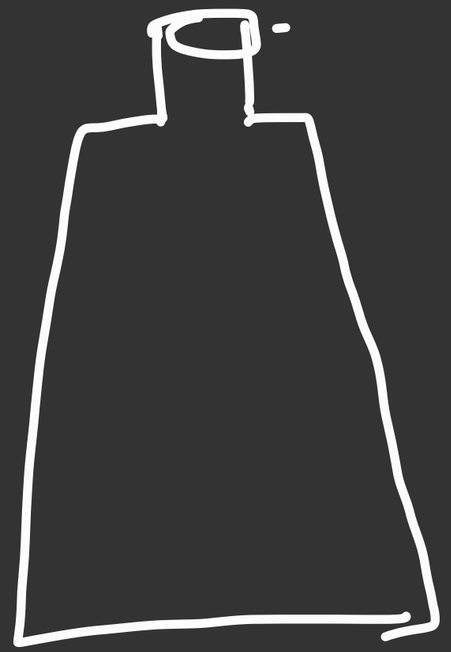
C Syntax

int
float
char

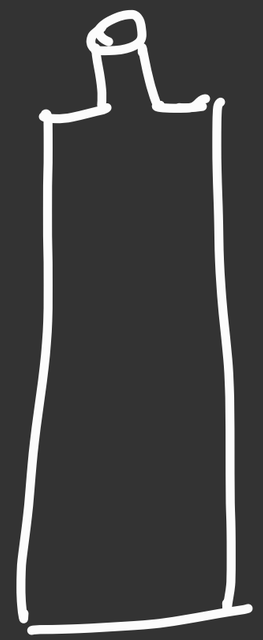
```
int a = 5;
int b = 5 + factorial(a);
```

b = 125

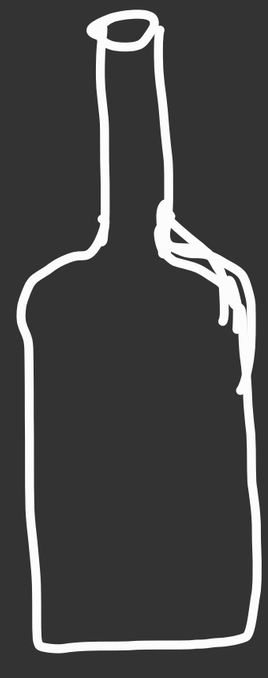
diff var/data types



Milk bottle



W-Bottle



B-Bottle

Milk|w|b bottle =

↓ data type

↓ var