CS 301 - Lecture 5

1

Variables
↓
Functions
↓
Conditions
↓
Iteration

x $\boxed{\cancel{1}\ \cancel{3}\ 8}$

$x = 1$

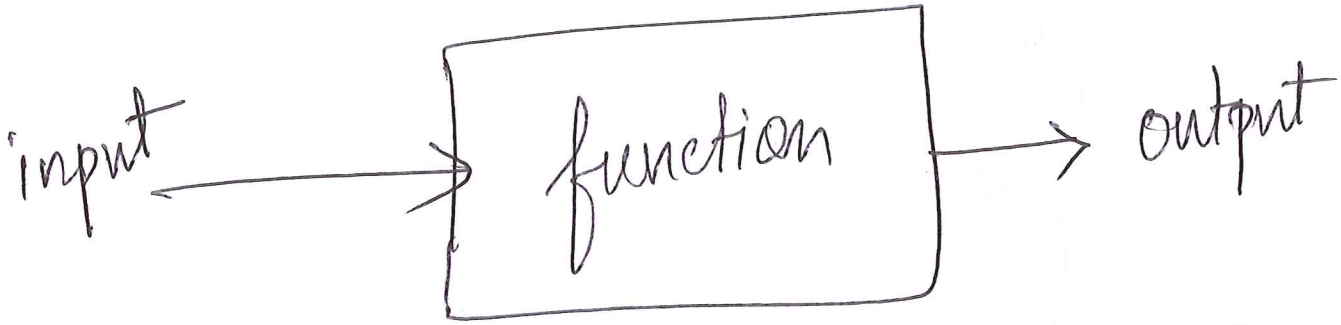
$x = 1 + 2$

$x = \underbrace{x + 5}_{3+5}$

int
float
str
bool

$$\boxed{ax^2 + bx + c = 0}$$

Functions

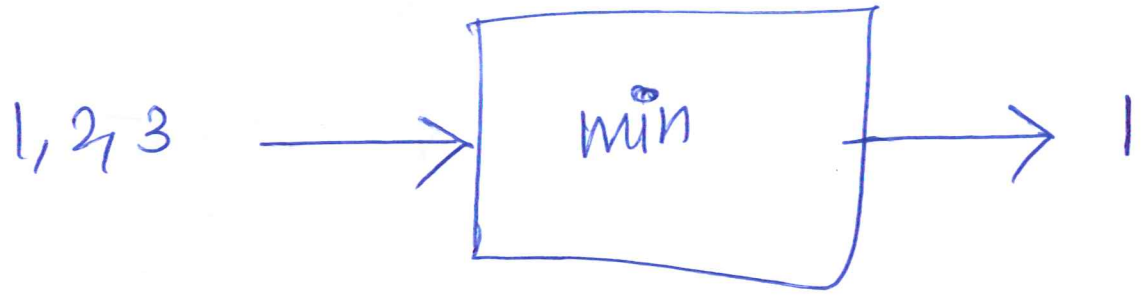


$$y = f(x) = x^2$$

$$f(1) = 1^2 = 1$$

$$f(2) = 2^2 = 4$$

$$f(-3) = (-3)^2 = 9$$



1. print()
2. type()
3. str()

(3)

How to get input from the user?

input()

inbuilt functions

1. int()
2. float()
3. round()
4. abs()

Math functions

math module

1. factorial()
2. ceil()
3. floor()
4. e^x ⟹ exp()
5. $\log_e x$ ⟹ log()

④

$100! = 1 \times 2 \times 3 \times \ldots \times 100$

$e = 2.718182\ldots$

$\text{math.exp}(x) \iff e^{x}$

$\text{math.exp}(1) \iff e^{1}$

$y = e^{x}$

$\log_e y = \log_e(e^{x})$

$\Rightarrow \underline{\log_e y = x}$ OR $\underline{x = \log_e y}$

$x = \log_e(e^{3})$

$\boxed{x = 3}$

(5)

$$y = f(x) = 2 * e^{x} + 3 * x^{3} - 1$$

$$\boxed{f(x) = 2e^{x} + 3x^{3} - 1}$$