30 - 03 - 2025

Agenda:

→ python Data Type
→ Operator (some)

problem: analyse data → weather forecasting

1-Jan 2-Jan 3-Jan ... 1-Feb

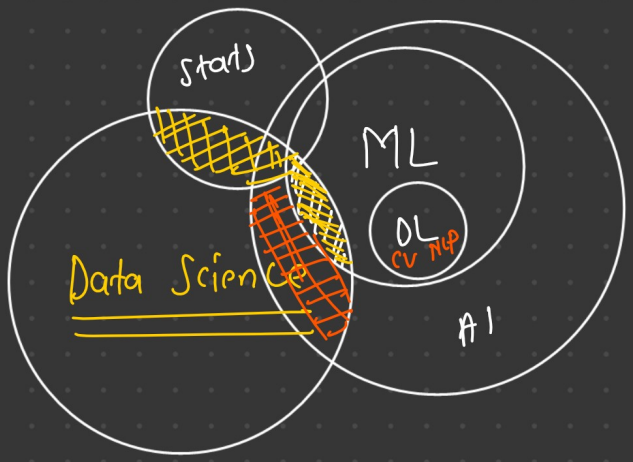
analysis ← 30 days data

→ on which week, the temp was lowest? →

→ what is the average temp? → better decision

2°C → warmer clothes

→ use data to make better decision.



Data types (int, float, str)

int: number without decimal

: phone-no, employee-id, id-card, pincode

float: numbers with decimal

: work experience, bmi, height, pi, price, temperature

str: characters + special character

↓ ↓

A-Z, a-z, 0-9 ↓

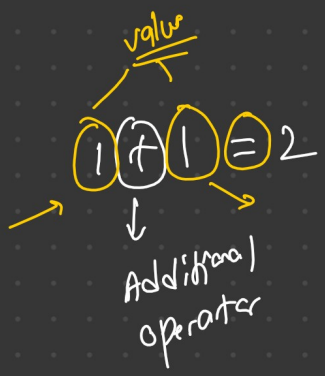
" ", .,), :, ;, -, +, *, ~

"1" → str, int

1 → str, int

Operator — Symbols or characters

input → operation



+ - = / * % == ** //

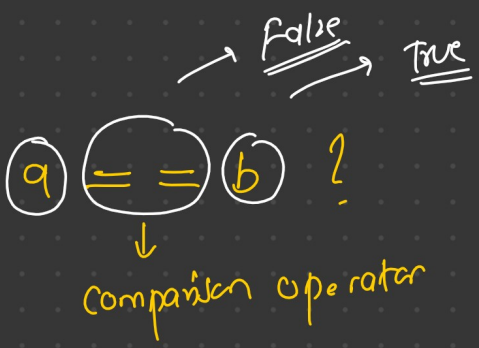
↓ operators

val1 + val2

\- / * a = 2

assignment operator

a=2
b=2

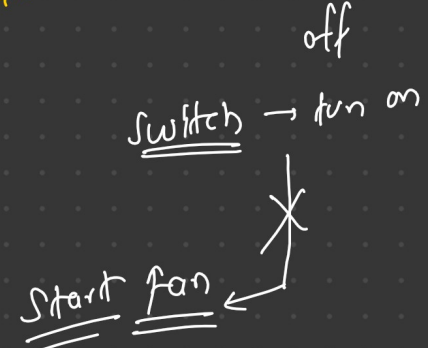


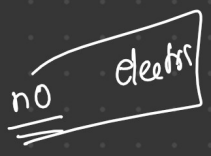
a=2 b=3 is a equals to b → NO False

False True

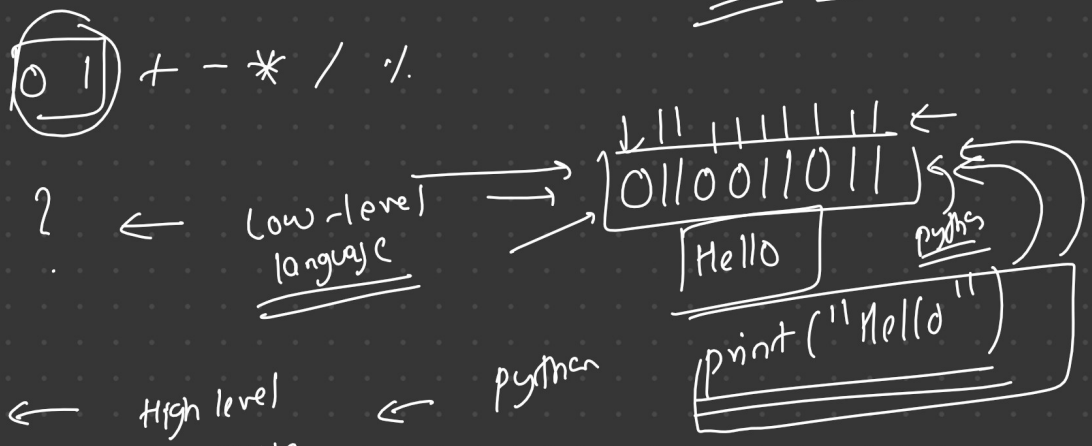
↓

Boolean





→ 0 1 + - * / %



? ← Low-level language

Human understable (an) ← High level language ← python

int / float / str

1 + 1 = ✓

1 + 1.1 = ✓

1 + "1" = error
int str

1 + int("1") = int

1 / 1 = 1.0 → float

dry running
↓
code
notes

parenthesis
↓

int("1") →

int("1") →

1//1 = 1.0 int
2.0
2.5

5/2 = 2
= 2.5 (float) ←

4/2 = 2 (int)

↑
math

power

2^2 → 4

2^2 → 2**2

%

5%2 = 1 modulus

$$2\overline{)5}\ 2,\ 4,\ 1$$

% ≠ /
↓ modulus
division

// → floor division

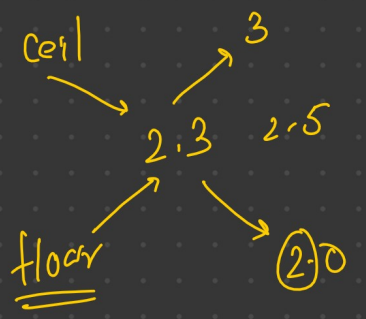
5/2 → 2.5

5//2 → 2

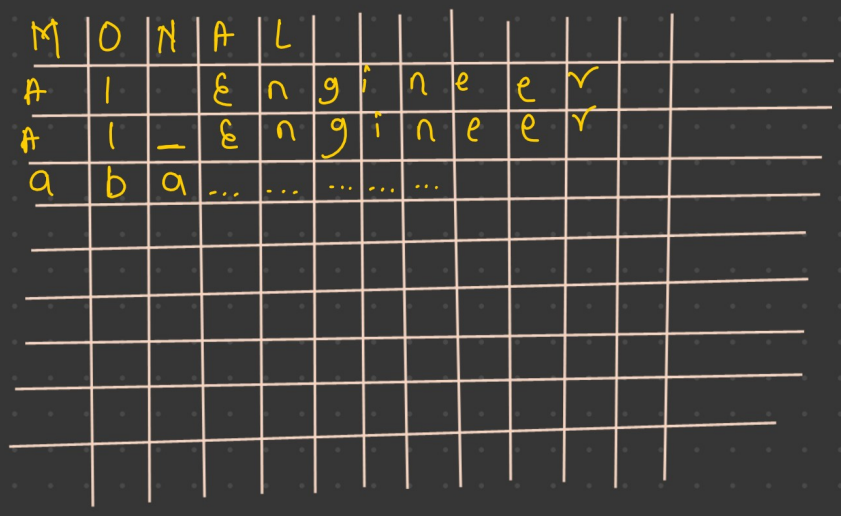
10/9 → 1.1111111...

10//9 → 1

floor → round off value to the nearest value



String



name = "MONAL"

"AI Engineer"

"AI_Engineer"

"aba" valid

"aba"

int & float

"1" + 1

↓

Type convert

typecasting

name while

"Monal"

→ rstrip()

lstrip()

google for

Name : Monal

Submit

" Manal " lstrip()

" Manal " → ① rstrip() ① ② lstrip() ② ①

② strip() → right & left

type casting ✗

→ 1 + 1 ⇒ add / concat

" 1 " + " 1 " = " 11 "

" 1 " + " 1 " → concatenating

not adding

" H " + " e " → " He "

add concatenation

① ② " 1 " + " 1 "

concat → NO typecasting required

Add → Born

↓ ↓ 1 — 10

0.5 speed ↑

8 months

BODMAS / PEDMAS

- Bracket / Parenthesis
- Order / Exponents
- Division
- Multiplication
- Addition
- Subtraction

→ multi — Division

→ left to right

→ 2 + 3 × 4

↓ ↓

2 + 12

→ 14

→ (2 + 3) × 4

→ (5) × 4

→ 20

+ × ( )

↓ ↓ ↓

Do brackets/parentheses first

Then exponents/orders

Then multiplication and division, from left to right

Then addition and subtraction, from left to right

(2 * 2 * 2) + 4

a = 2

a = a + 1

= a? → 2

a = a + 1

a = 2 → a? → 2

a + 2 → a? 2

a = a + 2 → a? 4

name = "Munal"

name.rstrip()

name = "Munal"

Doubt Clearing

" Riyan "

rstrip()

" Riyan"

lstrip()