

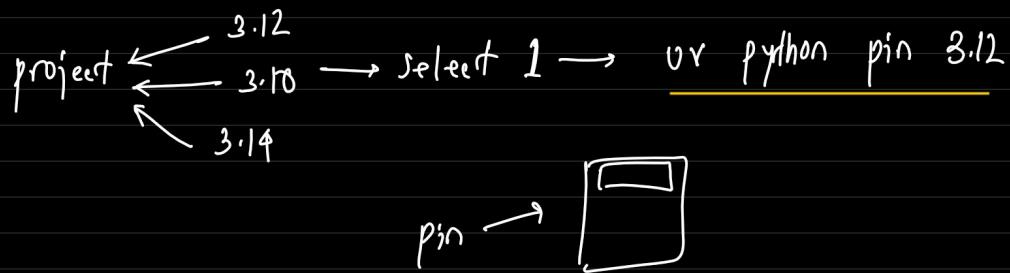
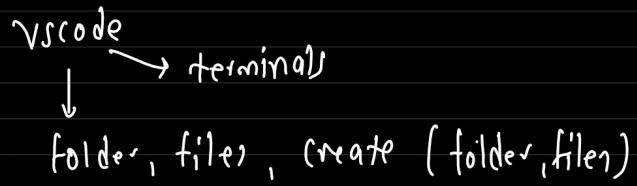
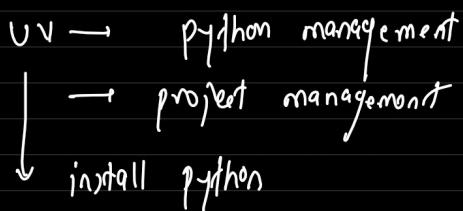
17-01-2026

Agenda:

Python - I

- Tools walkthrough
- Environment setup
- Notebook → variable, data types, operator - I
- Script and notebook execution.

↳ Done



uv run python

(file, folder) ← OS (software) → window, Mac

↓

Hardware

(file, folder) ← Python environment /

Task 1
Task 2 → 3.8
Task 100

file, folder ← Python environment /

Task 10
; → 3.12
Task 200

current location

UV Venky

extension:

music file → music.mp3 → music player
.wav

.

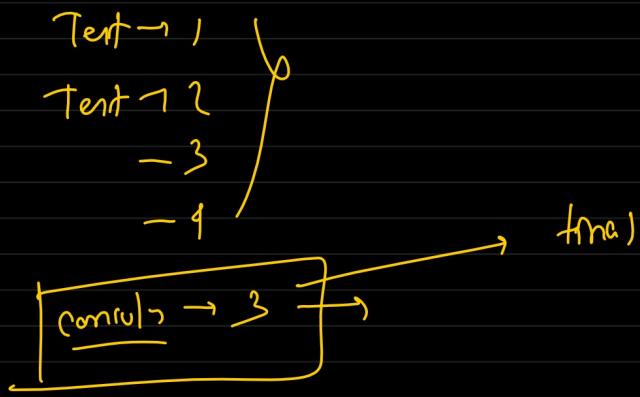
video file → .mp4 → video player

notepad → .txt → editor) → notepad
editor + IDE

python → .py → python script

→ .ipynb → interactive python notebook → code, text, image

→ experimentation



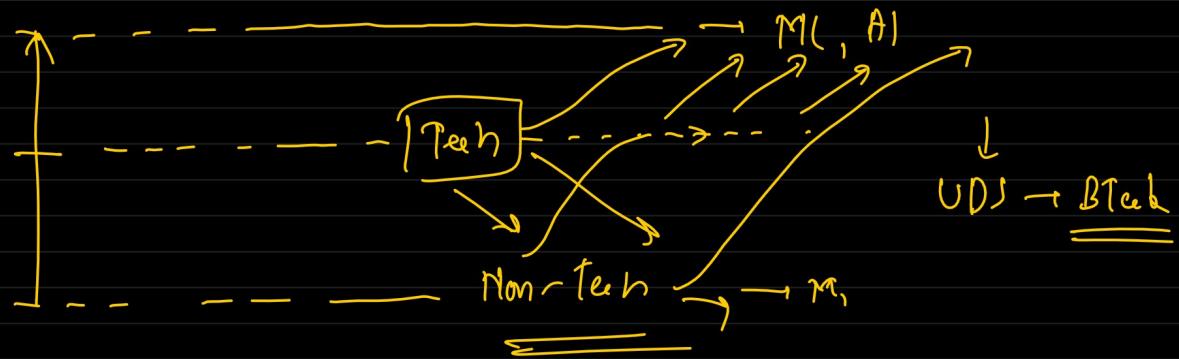
VIS → editor, tools for development

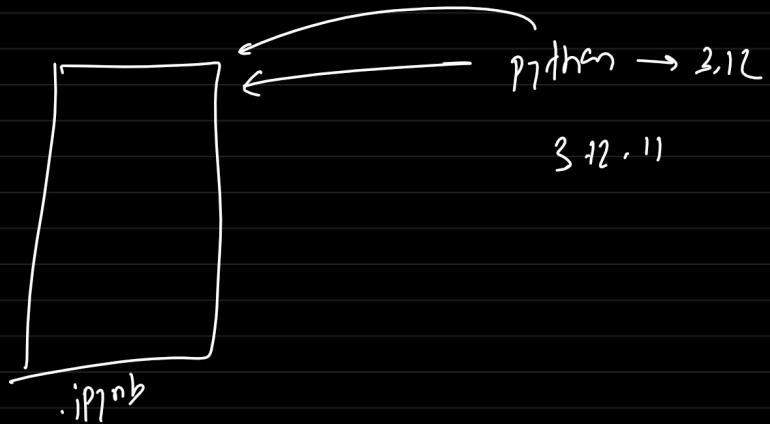
UV →

python → programming

OS → hardware

cls, clear
由

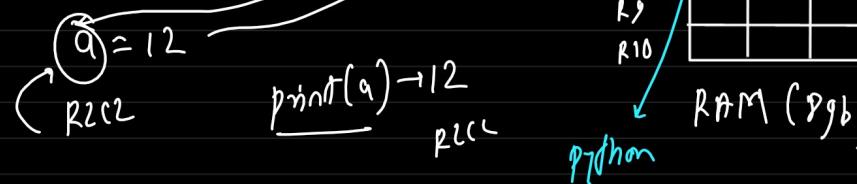




pythn:

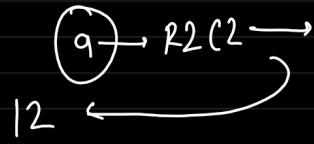
install → HDD / SSD
run → RAM

pythn → run → RAM → 2gb



variables:

enable storage



12 → Storage

pythn → RAM
store → RAM

R2C2
(address) ← 12

$a = 12$

$\rightarrow \text{python} \rightarrow \text{obj} \rightarrow \text{store} \rightarrow 12 \rightarrow \text{ram}$

$a \leftarrow \text{R2C2} \leftarrow 12$

$(\hat{a}) \xrightarrow{\text{f12}}$
 $\text{print}(a)$

$a = 12$

$b = 10$

$c = 3$

variable to store value

$a = 12$

$a = 12$

variable is used to store data.

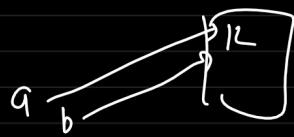
data → image
→ video
→ mp3

python → int → 0, 1, 2, 3, 4
→ float → 1.1, 1.0, 3.1534
→ string → H, Hello, Python, Data Science

$a = 12$, $\text{printf}(0) \rightarrow 12 \rightarrow \text{num}$



$a \leftarrow \text{add}(12) \leftarrow 12$



$a \rightarrow \text{add}(12)$



$(a) = 12 \rightarrow \text{num}$

$(b) = 12 \rightarrow \text{num}$

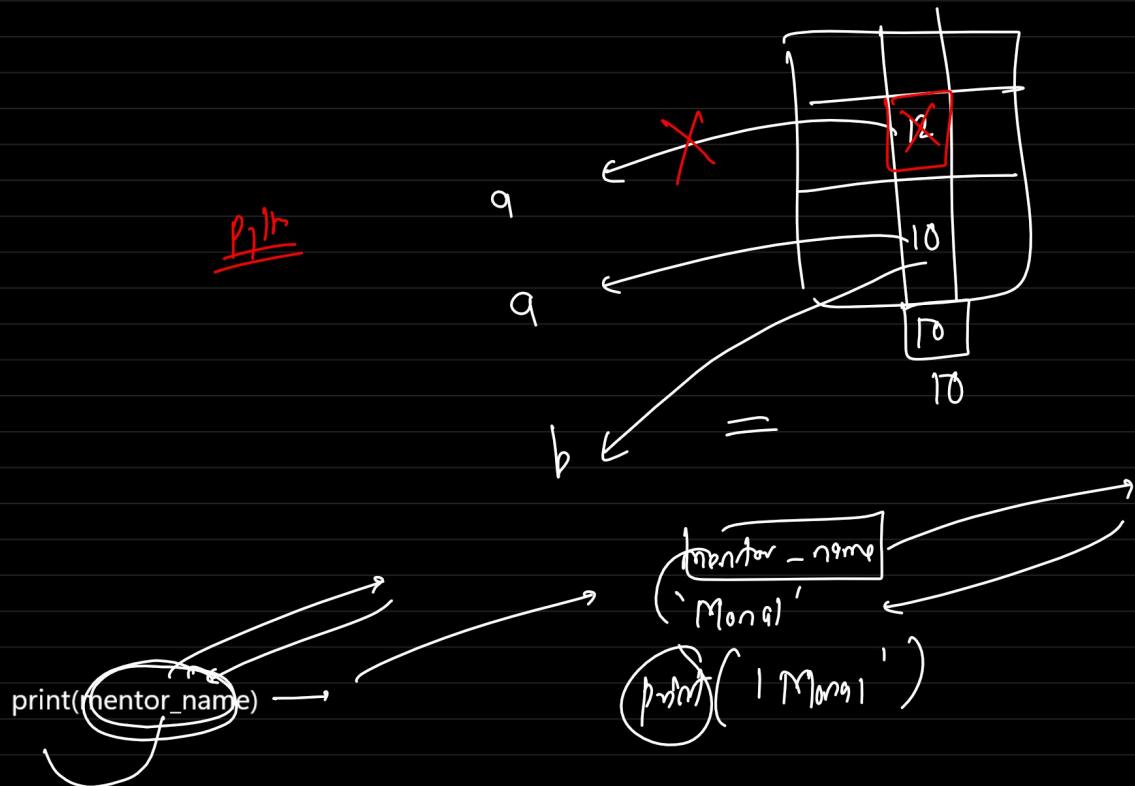
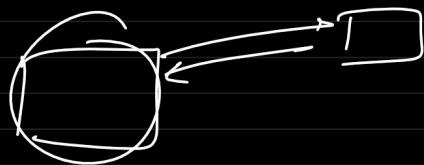
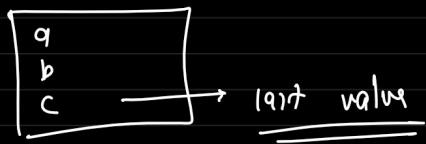
$b \neq 12$

$\text{int} \rightarrow [] [] [] \leftarrow [] [] \rightarrow 12$

$\{\text{float}\} \rightarrow [] [] [] [] [] [] \rightarrow [] [] [] [] [] [] \rightarrow 12.0$

$\{\text{string}\} \rightarrow [] [] [] [] [] []$

$12 \text{ not equal to } 12.0$



think → code

code → think

is my screen visible → 2 ↗
 Yes → True
 No → False

$a = 1$ $\text{float}(1.0) \rightarrow 1.0$

$a = \underline{\text{float}(a)} \rightarrow 1.0$

$0 \rightarrow \text{off} \rightarrow \text{false}$
 $1 \rightarrow \text{on} \rightarrow \text{true}$

Operation.

$b = \lceil \frac{1}{2} \rceil \rightarrow f$

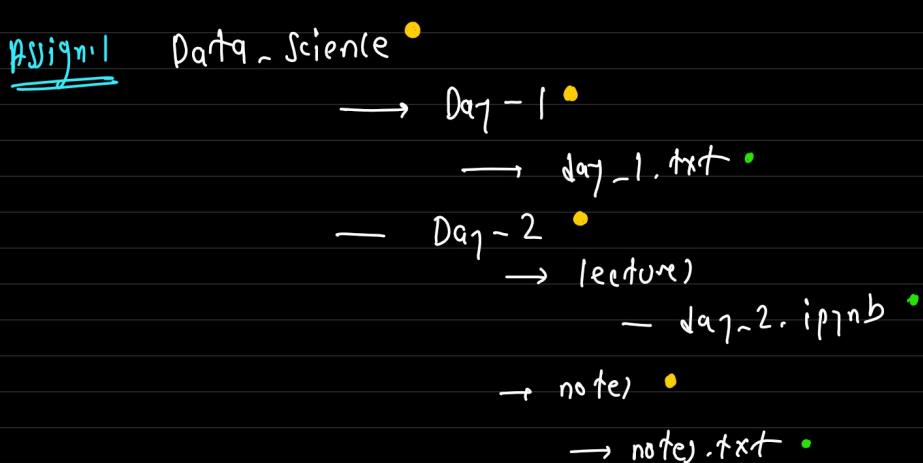
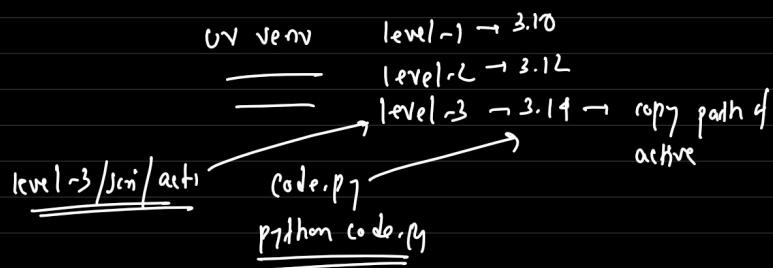
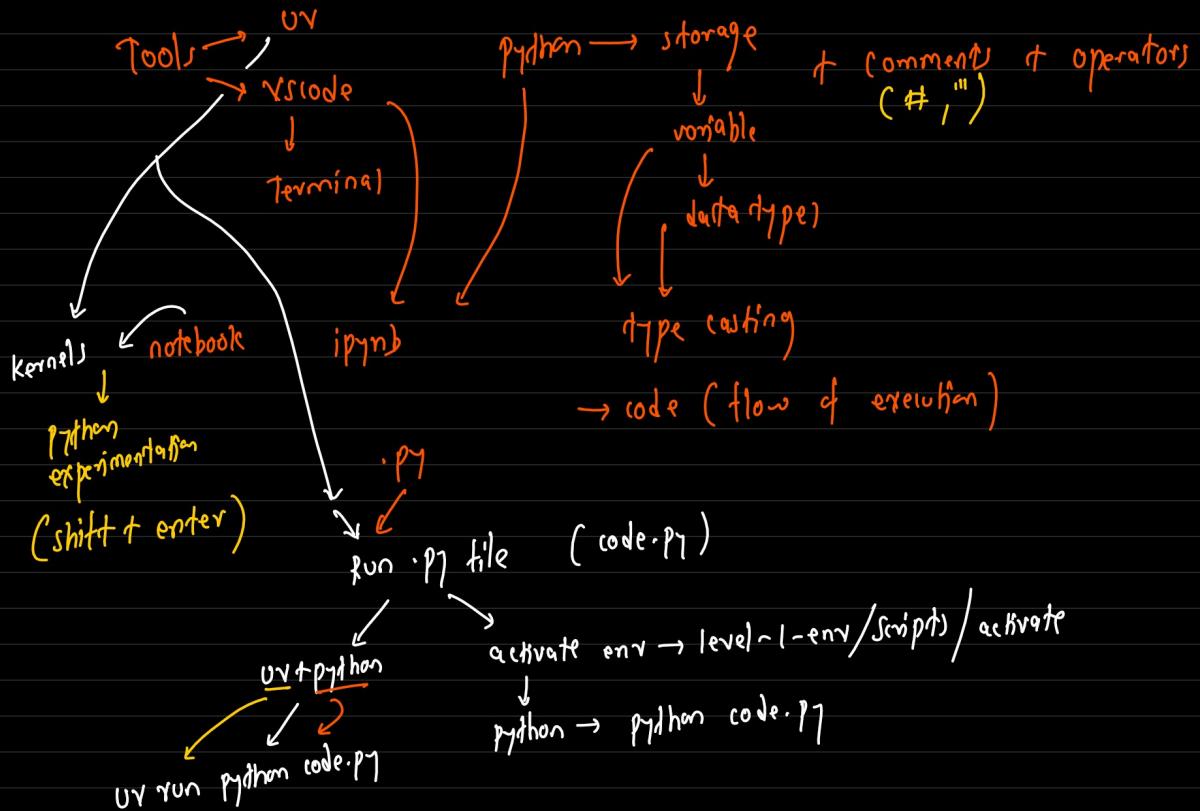
special symbols : - , + , * , / , .

Operators are used to perform operations on value and variable

Types of operators : —

- 1) Arithmetic operators → +, -, *, /, .
- 2) Relational operator → <, >, <=, >=, ==
- 3) Assignment operator → =, +=, -=, *=, /=
- 4) Logical operator → AND, OR, NOT
- 5) Bitwise operator → &, |, ^, ~, <<, >>

2 $\sum_{1}^{5} 10$



- folder
- file

Assignment 2

- Revise all the code & concept
- Do type casting from all combination of data types & understand which one are compatible.