

Pattern Recognition

[30, -5, 60, 22, 17, 13, 19]

Q1 What is the max? 60
Q2. Can you tell me 60 is max without numbers? NO

at all

CODE /
PROGRAM
FOR FIND MAX NO

Q3. What is the

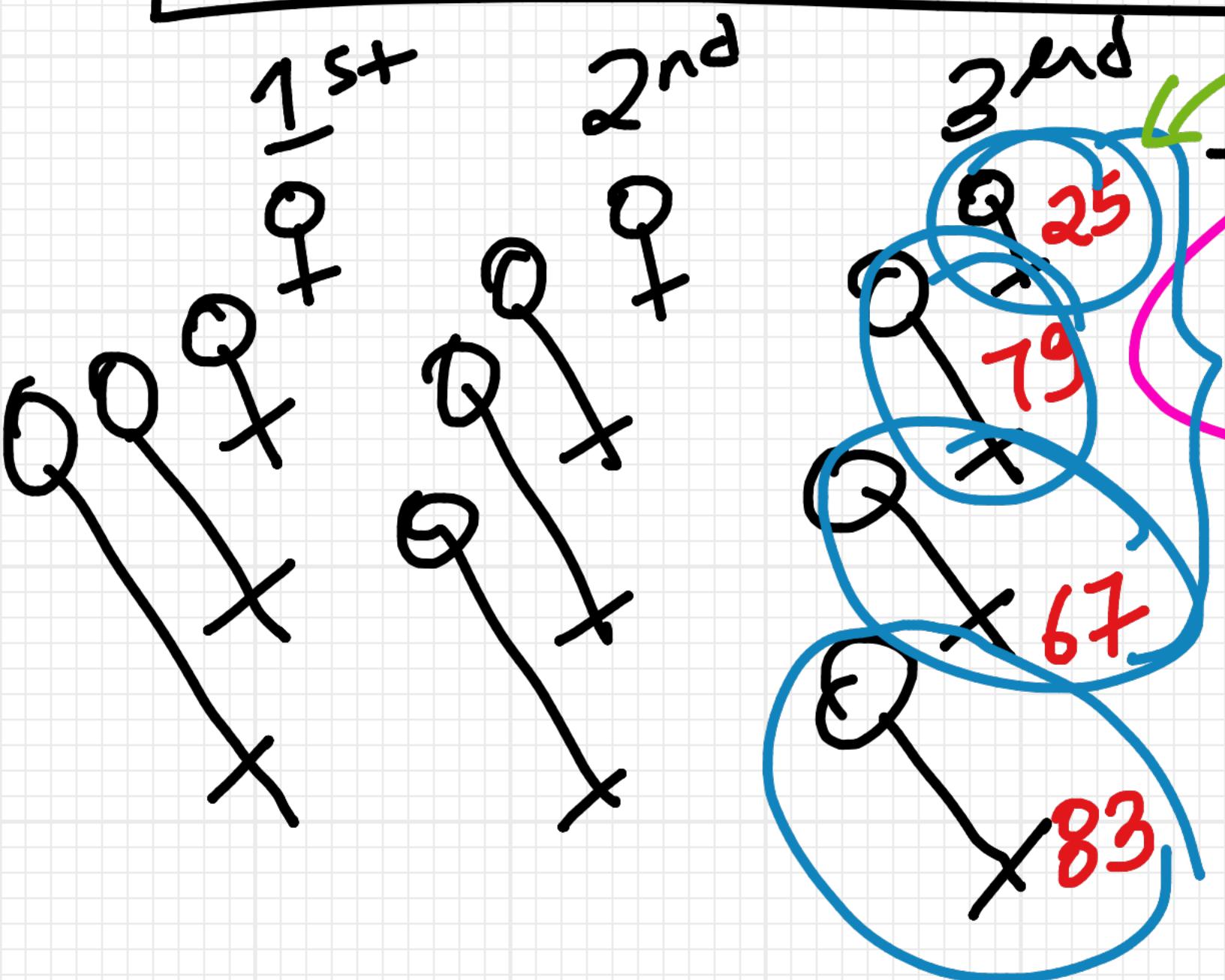
MIN no? -5

CODE /
PROGRAM
FOR FIND MIN NO



Knowledge

SCHOOL ASSEMBLY ✓



School principle
wants to meet
highest to lowest
scans one by one.

Visibility

Highest to lowest

83
79
67
25

?

For both previous problems we used sorting.

Sorting \Rightarrow Arranging a collection based on some weights

1st problem \Rightarrow weights \Rightarrow height of students

2nd problem \Rightarrow weights \Rightarrow marks of students

Ascending order.

Descending order

Ht of students (cm)

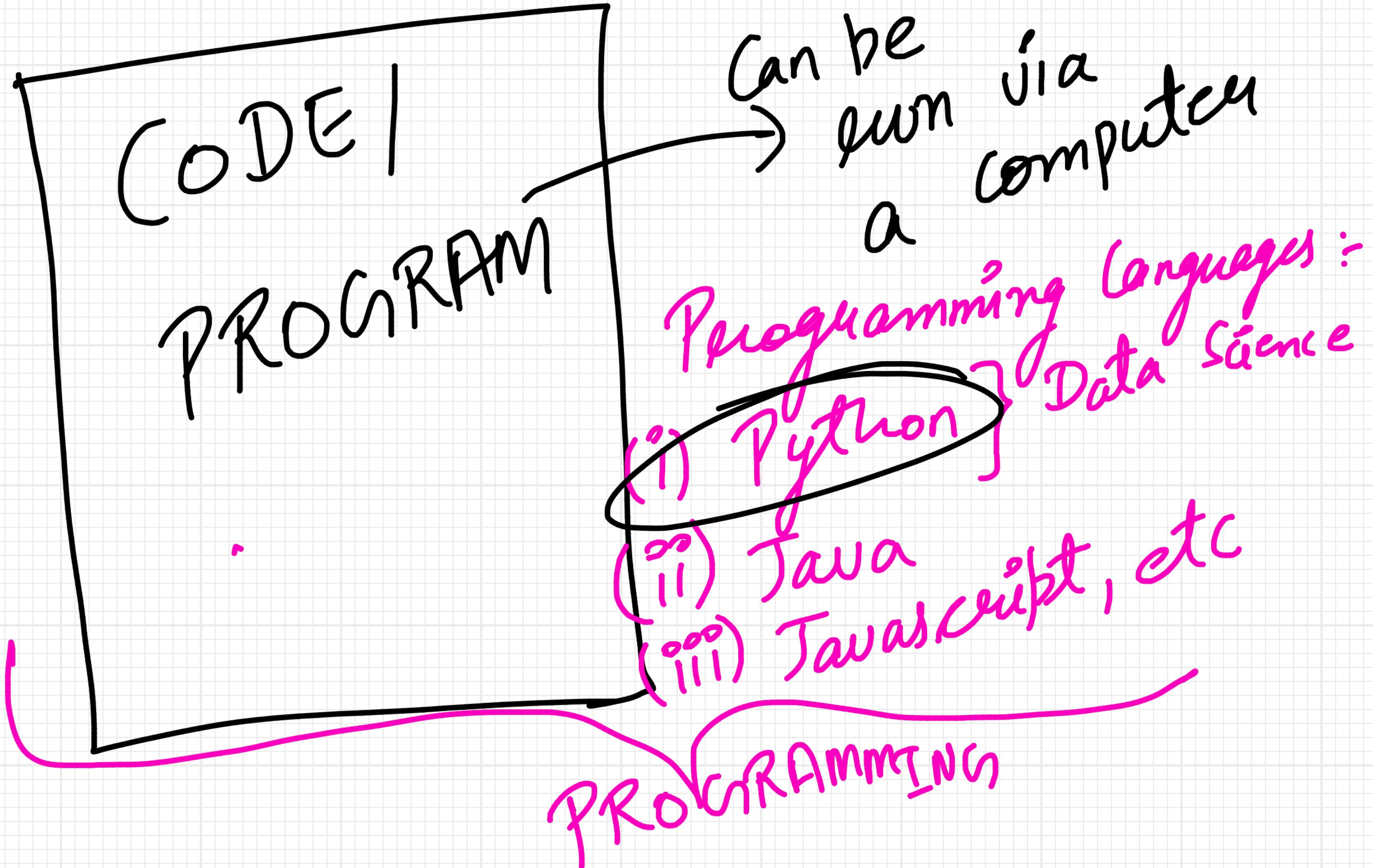
$$= [70, 75, 68, 72, 88, 58]$$

Assembly = [58, 68, 70, 72, 75, 88]

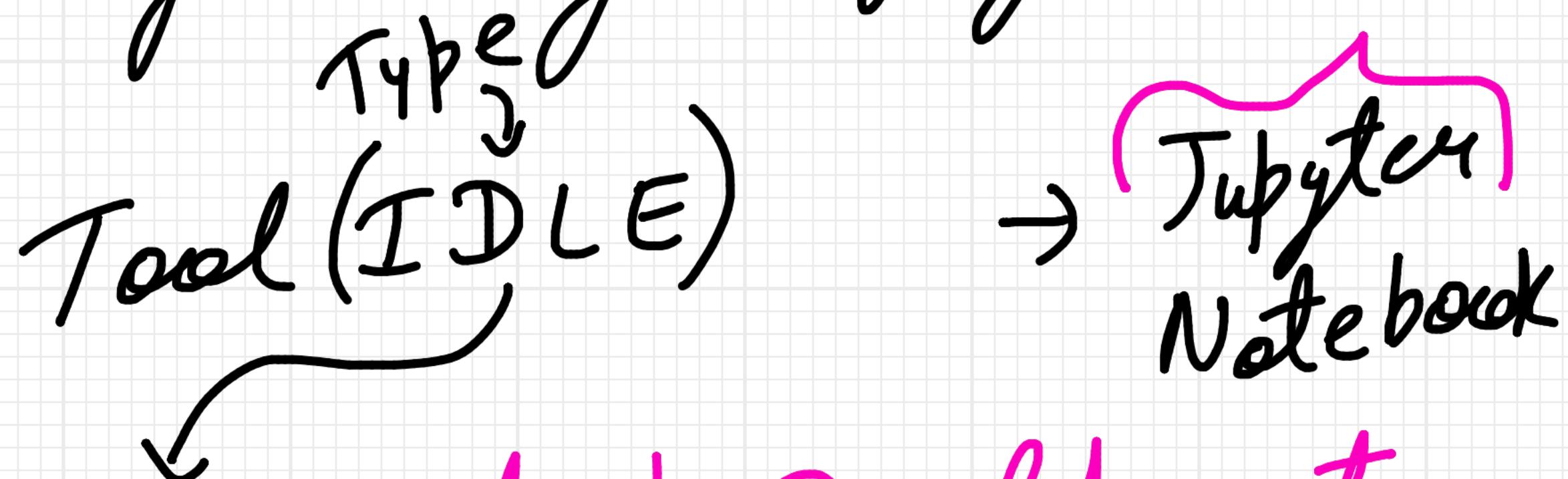
marks of students (out of 100)

$$= [95, 90, 86, 63, 75]$$

Penize = [95, 90, 86, 75, 63]



Programming language → Python



Integrated Development Environment

Other IDLE's ⇒

Editors

VS Code, PyCharm,
Sublime Text, Atom

Installing / Getting
Python and Jupyter
Notebook will be
discussed by your
Instructor.

Why did \mathfrak{f} introduced?

\Rightarrow because \mathfrak{f} want to show you guys how Python code looks like \mathfrak{f} also show some computational techniques. So all the code you write, you have to write \mathfrak{f} code a little later

DO NOT TRY

TO UNDERSTAND CODE.

BUT ONLY

CONCEPTS

that

will be able

understand that

like 2 weeks from now.

Example : Finding Max No.

Example : Arranging the No's Ascending (Smallest first)

→ [~~53~~, ~~29~~, ~~76~~, ~~20~~, ~~11~~, ~~66~~]
Since there are NO items in the list, STOP NOW.
⇒ [17, 20, 29, 53, 66, 76]

numbers = [5, 32, 17, 21, 26, 13, 43]

new_list = []

① numbers = [32, 17, 21, 26, 13, 43]

new_list = [5]

② numbers = [32, 17, 21, 26, 43]
new_list = [5, 13]

③ numbers = [32, 21, 26, 43]
new_list = [5, 13, 17]

④ numbers = [32, 26, 43]

new_list = [5, 13, 17, 21]

⑤ numbers = [32, 43]

new_list = [5, 13, 17, 21, 26]

⑥ numbers = [43]

new_list = [5, 13, 17, 21, 26, 32]

⑦ numbers = []

new_list = [5, 13, 17, 21, 26, 32, 43]

Homework Problem

Tell me

the concept
only.
above

Q [0, 0, 0, 2, 2, 0, 1, 1, 0, 2]

Similar to
05, 15, 125.

There can be any list
but will only contain
elements in ascending
order. Plus
you can only
visit once.

[0011200120]

50s 30s 22s

[000000]

J J J

[22]

[00000011122]

✓