Class 1 : Python:

Why Python:

- For Web Development --> Framework (Django, Flax).
- In Data Science / ML.
- Do not need to write the boilerplate code.

1. Extension of the Python file is .py

Variables:

- To store data
- Naming of variable
    - Can start with uppercase, lowercase or underscore.
    - Can’t start with numbers and special characters.
- Assign different type of data types
    - A = 10 , A = “ram” , id(A)
    - type(A)

Problem - 1

```
a = 10
b = 20
multiple = a*b
print("multiple")
```

Problem - 2

```
_var
V1ar
12var
v_a1r
```

Comments:

- # -> Single line comment
- “”” “”” -> Multiline comment

How data store in python:

- It stores the address of the actual value.
- Id(var) -> address of current variable
- Some optimization variables that contain a value from -5 to 256 have the same address. Because they are common numbers.

Range of variables:

- In Python there is no limit to how big integers you can store. The limit is, how much memory a python program can use.

Arithmetic Operators:

- +, - ,*, /, %, // , **
- / -> floating point division , // -> Integer division , ** -> exponent

Problem - 3:
Calculate simple Interest . Given P = 100, R = 10, T = 5.

Taking Input from user :

- A = input(“Enter num”)
- Take Integer as an input int(input())

Problem - 4:
Calculate average marks of three student (take input from user)

Boolean data type:

A = True , B = False

Relational Operators:

- > , < , == , !=

Logical Operators:

- and, or, not

If Else:

- Indentation
- Elif

Problem - 5:
Check given number is even or not

Problem - 6:
Find Maximum between 3 numbers

Loop:

- While loop
- Nested while loop

Problem - 7:
Given n find sum of even numbers.

Problem - 8:
Prime number

Problem - 9:
Given n find all prime numbers till n

Problem - 10:
Reverse a number

Problem - 11:
Palindrome number

Class 1: -> Class 2