4. PYTHON - PROGRAM EXECUTION FLOW

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1. Hello World program

Program Name	A program to print Hello World demo.py print("Hello World")
Run	py demo.py
Output	Hello World

2. Translator

- ✓ Translator is a program, it convert high level to low level language.
- ✓ Examples
  - o Compiler   :   Whole program in one step
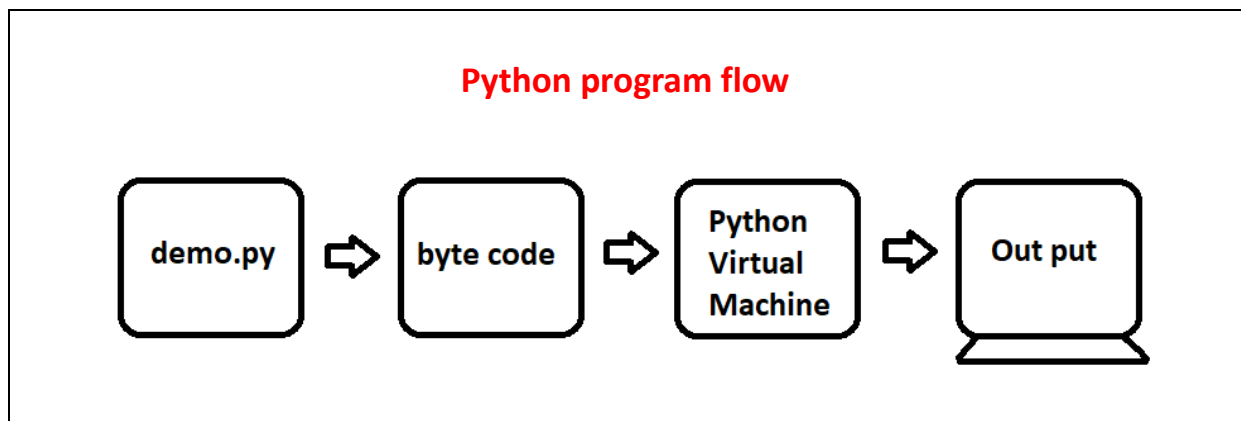 - o Interpreter :   Converts line by line

3. Is python compiler based or interpreter based?

- ✓ Python is an interpreted programming language.

4. Python program flow

✓ Now we will learn the python program flow, it contains mainly 3 parts,

1. Source code
2. Byte code
3. Python Virtual machine

Python program flow

demo.py ⇨ byte code ⇨ Python Virtual Machine ⇨ Out put

4. 1. Source code

✓ The written python program also called as source code.
✓ We need to save program with either .py (dot py) or .python (dot python) extension.

Example   :   demo.py

✓ Next step is, we need to run this program by using py command

Example   :   py demo.py

4.2. Byte code

✓ While running the program, the interpreter convert the python program into byte code(intermediate file)

- o This intermediate file is not visible.
- o This file will be stored into __pycache__ folder in current directory.
- o We can see this file by using below command.

Example   :   python -m py_compile demo.py

4.3. Python Virtual Machine

✓ This byte code file cannot understandable by the microprocessor to generate an output.
✓ So, here Python Virtual Machine converts this byte code into machine understandable format.
✓ Finally, we will get the output.