

## **TYPE-A:GETTING STARTED WITH PYTHON:CH-5**

1. When was Python released ?

sol:

Python was released in 1991 by Guido van Rossum.

2. Who was Python's developer and which two languages contributed to Python as a programming language?

sol:

- 1.Developer: Python was developed by Guido van Rossum
- 2.Languages that influenced Python:
  - C – for system-level features and efficiency.
  - ABC – for simplicity and readability of syntax.

3. What is a cross-platform software ?

sol:

- Cross-platform software is a program that can run on different operating systems without changes.
- Example operating systems: Windows, Linux, macOS.
- It allows users to use the same program on multiple platforms.

Example:

- 1.Python programs
- 2.Microsoft Office

4. What are the advantages of Python programming language ?

sol:

Advantages of Python Programming Language

- Easy to Learn and Use – Simple and readable syntax.
- Cross-Platform – Works on Windows, Linux, macOS, etc.
- Open Source – Free to use and distribute.
- Interpreted Language – Runs code line by line, easy for debugging.
- Extensive Libraries – Many built-in modules and packages for different tasks.
- Object-Oriented – Supports classes and objects for modular programming.
- Large Community Support – Easy to find help and resources.
- Versatile – Used in web development, AI, data science, automation, and more.

5. What are some limitations of Python programming language?

sol:

#### Limitations of Python Programming Language

- Slower Execution – Python is interpreted, so it is slower than compiled languages like C or C++.
- High Memory Usage – Uses more memory due to flexibility of data types.
- Mobile App Development – Not ideal for mobile apps.
- Database Access – Limited compared to languages like Java or C#.
- Runtime Errors – Errors are only detected when the program runs.

6. In how many different ways, can you work in Python ?

sol:

#### 1. Interactive Mode –

- Write and execute code line by line.
- Useful for testing small pieces of code.
- Example: Using Python shell or IDLE.

#### 2. Script Mode –

- Write code in a file with .py extension and run the whole program.
- Useful for longer programs.

#### 3. Integrated Development Environment (IDE) Mode –

- Write, edit, and run programs in a complete development environment.
- Example: PyCharm, Thonny, Spyder, or IDLE editor.

7. What are advantages/disadvantages of working in Interactive mode in Python ?

sol:

#### Advantages

- Quick Testing – Test small pieces of code immediately.
- Easy to Learn – Beginners can see results instantly.
- Immediate Feedback – Helps in understanding errors quickly.
- No Need to Save File – Useful for short experiments.

#### Disadvantages

- Not Suitable for Large Programs – Hard to manage many lines of code.
- Cannot Save Work Easily – Code disappears after closing the session.
- No Structured Program – Difficult to reuse or maintain code.

8. What are the advantages/disadvantages of working in script mode in Python ?

sol:

#### Advantages

- Suitable for Large Programs – Can write and manage many lines of code.
- Can Save Work – Program is stored in a file for future use.
- Reusable Code – The program can be run multiple times without rewriting.
- Better Organization – Easier to maintain and modify code.

#### Disadvantages

- Slower for Testing Small Code – Need to save and run the file each time.
- Not Immediate – Cannot see results line by line like interactive mode.
- Requires File Management – Need to keep track of program files.