

ASSIGNMENT 29 JAN

1. Who developed Python Programming Language?

- Guido van Rossum

2. Which type of Programming does Python support?

- Python supports multiple programming paradigms, including procedural, object-oriented, and functional programming.

3. Is Python case sensitive when dealing with identifiers?

- Yes, absolutely. It is a case-sensitive language. It treats uppercase and lowercase characters differently.

4. What is the correct extension of the Python file?

- .py

5. Is Python code compiled or interpreted?

- Python is an interpreted language.

6. Name a few blocks of code used to define in Python language?

- A block is a piece of Python program text that is executed as a unit. The following are blocks: a module, a function body, and a class definition. Each command typed interactively is a block.

7. State a character used to give single-line comments in Python?

- #

8. Mention functions which can help us to find the version of python that we are currently working on?

- `sys.version`, `sys.version_info`, `platform.python_version()`

9. Python supports the creation of anonymous functions at runtime, using a construct called?

- Lambda

10. What does pip stand for in Python?

- Preferred Installer Program

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11. Mention a few built-in functions in Python?

- print(), len(), type(), range(), input(), str(), int(), list(), dict(), set(), max(), min(), sum(), sorted(), zip()

12. What is the maximum possible length of an identifier in Python?

- Python identifiers can be of any length. However, PEP 8 suggests keeping line lengths to 79 characters for readability.

13. What are the benefits of using Python?

- Easy to learn and use
- High-level language with simple syntax
- Extensive standard library and third-party modules
- Versatile, supports multiple programming paradigms
- Large and active community
- Strong support for integration with other languages and tools
- Portable and platform-independent

14. How is memory managed in Python?

- Memory management in Python involves a private heap containing all Python objects and data structures. The management of this private heap is ensured internally by the Python memory manager. Python also has built-in garbage collection, which recycles all the unused memory to make it available for heap space.

15. How to install Python on Windows and set path variables?

- To install Python on Windows:
 1. Download the Python installer from the official Python website.
 2. Run the installer and follow the installation instructions.
 3. Check the option "Add Python to PATH" during installation.
- To set path variables manually:
 1. Right-click on "This PC" or "Computer" on the desktop or in File Explorer.
 2. Select "Properties."
 3. Click "Advanced system settings."
 4. Click "Environment Variables."
 5. Under "System variables," find the variable named Path and select it. Click "Edit."
 6. Add the path to the Python installation directory and the Scripts directory (e.g., C:\Python39 and C:\Python39\Scripts).
 7. Click "OK" to save and exit.

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16. Is indentation required in Python?

- Indentation refers to the spaces at the beginning of a code line. Where in other programming languages the indentation in code is for readability only, the indentation in Python is very important. Python uses indentation to indicate a block of code.