

# Python Assignment 29<sup>th</sup> January

**Q1. Who developed Python Programming Language?**

**Ans.** Python programming language was developed by Guido Van Rossum.

**Q2. Which type of Programming does Python support?**

**Ans.** Python Supports multiple types of programming. It supports Imperative Programming, Object- Oriented Programming, Functional Programming, Procedural Programming and Modular Programming

**Q3. Is Python case sensitive when dealing with Identifiers?**

**Ans.** Yes, Python is case sensitive when dealing with Identifiers.

**Q4 What is the correct extension of Python file?**

**Ans.** The correct extension of Python file is “.py”.

**Q5 Is Python code compiled or interpreted?**

**Ans.** Python code is both compiled and interpreted.

**Q6 Name a few blocks of code used to define in Python language.**

**Ans.** There are several blocks of code used to define in Python language.

1. Function Definition- defined using the keyword “def”.
2. Conditional Statement Definition- defined using the keywords “if”, “elif” and “else”.
3. Loops Definition- defined using the keywords “for” and “while”.
4. Class Definition- defined using the keyword “class”.
5. Exception handling- defined using the keywords “try”, “except”, “else” and “finally”.

**Q7 State a character used to give single line-comments in Python.**

**Ans.** The character used to give single line-comments in Python is “#”.

**Q8 Mention a function used to find the version of Python that we are working on.**

**Ans.** The function used to find the version of Python that we are working on is “sys.version” after importing the “sys” module. The command would go as follows:

```
Import sys
```

```
print(sys.version)
```

**Q9 Python supports creation of anonymous functions at runtime, using a construct called\_\_\_\_\_.**

**Ans.** Python supports creation of anonymous functions at runtime, using a construct called lambda.

Eg. Square = lambda x: x\*\*2

**Q10 What does pip in Python stand for?**

**Ans.** Pip is Python's package manager for installing and managing external libraries.

**Q11 Mention a few built in functions in python.**

**Ans.** A few built in functions in python are:

1. type() - used to find the type of a variable.
2. print() - used to display output.
3. range() - used to generate a sequence of numbers.
4. input() - used to get input from user.
5. int(), float(), str() - used to convert variable type into desired variable type.
6. max(), min() – used to find maximum or minimum value of a sequence.

**Q12 What is the maximum possible length of an Identifier in Python?**

**Ans.** There is no limit to the length of an Identifier in Python. Hence, the maximum possible length of an Identifier in Python is infinity.

**Q13 What are the benefits of using Python?**

**Ans.** The benefits of using Python are as follows:

1. Easy to Read and Write.
2. Can be used for building websites, analysing data, creating games, and even teaching computers to learn and think like humans.
3. Lots of Ready-to-Use Tools that developers can use without building everything from scratch, saving time and effort.
4. Python programs can run on different types of computers, so developers don't need to rewrite code for each one.
5. Python has a big group of helpful people who are always ready to assist and share their knowledge.
6. Python can work together with other programming languages, so developers can use the best of each language.
7. Python is a great starting point for those new to programming because it's not too complicated, making learning to code more enjoyable.

**Q14 How is memory managed in Python?**

**Ans.** Python automatically keeps track of the data that we create and makes sure that memory is allocated for it when needed. When data is no longer used or needed, Python frees up that memory so it can be used for other things.

**Q15 How to install Python on Windows and set path Variables?**

**Ans.** To install Python on Windows and set the PATH variables, follow these steps:

1. Download Python: Go to the official Python website: <https://www.python.org/downloads/> . Download the latest stable version of Python for Windows by clicking the "Download Python x.x.x" button (where x.x.x represents the version number).
2. Run the Installer: Locate the downloaded Python installer (usually in the Downloads folder) and double-click it to run it. Check the box that says "Add Python x.x to PATH" during the installation setup. This will automatically set the PATH environment variable for you, allowing you to use Python from the Command Prompt without specifying the full path.
3. Complete the Installation: Follow the installation wizard's instructions to complete the Python installation. It is recommended to select the option to install for all users if more than one user will be using the computer.
4. Verify the Installation: Open the Command Prompt (Press Windows + R, type "cmd," and hit Enter). Type `python --version` and press Enter. This will display the installed Python version if the installation was successful.
5. Verify PATH Variable: Open the Command Prompt and type `python` and press Enter. This should launch the Python interactive interpreter, indicating that the PATH variable has been set correctly.
6. That's it! Python is now installed on your Windows machine, and you can start using it to run Python scripts and execute Python commands from the Command Prompt.

Note: If you didn't select the "Add Python x.x to PATH" option during installation, you can set the PATH manually by adding the Python installation directory to the PATH environment variable. The Python installation directory is typically something like "C:\Pythonxx" (where xx represents the version number). Instructions for setting environment variables can vary based on the Windows version, so you may want to look up specific steps for your Windows version if needed.

#### **Q16 Is Indentation required in Python?**

**Ans.** Yes, Indentation is required in python and is very important as your code will give error if you have not given proper indentation in the code.