Assignment - 29th Jan

1. Who developed Python Programming Language?

> Python was created by **Guido van Rossum**, and first released on February 20, 1991.

2. Which type of programming does Python support?

> Python is an interpreted programming language, supporting **object-oriented, structured, and functional programming**.

3. Is python case sensitive when dealing with identifiers?

> Yes, Python is a case-sensitive language, i.e., it treats uppercase and lowercase characters differently. This applies to identifiers too. You must avoid using the same name with different cases while naming identifiers.

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

> .**py**

5. Is Python code compiled or interpreted?

> Python is an interpreted language, which means the source code of a Python program is converted into bytecode that is then executed by the Python virtual machine. Python is different from major compiled languages, such as C and C + +, as Python code is not required to be built and linked like code for these languages.

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

> The following are blocks: a module, a function body, and a class definition. Each command typed interactively is a block. A script file (a file given as standard input to the interpreter or specified as a command line argument to the interpreter) is a code block.

7. State a character used to give a single line comment in python.

> In Python, we use the hash symbol **#** to write a single-line comment.

8. Mention functions which can help us to find version of python.

> The function **sys.version** can help us to find the version of python that we are currently working on.

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

> Lambda

10. What does pip stand for python?

> PIP is a recursive acronym for "**Preferred Installer Program**" or PIP Installs Packages. It is a command-line utility that installs, reinstalls, or uninstalls PyPI packages with one simple command: pip.

11. Mention a few built-in functions in python.
- len()
- list()
- range()
- sum()
- min()
- max()
- sorted()
- reversed()

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

> The maximum possible length of an identifier in Python language is 79 characters.

13. What are the benefits of using Python?
- Easy to Learn and Use.
- Mature and Supportive Python Community.
- Support from Renowned Corporate Sponsors.
- Hundreds of Python Libraries and Frameworks.
- Versatility, Efficiency, Reliability, and Speed.
- Big data, Machine Learning and Cloud Computing.
- First-choice Language.
- The Flexibility of Python Language.

14. How is memory managed in Python?

> Memory in Python is managed by **Python private heap space**. All Python objects and data structures are located in a private heap. This private heap is taken care of by Python Interpreter itself, and a programmer doesn't have access to this private heap.

15. How to install python on windows and set path variables?

> Install python from this link https://www.python.org/downloads/

After this, install it on your PC. Look for the location where PYTHON has been installed on your PC using the following command on your command prompt: cmd python.

Then go to advanced system settings and add new variable and name it as PYTHON_NAME and paste the copied path.

Then look for the path variable, select it's value and select edit

Add a semicolon towards the end of the value if it's not present and then type %PYTHON_HOME%

16. Is indentation required in Python?

> Indentation is crucial to interpretation of Python - an indented block indicates which lines of your code fall in which conditional structures, loops, etc. It can't be ignored.