Assignment-1

1. Who developed python programming language

   Ans. Python was created by Guido van Rossum in the late 1980s.

2. Which type of programming does python support

   Ans. Procedural programming, Object-oriented programming (OOP), Functional programming, Aspect-oriented programming

3. Is python case sensitive when dealing with identifiers?

   Ans. Yes, Python is a case-sensitive programming language when it comes to identifiers such as variable names, function names, and class names.

4. What is the correct extension of python file

   Ans. In Python, the commonly used extension for source code files is ".py". For example, a Python program file could be named "my_program.py".

5. Python code compile or interpreted?

   Ans. Python code is typically interpreted, meaning that the Python interpreter reads and executes the code line by line at runtime.

6. Name few blocks of code used to define in python language
   Ans. Functional, Conditional, Loop, and exception handling

7. State a character to use to give single line commands in python

   Ans. In Python, the "#" character is used to give single-line comments.

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

   Ans. Using the sys module, using platform module, and using the command line

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

   Ans. Lambda

10. What does pip stand for python

    Ans. "Pip Installs Packages" or preferred installer program

11. Few built in functions in python
    Ans. print(): This function is used to display output to the console or terminal.

    len(): This function returns the length of an object, such as a string, list, or tuple.

    input(): This function allows the user to input data from the keyboard.

    type(): This function returns the data type of an object.

range(): This function generates a sequence of numbers.

int(), float(), str(): These functions are used to convert a value to the specified data type.

abs(): This function returns the absolute value of a number.

max(), min(): These functions return the maximum and minimum values from a list of numbers.

sum(): This function returns the sum of a list of numbers.

12. Maximum possible length of identifier in python

    Ans. In Python, the maximum possible length of an identifier (variable name, function name, etc.) is not explicitly defined. However, the Python documentation recommends that identifiers should be reasonably short, typically not exceeding 79 characters.

13. Benefits of using python

    Ans. Python is a versatile programming language that is widely used in a variety of fields and industries. Here are some of the benefits of using Python:

    - Easy to learn and use: Python is known for its simple syntax and readability, making it easy for beginners to learn and use.
    - Large and active community: Python has a large and active community of developers who contribute to open-source libraries and tools, making it easier to find solutions to common programming problems.
    - Cross-platform compatibility: Python code can run on a variety of platforms, including Windows, macOS, Linux, and others, making it a versatile choice for developing applications.
    - Extensive standard library: Python has a vast standard library that provides access to many useful modules and tools for developing applications, including modules for working with databases, networking, and more.

14. How is memory managed in python

    Ans. Memory management in Python is handled automatically by the Python interpreter using a technique called garbage collection.

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

    Ans.

1. Download Python: Go to the official Python website at python.org and download the latest version of Python for Windows.
2. Run the installer: Double-click the downloaded installer file to start the installation process.
3. Choose installation options: Select the installation options you want, such as the installation location and the additional features you want to include. You can accept the default settings for most options.
4. Add Python to path: During the installation process, you will be asked whether to add Python to the system path. Make sure to check this option, as it allows you to use Python from the command line and run Python scripts.
5. Verify installation: After the installation is complete, open a command prompt and type "python" to verify that Python is installed and working correctly. You should see the Python version number and the Python prompt.
6. Set environment variables: If Python is not added to the system path during installation, you can set the path variable manually. To do this, go to Control Panel > System and Security > System > Advanced System Settings > Environment Variables. Under System Variables, scroll down to Path and click Edit. Add the path to the Python executable (e.g., C:\Python39;C:\Python39\Scripts) to the end of the existing path, separated by a semicolon.

16. Is indentation required in python?

    Ans. Yes.