**Assignment - 7**

Q1. What is the purpose of the try statement?

Ans: The purpose of the try statement in Python is to facilitate exception handling. It allows developers to write code that may potentially raise exceptions and provides a mechanism to catch and handle those exceptions gracefully, preventing program termination.

Q2. What are the two most popular try statement variations?

Ans: The two most popular try statement variations are:

* try-except: This variation allows developers to catch and handle specific exceptions that may occur within the try block.
* try-finally: This variation ensures that certain cleanup or finalization tasks are executed regardless of whether an exception occurs within the try block.

Q3. What is the purpose of the raise statement?

Ans: The purpose of the raise statement in Python is to explicitly raise exceptions programmatically. Developers can use the raise statement to raise built-in or custom exceptions based on specific conditions or criteria within their code.

Q4. What does the assert statement do, and what other statement is it like?

Ans: The assert statement in Python is used to assert or validate certain conditions in the code. It checks whether a given expression evaluates to True and raises an AssertionError if the expression is False. It is similar to the if statement but is primarily used for debugging and testing purposes to ensure that assumptions hold true during program execution.

Q5. What is the purpose of the with/as argument, and what other statement is it like?

Ans: The with/as argument in Python is used in conjunction with context managers to manage resources efficiently and ensure proper cleanup. It is similar to the try-finally statement but provides a more concise and readable syntax for resource management. The with statement establishes a context for executing a block of code and automatically releases any acquired resources when the block exits, even if exceptions occur within the block.