Q1. What is the purpose of the try statement?

Answer :

The purpose of the try statement in Python is to define a block of code where exceptions can occur. It is used in conjunction with except, finally, and optionally else blocks to handle exceptions and control the flow of program execution in exceptional situations.

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

Answer :

1. try-except Statement:

The try-except statement is the most commonly used variation of the try statement. It allows you to catch and handle specific exceptions that may occur within the try block. By specifying one or more except blocks following the try block, you can define different exception handlers to handle specific types of exceptions.

2. try-finally Statement:

The try-finally statement is another common variation of the try statement. It is used when you want to execute certain code regardless of whether an exception occurs or not. The finally block is executed after the try block, regardless of whether an exception is raised or not.

Q3. What is the purpose of the raise statement?

Answer : The purpose of the raise statement in Python is to explicitly raise an exception. It allows you to create and trigger exceptions based on specific conditions or error scenarios in your code.

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

Answer : The assert statement in Python is used to check whether a given condition is true. It provides a way to perform sanity checks and verify assumptions in your code. If the condition is false, the assert statement raises an AssertionError exception, indicating that an unexpected situation has occurred.

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

Answer : The with/as statement in Python is used for working with context managers. It provides a convenient and concise way to manage resources and ensure proper cleanup or finalization of resources, such as files, network connections, or database connections.