

1. Why are functions advantageous to have in your programs?

Answer:

Functions reduce the need for duplicate code. This makes programs shorter, easier to read, and easier to update.

2. When does the code in a function run: when it's specified or when it's called?

Answer:

The code in a function runs when the function is called, not when the function is satisfied.

3. What statement creates a function?

Answer:

The `def` statement defines (that is, creates) a function.

4. What is the difference between a function and a function call?

Answer:

- **A function:** A function is a block of code that does a particular operation and returns a result. It usually accepts inputs as parameters and returns a result.
- **A function call:** A function call is what moves the program execution into the function, and the function call evaluates to the function's return value.

5. How many global scopes are there in a Python program? How many local scopes?

Answer:

There is only one global Python scope per program execution. This scope remains in existence until the program terminates and all its names are forgotten.

There is one local scope created whenever a function is called.

6. What happens to variables in a local scope when the function call returns?

Answer: A local variable retains its value until the next time the function is called. A local variable becomes undefined after the function call completes. The local variable can be used outside the function any time after the function call completes..

7. What is the concept of a return value? Is it possible to have a return value in an expression?

Answer:

A return value is the value that a function call evaluates to. Like any value, a return value can be used as part of an expression.

8. Why is `eggs` a valid variable name while `100` is invalid?

Answer:

A variable name must start with a letter or the underscore character. A variable name cannot start with a number. That's why `eggs` is a valid variable name but `100` is invalid.

9. What three functions can be used to get the integer, floating-point number, or string version of a value?

Answer:

The **int()** , **float()** , **str()** functions will evaluate to the integer, floating-point number and string versions of a value.

10. Why does this expression cause an error? How can you fix it?

'I have eaten ' + 99 + ' burritos.'

Answer:

This expression cause an error because python does not allow concatenation values of different types.

We can resolve the issue by conversion the integer values to string before concatenating them in the print statement.

'I have eaten ' + 99 + ' burritos.'