

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

Answer:

By using functions, we can avoid rewriting the same logic/code again and again in a program. We can call functions any number of times in a program and from any place in a program. We can track a large program easily when it is divided into multiple functions. Reusability is the main achievement of functions.

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

Answer:

The code in a function executes when the function is called, not when the function is defined.

3. What statement creates a function?

Answer:

A function is defined by using the `def` keyword, followed by a name of our choosing, followed by a set of parentheses which hold any parameters the function will take (they can be empty), and ending with a colon(:).

Example:

```
def addition(a,b):  
    return a+b
```

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

Answer:

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. The parameters are not mandatory.

Calling a function means invoking a function so that it performs the required task. When we call a function then the control passes to the function and the statements written therein are executed one by one thereby carrying out the required task.

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

Answer:

A variable is only available from inside the region it is created. This is called scope.

A variable created inside a function belongs to the *local scope* of that function, and can only be used inside that function.

Example:

```
def myfunc():  
    x = 300  
    print(x)  
myfunc()
```

If we operate with the same variable name inside and outside of a function, Python will treat them as two separate variables, one available in the **global scope** (outside the function) and one available in the local scope (inside the function).

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.

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

Answer:

Return values are the values that a function returns when it has completed.

We can use that value in a math expression or any other kind of expression in which the value has a logical or coherent meaning.

Return statements can not be used outside the function.

8. If a function does not have a return statement, what is the return value of a call to that function?

Answer:

In Python, every function returns something. If there are no return statements, then it returns None.

9. How do you make a function variable refer to the global variable?

Answer:

When we create a variable inside a function, that variable is local, and can only be used inside that function. To create a global variable inside a function, we use the “global” keyword.

```
def func():  
  
    x = "world"  
  
func()  
  
print("hello " + x)
```

10. What is the data type of None?

Answer:

The None keyword is used to define a null value, or no value at all. None is not the same as 0, False, or an empty string. None is a data type of its own (NoneType) and only None can be None.

11. What does the sentence `import areallyourpetsnamederic` do?

Answer:

That import statement imports a module named areallyourpetsnamederic.

12. If you had a `bacon()` feature in a `spam` module, what would you call it after importing `spam`?

Answer:

This function can be called with `spam.bacon()`.

13. What can you do to save a programme from crashing if it encounters an error?

Answer:

We use the `try` and `except` statements to handle exceptions. Whenever the code breaks down, an exception is thrown without crashing the program.

14. What is the purpose of the `try` clause? What is the purpose of the `except` clause?

Answer:

The `try` block lets you test a block of code for errors. The `except` block lets you handle the error.

