

Lab Assignment & Solution



Cybersecurity Professional Program
Introduction to Python
for Security

Functions

PY-05-LS3

Scope Behavior

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Note: Solutions for the instructor are shown inside the green box.



Lab Objective

Understand how the scope of a variable influences its behavior and how it can be manipulated.



Lab Mission

Create global variables and try to make changes to them within a function.



Lab Duration

10–20 minutes



Requirements

- Basic knowledge of Python



Resources

- Environment & Tools
 - Windows or Linux
 - PyCharm
 - Python 3



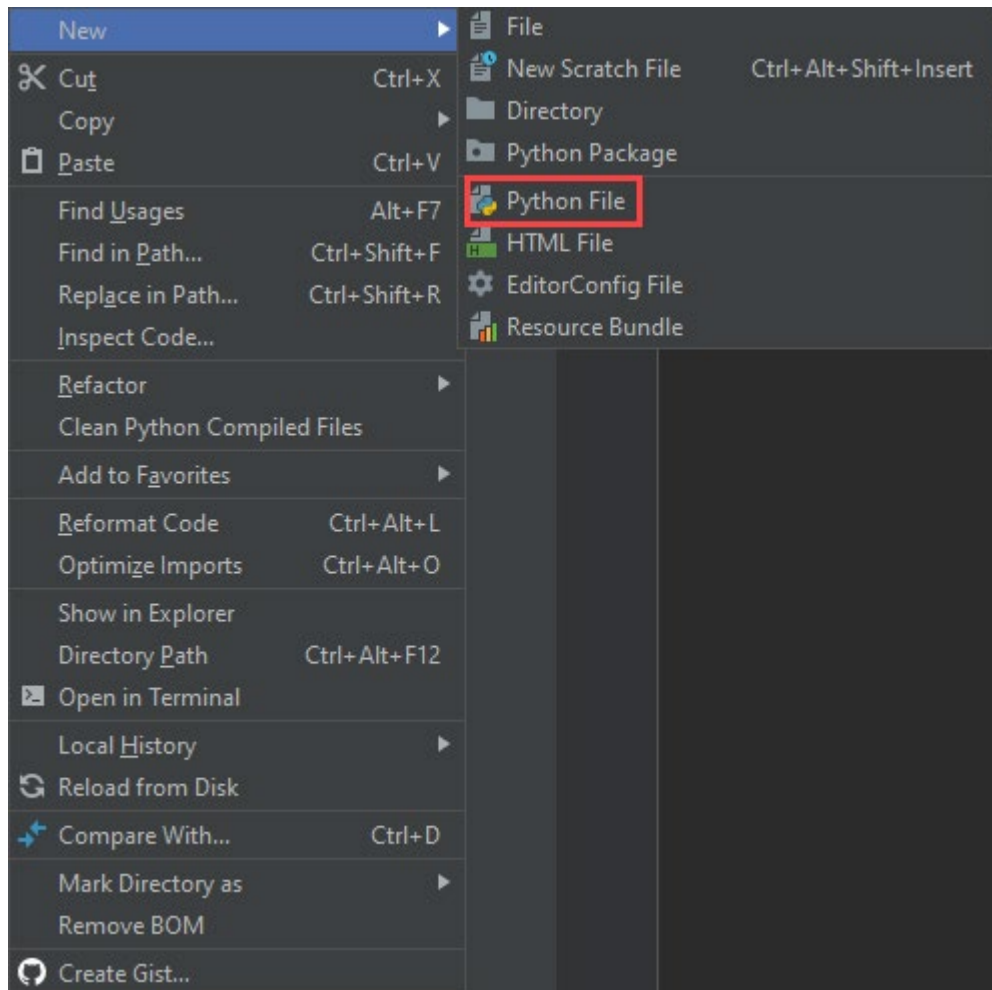
Textbook References

- Chapter 5: Functions
 - Section 2: Code Handling

Lab Task: Understanding Scope in Programming

In this task, you will learn how a global scope influences variables.

- 1 Create a new Python file in PyCharm by right clicking the project you created and selecting **New > Python File**.



- 2 Declare two different global variables.

```
global_var = 5
changed_global_var = 20
```

3 Define a simple function.

```
def local_change( ) :
```

4 Within the function, change the value of the first variable and print it.

```
def local_change():  
    global_var = 10  
    print("inside function global_var's value: ", global_var)
```

5 Within the function, declare the second variable as global.

```
def local_change():  
    global_var = 10  
    print("inside function global_var's value: ", global_var)  
    global changed_global_var
```

6 Within the function, change the value of the second variable and print it.

```
def local_change():  
    global_var = 10  
    print("inside function global_var's value: ", global_var)  
    global changed_global_var  
    changed_global_var += 5  
    print("inside function changed_global_var's value: ",  
changed_global_var)
```

7 Invoke the function.

```
local_change()
```

8 Print the values of both functions after their invocation.

```
print("outside function global_var's value: ", global_var)  
print("outside function changed_global_var's value: ",  
changed_global_var)
```