

Call Frames and Global Variables

```
def swap(a,b):
    """Swap global a & b"""
    1 tmp = a
    2 a = b
    3 b = tmp
```

Global Variables
a 1 b 2

Call Frame
swap 1
a 1 b 2

```
>>> a = 1
>>> b = 2
>>> swap(a,b)
```

Question: What exactly gets swapped with function swap?

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Call Frames and Global Variables

```
def swap(a,b):
    """Swap global a & b"""
    1 tmp = a
    2 a = b
    3 b = tmp
```

Global Variables
a 1 b 2

Call Frame
swap ~~1 2 3~~
a ~~2~~ b ~~1~~
tmp 1 RETURN None

```
>>> a = 1
>>> b = 2
>>> swap(a,b)
```

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Call Frames and Global Variables

```
def swap(a,b):
    """Swap global a & b"""
    1 tmp = a
    2 a = b
    3 b = tmp
```

Global Variables
a 1 b 2

Call Frame
swap ~~1 2 3~~

```
>>> a = 1
>>> b = 2
>>> swap(a,b)
```

THIS FUNCTION DOES NOT SWAP the global a and global b

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More Exercises (1)

Module Text	Interactive Python
# my_module.py	>>> import my_module
	>>> my_module.x
def foo(x):	...
return x+1	What does Python give me?
x = 1+2	A: 9
x = 3*x	B: 10
	C: 1
	D: Nothing
	E: Error

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More Exercises (1)

Module Text	Interactive Python
# my_module.py	>>> import my_module
	>>> my_module.x
def foo(x):	...
return x+1	What does Python give me?
x = 1+2	A: 9 CORRECT
x = 3*x	B: 10
	C: 1
	D: Nothing
	E: Error

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More Exercises (2)

Function Definition	Function Call
def foo(a,b):	>>> x = 2
1 x = a	>>> foo(3,4)
2 y = b	>>> x
3 return x*y+y	What does Python give me?
	A: 2
	B: 3
	C: 16
	D: Nothing
	E: I do not know

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More Exercises (2)

Function Definition

```
def foo(a,b):  
1 | x = a  
2 | y = b  
3 | return x*y+y
```

Function Call

```
>>> x = 2  
>>> foo(3,4)  
>>> x  
...
```

What does Python give me?

A: 2 **CORRECT**
B: 3
C: 16
D: Nothing
E: I do not know

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More Exercises (3)

Module Text

```
# module.py  
  
def foo(x):  
| x = 1+2  
| x = 3*x
```

Interactive Python

```
>>> import module  
>>> module.x  
...
```

What does Python give me?

A: 9
B: 10
C: 1
D: Nothing
E: Error

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More Exercises (3)

Module Text

```
# module.py  
  
def foo(x):  
| x = 1+2  
| x = 3*x
```

Interactive Python

```
>>> import module  
>>> module.x  
...
```

What does Python give me?

A: 9
B: 10
C: 1
D: Nothing
E: Error **CORRECT**

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More Exercises (4)

Module Text

```
# module.py  
  
def foo(x):  
| x = 1+2  
| x = 3*x  
  
x = foo(0)
```

Interactive Python

```
>>> import module  
>>> module.x  
...
```

What does Python give me?

A: 9
B: 10
C: 1
D: Nothing
E: Error

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More Exercises (4)

Module Text

```
# module.py  
  
def foo(x):  
| x = 1+2  
| x = 3*x  
  
x = foo(0)
```

Interactive Python

```
>>> import module  
>>> module.x  
...
```

What does Python give me?

A: 9
B: 10
C: 1
D: Nothing **CORRECT**
E: Error

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More Exercises (5)

Module Text

```
# module.py  
  
def foo(x):  
| x = 1+2  
| x = 3*x  
| return x+1  
  
x = foo(0)
```

Interactive Python

```
>>> import module  
>>> module.x  
...
```

What does Python give me?

A: 9
B: 10
C: 1
D: Nothing
E: Error

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More Exercises (5)

Module Text

```
# module.py
```

```
def foo(x):  
    x = 1+2  
    x = 3*x  
    return x+1
```

```
x = foo(0)
```

Interactive Python

```
>>> import module
```

```
>>> module.x
```

```
...
```

What does Python
give me?

```
A: 9  
B: 10     CORRECT  
C: 1  
D: Nothing  
E: Error
```

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