An Introduction To Interactive Programing In Python (Part 1)

by Joe Warren, Scott Rixner, John Greiner, Stephen Wong

Quiz 2a – Interactive applications in python   *Skanda S Bharadwaj*

Question 1

What typically calls an event handler?

Your Answer		Score	Explanation
The code you write.			
✓ Some code that you didn't write which generates the event.	Correct	10.00	Correct.
Total		10.00 / 10.00	

Question 2

In CodeSkulptor, how many event handlers can be running **at the same time**?

Your Answer	Score	Explanation

✓ 1	Correct	10.00	Correct.
0			
Unlimited, i.e., 0 or more			
Total		10.00 / 10.00	

Question 3

What are the three parts of a frame?

Refer to the video on SimpleGUI.

Your Answer		Score	Explanation
Mouse	Correct	0.17	
✓ Status Area	Correct	3.00	
Border	Correct	0.17	

2

Background Area	Correct	0.17
✓ Canvas	Correct	3.00
Keyboard	Correct	0.17
Options Area	Correct	0.17
Title	Correct	0.17
✓ Control Area	Correct	3.00
Total		10.00 / 10.00

Question 4

For the SimpleGUI-based programs in this course, we recommended breaking down an interactive Python program into seven parts. Below, these parts are listed alphabetically.

1. Create frame
2. Define classes

3

3. Define event handlers
4. Initialize global variables
5. Define helper functions
6. Register event handlers
7. Start frame and timers

However, in lecture, we recommended a particular ordering of these parts. Enter 7 numbers in the range 1–7, separated only by spaces, to indicate the recommended ordering of the preceding elements of an interactive Python program. For example, if you think that the first action in your program should be to register your event handlers, enter 6 as the first number in the sequence.

Answer for Question 4

You entered:

Your Answer		Score	Explanation
4	Correct	1.43	
5	Correct	1.43	
2	Correct	1.43	
3	Correct	1.43	

4

1	Correct	1.43
6	Correct	1.43
7	Correct	1.43
Total		10.00 / 10.00

Question 5

Assume the following global definition is part of your program.

x = 5

If each of the following function definitions are also part of your program, which of them **needs** a `global x` declaration? You can try each definition in CodeSkulptor.

Your Answer	Score	Explanation
def b(x,y): x = x + y return x	Correct 1.50	This example does not need a global declaration. Here a local variable x is being assigned to. If you add a `global` declaration, you'll get a `SyntaxError`.

5

def c(y): return x + y	Correct	1.50	This example does not need a global declaration. You don't need a `global` declaration unless you are assigning to the global variable.

def d(y):
 	
   y = x + y
 	
   return y
	Correct	1.50	This example does not need a global declaration. You don't need a `global` declaration unless you are assigning to the global variable.

✓ def a(y
    ):
 	
x = x + y
 	
   return y
	Correct	5.50	This example needs a global declaration. A global variable is assigned within a function, so you need a `global` declaration.

Total   10.00 / 10.00

Question 6

Consider the following code.

```
count = 0
```

6

```
def square(x):

    global count

    count += 1

    return x**2


print square(square(square(square(3))))
```

What is the value of `count` at the end? Enter a number. (You can double check your answer in CodeSkulptor if you wish.)

Answer for Question 6

You entered:

Your Answer	Score	Explanation
4	Correct 10.00	Correct. Each time `square` is called the global variable `count` is increased by 1.
Total	10.00 / 10.00	

Question 7

Consider the following code.

```
a = 3
b = 6
```

7

```
def f(a):

    c = a + b

    return c
```

Which names occur in the global scope?

Your Answer		Score	Explanation
✓	b	Correct	2.50	
	c	Correct	2.50	
✓	f	Correct	2.50	The function name f has global scope.
✓	a	Correct	2.50	
Total		10.00 / 10.00	

Question 8

Consider the following code.

8

```
a = 3

b = 6


def f(a):

    c = a + b

    return c
```

Which names occur in a local scope?

Your Answer	Score	Explanation
✓ c	Correct	2.50	
f	Correct	2.50	
b	Correct	2.50	
✓ a	Correct	2.50	
Total	10.00 / 10.00	

Question 9

Which of the following are valid calls to `create_frame`?

Look at the [documentation](#) for SimpleGUI frames, but also try the code in CodeSkulptor.

Your Answer		Score	Explanation
`frame = simplegui.create_frame(100, 100, 100)`	Correct	1.00	This is not a valid call. The call is missing title argument.
✓ `frame = simplegui.create_frame("Testing", 200, 200, 300)`	Correct	4.00	
✓ `f = simplegui.create_frame("My Frame", 100, 100)`	Correct	4.00	
`frame = simplegui.create_frame(200, 200, 200, 200)`	Correct	1.00	
Total		10.00 / 10.00	

Question 10

If the following is our entire program, what one line of code should replace the question marks for it to show a frame?

```
???
f = simplegui.create_frame("My frame", 200, 200)
f.start()
```

Your Answer	Score	Explanation
✓ `import simplegui` Correct	10.00	
`import simplegui.create_frame`		
`import create_frame`		
Total	10.00 / 10.00	