

## Feedback — Quiz 2b

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You submitted this quiz on **Mon 3 Aug 2015 12:27 AM IST**. You got a score of **98.00** out of **100.00**. You can [attempt again](#), if you'd like.

### Question 1

In the following code, what does the number `100` represent?

```
my_button = frame.add_button("My Label", button_handler, 100)
```

Use the CodeSkulptor [documentation](#) to look it up.

Your Answer	Score	Explanation
<input checked="" type="radio"/> Width of the button in pixels	✓ 10.00	
<input type="radio"/> Height of the button in pixels		
<input type="radio"/> Vertical position of the button in pixels		
<input type="radio"/> Horizontal position of the button in pixels		
Total	10.00 / 10.00	

### Question 2

How many control objects are allowed in a frame?

Your Answer	Score	Explanation
<input type="radio"/> 0		
<input checked="" type="radio"/> Unlimited, i.e., 0 or more	✓ 10.00	Correct.
<input type="radio"/> 1		
Total	10.00 / 10.00	

## Question 3

Which of the following are valid ways of defining and using a label?

Note that ellipses denote code that is omitted from and irrelevant for the question. Feel free to fill in plausible parameters and test each choice in CodeSkulptor.

Your Answer	Score	Explanation
<input checked="" type="checkbox"/> <pre>import simplegui f = simplegui.create_frame(...) f.add_label("My label")</pre>	<input checked="" type="checkbox"/> 4.00	
<input type="checkbox"/> <pre>import simplegui simplegui.create_frame(...) l1 = simplegui.add_label("Label one") l2 = simplegui.add_label("Label two")</pre>	<input checked="" type="checkbox"/> 1.00	This is not a valid way to add a label. It's not <code>simplegui.add_label</code> .
<input checked="" type="checkbox"/> <pre>import simplegui frame = simplegui.create_frame(...) frame.add_label("Label one") frame.add_label("Label two")</pre>	<input checked="" type="checkbox"/> 4.00	
<input type="checkbox"/> <pre>import simplegui simplegui.create_frame(...) simplegui.add_label("My label")</pre>	<input checked="" type="checkbox"/> 1.00	This is not a valid way to add a label. It's not <code>simplegui.add_label</code> .
Total	10.00 / 10.00	

## Question 4

When you enter text into an input field and press enter, the text is passed to the input field's

event handler. What is the data type of the text?

Your Answer	Score	Explanation
<input type="radio"/> A string or a number, depending on the text entered		
<input type="radio"/> A number		
<input checked="" type="radio"/> A string	✓ 10.00	The entered data is a string. The text entered into an input field is always passed to the input handler as a string even if the text corresponds to a number.
Total	10.00 / 10.00	

## Question 5

Consider the following conditional statement.

```
if p == False:
    return False
elif q == False:
    return False
else:
    return True
```

That is equivalent to which of the following simpler statements?

Try to reason logically about each of the statements, but also try each in [CodeSkulptor](#).

Your Answer	Score	Explanation
<input type="checkbox"/> <code>return p and (not q)</code>	✓ 1.00	
<input checked="" type="checkbox"/> <code>return p and q</code>	✓ 7.00	
<input type="checkbox"/> <code>return p or q</code>	✓ 1.00	
<input type="checkbox"/> <code>return (not p) or (not q)</code>	✓ 1.00	
Total	10.00 / 10.00	

## Question 6

Which of the following describes the mistake in the following code?

```
def volume_cube(side):  
    """ Returns the volume of a cube, given the length of its side. """  
    print side ** 3  
  
s = 5  
print "The volume of a cube with sides", s, "long is", volume_cube(s), "."
```

### Your Answer

**Score****Explanation**

The function should return, not print, its result.



10.00

Correct. In most cases, functions should return their computed results. Furthermore, the documentation string here specifies that it should be returning that value.



The call to `volume_cube` shouldn't be within a `print` statement. More generally, function calls usually shouldn't be within `print` statements.



All of the printing should be done within the function.

Total

10.00

/

10.00

## Question 7

What kind of errors can happen if you are missing a needed `global` declaration in one of your function definitions? For this question, you need only consider the case where the problem is in the function that is missing the `global` declaration.

If you are having trouble with this question, watch this week's Programming Tips video again.

Your Answer	Score	Explanation
<input type="checkbox"/> NameError	✓ 0.67	
<input type="checkbox"/> AttributeError	✓ 0.67	
<input checked="" type="checkbox"/> An incorrect computation that generates no error message	✓ 4.00	If you only assign to the variable, without trying to use its current value, you won't get any error message. Instead, Python assumes the variable is local, which might lead to an unexpected result.
<input type="checkbox"/> SyntaxError	✓ 0.67	
<input checked="" type="checkbox"/> Error: local variable '...' referenced before assignment	✓ 4.00	
Total	10.00 / 10.00	

## Question 8

Which of the following function definitions are in the [recommended code style](#)?

Your Answer	Score	Explanation
<input type="checkbox"/> def f (x, y): """ Add the two inputs. """ return x + y	✓ 1.00	This does not follow recommended style, there shouldn't be a space before the parenthesis.
<input checked="" type="checkbox"/> def f(x, y): return x + y # Add the two inputs.	✗ 0.00	This does not follow recommended style, a comment should be on a separate line.
<input checked="" type="checkbox"/> def my_function(x, y): """ Add the two inputs. """ return x + y	✓ 7.00	



0.00

This does not follow recommended style, there should be a space after the comma.

```
def f(x,y):
```

```
    """ Add the two inputs
```

```
    ts. """
```

```
    return x + y
```

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Total

8.00 /

10.00

## Question 9

Cut and paste the following code into [CodeSkulptor](#). Run it and make an attempt to understand how it works.

```
# Simple interactive application

import simplegui

# Define globals.

message = "Welcome!"
count = 0

# Define event handlers.

def button_handler():
    """Count number of button presses."""
    global count
    count += 1
    print message, " You have clicked", count, "times."

def input_handler(text):
    """Get text to be displayed."""
    global message
    message = text

# Create frame and register event handlers.

frame = simplegui.create_frame("Home", 100, 200)
frame.add_button("Click me", button_handler)
frame.add_input("New message:", input_handler, 100)

# Start frame.

frame.start()
```

We'd like to modify the code so that the count is reset to zero whenever a new message is entered. Where would you need to modify this code to implement this change?

Your Answer	Score	Explanation
<input type="radio"/> Add an assignment to <code>count</code> in the initialization of global variables.		
<input type="radio"/> Add an assignment to <code>count</code> in the event handler for the button.		
<input checked="" type="radio"/> Add an assignment to <code>count</code> in the event handler for the input field. Also add a <code>global count</code> declaration there.	✓ 10.00	
<input type="radio"/> Add an assignment to <code>count</code> at the end of this code.		
Total	10.00 / 10.00	

## Question 10

In the game “Guess the number”, what is the minimum number of guesses necessary to guarantee that the guesser can *always* win if the secret number is chosen in `range(0, 400)`? Review the mini-project description for "Guess the number" if you are having trouble with this problem.

Your Answer	Score	Explanation
<input checked="" type="radio"/> 9 guesses	✓ 10.00	
<input type="radio"/> 8 guesses		
<input type="radio"/> 10 guesses		
<input type="radio"/> It's impossible to guarantee that you can always win at “Guess the number”.		
<input type="radio"/> 12 guesses		

Total	10.00 / 10.00
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