

## Feedback — Quiz 2b

[Help Center](#)

Thank you. Your submission for this quiz was received.

You submitted this quiz on **Sun 1 Mar 2015 6:58 PM WET**. You got a score of **100.00** out of **100.00**.

### 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"/> 1 |       |             |

☒ Unlimited, i.e., 0 or more



10.00

Correct.

☐ 0

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 type="checkbox"/><br>import simplegui<br><br>def label_handler():<br>print "Handler called."<br><br>f = simplegui.create_frame<br>(...)<br>f.add_label("My label",lab<br>el_handler) | 1.00  | This is not a valid way to add a label. Labels don't have handlers.                 |
| <input checked="" type="checkbox"/><br>import simplegui<br>f = simplegui.create_frame<br>(...)<br>label = f.add_label("My la<br>bel")<br>label.set_text("My new lab<br>el")                 | 4.00  |   |
| <input type="checkbox"/><br>import simplegui<br><br>simplegui.create_frame(...)<br>simplegui.add_label("My l<br>abel")  | 1.00  | This is not a valid way to add a label. It's not <code>simplegui.add_label</code> . |



4.00

```
import simplegui  
f = simplegui.create_frame  
(...)  
f.add_label("My label")
```

|       |         |
|-------|---------|
| 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**☐ A number☐ A string or a  
number, depending  
on the text entered☒ 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.

|       |       |
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|       | 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 (not p) or (not q)</code> | ✓ 1.00        |             |
| <input type="checkbox"/> <code>return not(p or q)</code>        | ✓ 1.00        |             |
| <input type="checkbox"/> <code>return p or q</code>             | ✓ 1.00        |             |
| <input checked="" type="checkbox"/> <code>return q and p</code> | ✓ 7.00        |             |
| 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 |
|--|-------|-------------|
| <input type="radio"/> The call to <code>volume_cube</code> shouldn't be within a <code>print</code> statement. More generally, function calls usually shouldn't be within <code>print</code> statements. |       |             |



All of the printing should be done within the function.



10.00

The function should return, not print, its result.

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

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 checked="" type="checkbox"/> Error: local variable '...' referenced before assignment | 4.00  |   |
| <input type="checkbox"/> NameError   | 0.67  |   |
| <input type="checkbox"/> SyntaxError   | 0.67  |   |
| <input type="checkbox"/> AttributeError  | 0.67  |   |
| <input checked="" type="checkbox"/> An incorrect computation that                            | 4.00  | If you only assign to the variable, without trying to use its current value, you won't get any error message. |





generates no error message

Instead, Python assumes the variable is local, which might lead to an unexpected result.

|       |       |
|-------|-------|
| Total | 10.00 |
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|       | 10.00 |

## Question 8

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

| Your Answer   | Score  | Explanation   |
|---|--|---|
| <input checked="" type="checkbox"/> <pre>def f(x, y):     """ Add the two input s. """     return x + y</pre> |  7.00   |   |
| <input type="checkbox"/> <pre>def myFunction(x, y):     """ Add the two input s. """     return x + y</pre>   |  1.00 | This does not follow recommended style, only class names should use “camel case”. |
| <input type="checkbox"/> <pre>def f(x, y):     return x + y # Add t he two inputs.</pre>                      |  1.00 | This does not follow recommended style, a comment should be on a separate line.   |
| <input type="checkbox"/> <pre>def f(x,y):     """ Add the two input s. """     return x + y</pre>             |  1.00 | This does not follow recommended style, there should be a space after the comma.  |
| Total   | 10.00 /<br>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**

---



Add an assignment to `count` in the initialization of global variables.



✓ 10.00

Add an assignment to `count` in the event handler for the input field. Also add a `global count` declaration there.



Add an assignment to `count` in the event handler for the button.



Add an assignment to `count` 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 the you can always win at “Guess the number“. |         |             |
| <input type="radio"/> 12 guesses   |         |             |



|       |                  |
|-------|------------------|
| Total | 10.00 /<br>10.00 |
|-------|------------------|