An Introduction To Interactive Programing In Python (Part 1)

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Quiz 0b – Variables and assignments   *Skanda S Bharadwaj*

Question 1

Which of the following are syntactically correct strings?

Try each of them in CodeSkulptor.

Your Answer		Score	Explanation
✓ `'Hello'`	Correct	2.50	This is a string. You can use single-quotes.
✓ `"'ello"`	Correct	2.50	This is a string. A single-quote (apostrophe) can appear inside double-quotes.
`[Hello]`	Correct	1.25	This is not a string. A string must use quotation marks.
✓ `"Hello, world."`	Correct	2.50	This is a string. You can use double-quotes.

`"Goodbye'`	Correct	1.25	This is not a string. You can't mix-and-match single- and double-quotes.
Total		10.00 / 10.00	

Question 2

To display a value in the console, what Python keyword do you use?

Answer for Question 2

Your Answer		Score	Explanation
print	Correct	10.00	Correct.
Total		10.00 / 10.00	

Question 3

In the following code, the one line starting with `#` is highlighted in red. What does this line mean to Python?

```
tax_rate = 0.15
```

```
income = 40000

deduction = 10000


# Calculate income taxes

tax = (income - deduction) * tax_rate


print tax
```

Your Answer		Score	Explanation
This text is used as a file name for the code.			
✓ This is a comment aimed at the human reader. Python ignores such comments.	Correct	10.00	
The text is stored in a special variable called `#`.			
This text is printed on the console.			
This is a syntax error.			

3

Total   10.00 / 10.00

Question 4

Which of the following arithmetic expressions are syntactically correct?

Try each of them in CodeSkulptor.

Your Answer		Score	Explanation
✓ `7 / +4`	Correct	2.00	This example has correct syntax. You can put a positive sign in front of a number like thi
✓ `(7 - 2) / (3 ** 2)`	Correct	2.00	This example has correct syntax.
✓ `5 - 1 - 3 - 7 - 0`	Correct	2.00	This example has correct syntax.
`9 - (2 - (4 * 3)`	Correct	2.00	This example has incorrect syntax. This is missing closing parenthesis.
`3 * ((2 - 9) + 4)) * (2 + (1 - 3))`	Correct	2.00	This example has incorrect syntax. This has an extra closing parenthesis.

Total   10.00 / 10.00

Question 5

You would like to make it so that the variable `ounces` has the value 16, thus representing one pound. What simple Python statement will accomplish this?

Your Answer		Score	Explanation
`ounces := 16`	Correct	1.00	Invalid syntax
✓ `ounces = 16`	Correct	8.00	
`ounces == 16`	Correct	1.00	Means something different
Total		10.00 / 10.00	

Question 6

A gram is equal to 0.035274 ounces. Assume that the variable `mass_in_ounces` has a value representing a given mass in ounces. Which Python statement below uses the variable `mass_in_ounces` to compute an equivalent mass `mass_in_grams` expressed in grams?

Think about it mathematically, but also test these expressions in CodeSkulptor. If you are still confused, you might check out the student tutorial video by Kelly on unit conversions in the "Concepts and Examples" page.

Your Answer		Score	Explanation
`mass_in_grams = mass_in_ounces * 0.035274`			
✓ `mass_in_grams = mass_in_ounces / 0.035274`	Correct	10.00	Correct.
`mass_in_grams = 0.035274 / mass_in_ounces`			
`mass_in_ounces = 0.035274 * mass_in_grams`			
Total		10.00 / 10.00	

Question Explanation

Remember that one ounce weighs much more than one gram as you consider possible answers.

Question 7

Which of the following can be used as a variable name?

Try using each in CodeSkulptor.

Your Answer		Score	Explanation
`my-number`	Correct	1.00	No, this is not a valid variable name. You cannot use a dash in a variable name. The dash is interpreted as a minus sign.
✓ `__number__`	Correct	2.00	This is a valid variable name. However, convention says that Python variable names starting and ending with underscores only in special circumstances.
✓ `ounces`	Correct	2.00	This is a valid variable name.
`ounce(s)`	Correct	1.00	No, this is not a valid variable name. You cannot use parentheses in a variable name.
✓ `number123`	Correct	2.00	This is a valid variable name.
✓ `MYnumber`	Correct	2.00	This is a valid variable name. However, convention says that Python variables shouldn't start with a capital let
Total		10.00 / 10.00	

Question 8

Assume you have values in the variables `x` and `y`. Which statement(s) would result in `x` having the sum of the current values of `x` and `y`?

Test your answer in CodeSkulptor.

Your Answer		Score	Explanation
`x += x + y`	Correct	1.00	
`x += y + x`	Correct	1.00	
✓ `x += y`	Correct	4.00	
✓ `x = y + x`	Correct	4.00	
Total		10.00 / 10.00	

Question 9

Python file names traditionally end in what characters after a period? Don't include the period.

Answer for Question 9

You entered:

Your Answer	Score	Explanation
py	Correct	10.00	
Total		10.00 / 10.00	

Question 10

We encourage you to save your CodeSkulptor Python files where?

Your Answer	Score	Explanation
On your computer only		
Nowhere — CodeSkulptor automatically saves your files for you		
In "the cloud" only		

✓ In "the cloud" and on your computer		Correct	10.00	Correct.
Total			10.00 / 10.00	