Feedback — Quiz 8

Help Center

Thank you. Your submission for this quiz was received.

You submitted this quiz on **Tue 15 Mar 2016 10:05 PM PDT**. You got a score of **100.00** out of **100.00**.

Question 1

Which of the following is valid notation for a set in CodeSkulptor?

Your Answer		Score	Explanation
☑ `set()`	✔	4.00	
☐ `{1,2,3}`	✔	2.00	While valid in Python 2.7 or 3.X, it is not valid in Python 2.6 or CodeSkulptor.
☑ `set([1, 2, 3])`	✔	4.00	
Total		10.00 / 10.00	

Question 2

Which of the following operations can mutate set `s`? You may want to try some examples in CodeSkulptor and refer to the documentation.

Your Answer		Score	Explanation
☐ `t.symmetric_difference(s)`	✔	1.00	
☑ `s.update(t)`	✔	5.00	
☐ `s.intersection_update(s)`	✔	1.00	While `s.update()` can change `s`, a set intersected with itself is just the same set.

☐ `s.symmetric_difference(t)`	✔	1.00
☑ `s.add(x)`	✔	1.00
☐ `t.symmetric_difference_update(s)`	✔	1.00
Total		10.00 / 10.00

Question 3

Which operation corresponds to the following description? Refer to the CodeSkulptor documentation.

Given two sets, `s` and `t`, we want a new set containing all the elements that are in one of the sets, but not both of the sets. For example, if `s` has the elements 1, 2, 3, 4, and `t` has the elements 3, 4, 5, 6, then the result should have the elements 1, 2, 5, 6.

Your Answer		Score	Explanation
◉ `s.symmetric_difference(t)`	✔	10.00	
○ `s.symmetric_difference_update(t)`			
○ `t.difference(s)`			
○ `s.difference(t)`			
Total		10.00 / 10.00	

Question 4

A set is an unordered collection of distinct elements. Which of the following problem contexts represent instances of this idea?

Your Answer	Score	Explanation

☑ Group of distinct cities	✔	8.00	
☐ Alphabetized names	✔	1.00	No, sets are not ordered.
☐ Phonebook	✔	1.00	While you could have a set of pairs, each with a name and phone number, there wouldn't be an easy way to look up a person's phone number.
Total		10.00 / 10.00	

Question 5

How many frames per second are *typically* projected in modern movies? How many times per second is the draw handler typically called in CodeSkulptor?

Enter two numbers representing these frame rates in frames per second. Use only spaces to separate the numbers.

You entered:

24 60

Your Answer		Score	Explanation
24	✔	5.00	
60	✔	5.00	
Total		10.00 / 10.00	

Question 6

The bonus portion of this week's mini-project defines and uses a `Sprite` class to support animations. Each animated sprite includes an associated tiled image, each of whose sub-images are drawn in turn during the process of animating the sprite.

What attribute (also known as a field) of this `Sprite` class can be used to select the appropriate sub-image to draw during this animation process? (If you are stuck, review the bonus phase in the mini-project description.)

Your Answer		Score	Explanation
○ `radius`			
○ `image_size`			
○ `angle_vel`			
○ `image`			
◉ `age`	✔	10.00	
○ `image_center`			
○ `lifespan`			
○ `sound`			
○ `vel`			
○ `animated`			
○ `angle`			
○ `pos`			
Total		10.00 / 10.00	

Question Explanation

Here is the text of the relevant instruction from the bonus phase: "In the draw method of the Sprite class, check if `self.animated` is `True`. If so, then choose the correct tile in the image based on the age. The image is tiled horizontally. If `self.animated` is `False`, it should continue to draw the sprite as before."

Question 7

Consider a horizontally-tiled image where each sub-image has the same size. If each sub-image is of size 60×90 (in pixels), what is the horizontal distance (in pixels) between the centers of adjacent sub-images?

Your Answer	Score	Explanation

60	✔	10.00
90		
180		
120		
Total		10.00 / 10.00

Question 8

How many **distinct** numbers are printed by the following code? Enter the count.

```
def next(x):
    return (x ** 2 + 79) % 997

x = 1
for i in range(1000):
    print x
    x = next(x)
```

Hint: Consider how editing the code to use a set could help solve the question.

You entered:

46

Your Answer		Score	Explanation
46	✔	20.00	
Total		20.00 / 20.00	

Question 9

Which instructor exhibits the best coding style?

Your Answer	Score	Explanation

Scott			
Joe			
Stephen			
John	✔	10.00	John's programming tips are the best. We need to see more of him.
Total		10.00 / 10.00	