

Feedback — Quiz 7b

[Help](#)

You submitted this quiz on **Sun 2 Nov 2014 11:59 PM IST**. You got a score of **100.00** out of **100.00**.

Question 1

The class code provided for this week's mini-project supports an `ImageInfo` class to organize the data associated with the image. Consider an `ImageInfo` object of the following form:

```
ImageInfo([45, 45], [90, 90], 35)
```

What is the radius of the shape associated with this `ImageInfo` object?

You entered:

Your Answer	Score	Explanation
35	✓ 10.00	This is the radius of the circle used in computing collisions involving the shape.
Total	10.00 / 10.00	

Question 2

Consider the provided `ImageInfo` and `Sprite` class code. Assume we want ten asteroids on the screen, each looking exactly alike and using the same image file. How many `ImageInfo` objects and how many `Sprite` objects should we create?

Your Answer	Score	Explanation
-------------	-------	-------------



one

`ImageInfo`

object, one

`Sprite` object



15.00

Since there is one image file, there should be one `ImageInfo`. Since there are ten displayed asteroids, each potentially with its own velocity and angle, there should be ten `Sprite` objects.

one

`ImageInfo`

object, ten

`Sprite`

objects



ten

`ImageInfo`

objects, ten

`Sprite`

objects



ten

`ImageInfo`

objects, one

`Sprite` object

Total

15.00

/

15.00

Question 3

The version of *Rice Rocks* that we will implement uses only a single asteroid image and spawns multiple instances of the provided `Sprite` class using this image. In the original *Asteroids*, a large asteroid split into two medium asteroids which themselves split into two small asteroids.

If we only had one image and wanted to implement asteroids of varying sizes in our version, how *should* we do this?

Your Answer	Score	Explanation
<input checked="" type="radio"/> <p>Add a size attribute in the <code>Sprite</code> class and a size parameter to <code>Sprite.__init__</code>. Use the size attribute when drawing the sprite.</p>	<div>✓</div> 15.00	Adding a size attribute in the <code>Sprite</code> class allows each instance of a sprite to have a different size that can use in the draw method for the sprite.
<input type="radio"/> <p>Add a size attribute in the <code>ImageInfo</code> class and a size parameter to <code>ImageInfo.__init__</code>. Use this attribute when drawing the sprite.</p>		
<input type="radio"/> <p>Store a list of sizes for each asteroid in a global variable. Use the corresponding size when drawing a sprite.</p>		
<input type="radio"/> <p>Store the size in a global variable. Use this variable when drawing a sprite.</p>		
Total	15.00	
	/	
	15.00	

Question 4

What is the supported range of sound volumes in `set_volume`? You can find out in the

CodeSkulptor [documentation](#).

Your Answer	Score	Explanation
<input type="radio"/> 0 to 10		
<input type="radio"/> 1 to 100		
<input checked="" type="radio"/> 0 to 1	✓ 10.00	
<input type="radio"/> -1 to 1		
Total	10.00 / 10.00	

Question 5

Assume you have code that loads and plays a sound. Unfortunately, you don't hear anything. Which of the following could be a reason?

Your Answer	Score	Explanation
<input checked="" type="checkbox"/> Your browser is loading a big sound file. Wait longer.	✓ 2.00	
<input checked="" type="checkbox"/> You have set the volume level to 0.	✓ 2.00	
<input checked="" type="checkbox"/> A file found with the given URL isn't a sound file recognized by your browser.	✓ 2.00	
<input checked="" type="checkbox"/> No file is found with the given URL.	✓ 2.00	
<input checked="" type="checkbox"/> The given URL exists, but is inaccessible due to network problems.	✓ 2.00	
Total	10.00 /	

Question 6

Which of the following are valid HTML representations of the color blue?

Refer to this page on [HTML color values](#).

Your Answer	Score	Explanation
<input type="checkbox"/> "purple"	✓ 2.00	
<input checked="" type="checkbox"/> "Blue"	✓ 2.00	
<input checked="" type="checkbox"/> "rgb(0, 0, 255)"	✓ 2.00	
<input checked="" type="checkbox"/> "#0000FF"	✓ 2.00	
<input type="checkbox"/> "#FFFF00"	✓ 2.00	
Total	10.00 / 10.00	

Question 7

Imagine we are writing code for something like *Rice Rocks*, where things are moving in 2D toroidal space, i.e., the wrap around all four sides of the screen. How can we eliminate the duplicated code in the following function?

```
def move(position, vector):
    """Moves the position by the given vector in 2D toroidal space."""
    position[0] = (position[0] + vector[0]) % SCREEN_SIZE[0]
    position[1] = (position[1] + vector[1]) % SCREEN_SIZE[1]
```

Your Answer	Score	Explanation
<input type="checkbox"/> def move(position, vector):	✓ 1.00	Invalid Python.

"""Moves the position by the given vector in 2D toroidal space."""

```
position = (position + vector) % SCREEN_SIZE
```



1.00

No, this doesn't have the same behavior.

```
def move(position, vector):
```

```
    position = [(pos + vec) % size for pos in position
                for vec in vector for size in SCREEN_SIZE]
```



4.00

```
def move_dimension(dimension, position, vector):
```

```
    """Moves the position component by the given vector component in 1D toroidal space."""
```

```
    position[dimension] = (position[dimension] + vector[dimension]) % SCREEN_SIZE[dimension]
```

```
def move(position, vector):
```

```
    """Moves the position by the given vector in 2D toroidal space."""
```

```
    move_dimension(0, position, vector)
```

```
    move_dimension(1, position, vector)
```



4.00

```
NUM_DIMENSIONS = 2
```

```
def move(position, vector):
```

```
    """Moves the position by the given vector in 2D toroidal space."""
```

```
    for d in range(NUM_DIMENSIONS):
```

```
        position[d] = (position[d] + vector[d]) % SCREEN_SIZE[d]
```

Total

10.00 /

10.00

Question 8

What is the *primary* reason for not duplicating code? It was the only reason mentioned in the Programming Tips #7 video.

Your Answer

Score

Explanation



It leads to faster code.

☒ You only need to get the code correct *once*. ✓ 10.00

☐ It takes less time to write the code.

Total 10.00 / 10.00

Question 9

What is Mike Massimino's greatest accomplishment?

Your Answer

Score

Explanation

☐ Fixing the Hubble Space Telescope in space

☐ Receiving his PhD from MIT

☐ Appearing on *An Introduction to Interactive Programming in Python*

☐ Being the first person to use Twitter in space

☒ Appearing on *The Big Bang Theory* ✓ 10.00 Yeah, we wish we could meet Sheldon Cooper, too.

Total 10.00 / 10.00