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Test Name:	**ACDS Assessment 6 - Classes and Review**
Taken On:	17 Jan 2021 12:04:32 EST
Time Taken:	25 min 15 sec/ 270 min
Work Experience:	> 5 years
Invited by:	TTS
Skills Score:	Python (Basic) 50/50
Tags Score:	Easy 100/100 Language Proficiency 50/50 OOPS 50/50 Python 50/50 python 50/50

100%

150/150

scored in **ACDS Assessment 6 - Classes and Review** in 25 min 15 sec on 17 Jan 2021 12:04:32 EST

Recruiter/Team Comments:

No Comments.

Plagiarism flagged

We have marked questions with suspected plagiarism below. Please review.

Question Description	Time Taken	Score	Status
Q1 Shape Classes > Coding	6 min 49 sec	50/ 50	!
Q2 Python: Alphabet Filter > Coding	6 min 21 sec	50/ 50	!
Q3 Python > Multiple Choice	2 min 22 sec	10/ 10	✓
Q4 Python > Multiple Choice	2 min 38 sec	10/ 10	✓
Q5 Python > Multiple Choice	3 min 49 sec	10/ 10	✗
Q6 Python > Multiple Choice	58 sec	10/ 10	✓
Q7 Python > Multiple Choice	1 min 46 sec	10/ 10	✓

QUESTION 1

Shape Classes > Coding Easy OOPS

Needs Review

Score 50

QUESTION DESCRIPTION

In this challenge you will write three shape classes that return a calculated area for each shape.

Implement the following classes and methods:

- A *Circle* class with:
  - A constructor having one floating-point number parameter, *radius*.
  - A *getArea()* method that returns a ceiling-rounded integer denoting the area of the *Circle* object, calculated using the formula:
    area(Circle(radius)) = ceiling(3.14159265 × radius × radius).
- A *Rectangle* class with:
  - A constructor having two floating-point number parameters: *width* and *height*.
  - A *getArea()* method that returns a ceiling-rounded integer denoting the area of the *Rectangle* object, calculated using the formula:
    area(Rectangle(width, height)) = ceiling(width × height).
- A *Square* class with:
  - A constructor having one floating-point number parameter, *width*.
  - A *getArea()* method that returns a ceiling-rounded integer denoting the area of the *Square* object, calculated using the formula:
    area(Square(width)) = ceiling(width × width).

Constraints

- *0 < radius, width, height ≤ 20*

▼ Input Format for Custom Testing

Input from stdin will be processed as follows and passed to the function.

The first line contains a floating point number, the *radius* of a circle.
The second line contains two space-separated floating point numbers the *width* and *height* of a rectangle.
The third line contains a floating point number, the *radius* of a circle.
The fourth line contains a floating point number, the *width* of a square.
The fifth line contains two space-separated floating point numbers the *width* and *height* of a rectangle.

▼ Sample Case 0

Sample Input 0

```
STDIN     Function
-----     --------
5      →  radius = 5.0
3 4    →  width = 3.0, height = 4.0
2      →  radius = 2.0
3.3    →  width = 3.3
5 7.5  →  width = 5.0, height = 7.5
```

Sample Output 0

```
79
12
13
11
38
```

Explanation 0

Area of *Circle(5)* is *3.14159265 × 5.0 × 5.0 = 78.53981625 ⇒ 79*
Area of *Rectangle(3, 4)* is *3.0 × 4.0 = 12.0 ⇒ 12*
Area of *Circle(2)* is *3.14159265 × 2.0 × 2.0 = 12.5663706 ⇒ 13*
Area of *Square(3.3)* is *3.3 × 3.3 = 10.89 ⇒ 11*
Area of *Rectangle(5, 7.5)* is *5.0 × 7.5 = 37.5 ⇒ 38*

CANDIDATE ANSWER

Language used: **Python 3**

```
class Circle:
    def __init__(self, radius):
        self.radius = radius

    def getArea(self):
        area = math.ceil(math.pi * self.radius ** 2)
        return area

class Rectangle:
    def __init__(self, width, height):
        self.width = width
        self.height = height

    def getArea(self):
        area = math.ceil(self.width * self.height)
        return area

class Square:
    def __init__(self, width):
        self.width = width

    def getArea(self):
        area = math.ceil(self.width ** 2)
        return area
```

TESTCASE	DIFFICULTY	TYPE	STATUS	SCORE	TIME TAKEN	MEMORY USED
Testcase 0	Easy	Sample case	Success	1	0.0268 sec	7.67 KB
Testcase 1	Easy	Hidden case	Success	24	0.0272 sec	7.47 KB
Testcase 2	Easy	Hidden case	Success	24	0.0286 sec	7.55 KB
Testcase 3	Easy	Sample case	Success	1	0.0273 sec	7.54 KB

No Comments

QUESTION 2

Needs Review

Score 50

Python: Alphabet Filter › Coding

Language Proficiency | Python | Easy

QUESTION DESCRIPTION

Given a string consisting of only lowercase characters, create two methods that remove all the consonants or vowels from the given word. They must retain the original order of the characters in the returned strings.

Example:

s = 'onomatopoeia'

- The *filter_vowels* method removes all vowels from *s* and returns the string '*nmtp*'.
- The *filter_consonants* method removes all consonants from *s* and returns the string '*ooaooeia*'.

Function Description

For a given definition of a class *LetterFilter*, complete its methods *filter_vowels* and *filter_consonants*. The class takes a string in the constructor and stores it to its *s* attribute. The method *filter_vowels* must return a new string with all vowels removed from it. Similarly, the method *filter_consonants* must return a new string with all consonants removed from it.

Constraints

- The string contains only lowercase letters in the range ascii[a-z]
- The string contains at least one vowel and at least one consonant

▼ Input Format For Custom Testing

The first line contains a string, *s*, that denotes the string to be transformed.

▼ Sample Case 0

Sample Input 0

```
STDIN        Function
-----        --------
hackerrank → string s = 'hackerrank'
```

Sample Output 0

```
hckrrnk
aea
```

Explanation 0

- The first result is after removing all vowels, {a, e, i, o, u}, from the string.
- The second result is after removing all consonants.

▼ Sample Case 1

Sample Input 1

```
STDIN          Function
-----          --------
programming →  string s = 'programming'
```

Sample Output 1

```
prgrmmng
oai
```

Explanation 1

- The first result is after removing all vowels, {a, e, i, o, u}, from the string.
- The second result is after removing all consonants.

CANDIDATE ANSWER

Language used: **Python 3**

```
# Enter your code here.
# Complete the classes below.
# Reading the inputs and writing the outputs are already done for you.
#

class LetterFilter:
    vowels = ["a", "e", "i", "o", "u"]

    def __init__(self, s):
        self.s = s
```

```
    def filter_vowels(self):
    # Enter your code here
        new_str = self.s
        for i in new_str:
            if i in LetterFilter.vowels:
                new_str = new_str.replace(i, "")
        # Return a string
        return new_str

    def filter_consonants(self):
    # Enter your code here
        new_str = self.s
        for i in new_str:
            if i not in LetterFilter.vowels:
                new_str= new_str.replace(i, "")
        # Return a string
        return new_str
```

TESTCASE	DIFFICULTY	TYPE	STATUS	SCORE	TIME TAKEN	MEMORY USED
TestCase 0	Easy	Sample case	Success	1	0.0229 sec	7.38 KB
TestCase 1	Easy	Sample case	Success	1	0.0266 sec	7.66 KB
TestCase 2	Easy	Sample case	Success	1	0.0237 sec	7.69 KB
TestCase 3	Easy	Hidden case	Success	3	0.0286 sec	7.37 KB
TestCase 4	Easy	Hidden case	Success	3	0.0269 sec	7.59 KB
TestCase 5	Easy	Hidden case	Success	3	0.0232 sec	7.33 KB
TestCase 6	Medium	Sample case	Success	5	0.0263 sec	7.7 KB
TestCase 7	Medium	Hidden case	Success	5	0.0251 sec	7.66 KB
TestCase 8	Easy	Hidden case	Success	7	0.0504 sec	7.7 KB
TestCase 9	Easy	Hidden case	Success	7	0.0588 sec	7.33 KB
TestCase 10	Easy	Sample case	Success	7	2.0748 sec	7.61 KB
TestCase 11	Easy	Hidden case	Success	7	1.9868 sec	7.84 KB

No Comments

QUESTION 3

Correct Answer

Score 10

Python › Multiple Choice python

QUESTION DESCRIPTION

What is another name for a derived class?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- Parent Class
- Super Class
- Mini Class
- ✓ Subclass

No Comments

QUESTION 4

Correct Answer

Score 10

Python › Multiple Choice python

QUESTION DESCRIPTION

True or False: The init method should return a value.

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- TRUE
- ✓ FALSE

No Comments

QUESTION 5

Wrong Answer

Score 10

Python › Multiple Choice python

QUESTION DESCRIPTION

Which of the following is not a property of an object?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- Can be stored in a container
- ✓ Can be passed to a function as a parameter
- Cannot be returned by a function
- Is bound to a variable

No Comments

QUESTION 6

Correct Answer

Score 10

Python › Multiple Choice python

QUESTION DESCRIPTION

If we want to use an object, what do we create?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- [x] An instance
- [ ] A class
- [ ] A model
- [ ] A child class

No Comments

QUESTION 7

Correct Answer

Score 10

Python › Multiple Choice python

QUESTION DESCRIPTION

How do we print the description of a car object (from the following definition)?

```
class Vehicle:
    name = ""
    kind = "car"
    color = ""
    value = 100.00

    def desc(self):
        desc_str = "%s is a %s %s worth $%.2f." % (self.name, self.color,
self.kind, self.value)
        return desc_str
```

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- [x] my_car = Vehicle() print(my_car.desc())
- [ ] my_car = Vehicle() print(my_car)
- [ ] my_car = Vehicle() print(my_car())
- [ ] my_car = Vehicle() print(my_car.desc)

No Comments