course_4_assessment_3

Due: 2019-02-04 15:15:00

Description: Assessment for the Test Cases lesson

Score: 4.0 of 4 = 100.0%

Questions

Score: 0.0 / 0

Comment: autograded

Save & Run | Show Code | Show CodeLens

ActiveCode (ac_19_4_3)

Score: 0.0 / 0

Comment: autograded

The function *mySum* is supposed to return the sum of a list of numbers (and 0 if that list is empty), but it has one or more errors in it. Use this space to write test cases to determine what errors there are. You will be using this information to answer the next set of multiple choice questions.

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```
1  import test
2
3
4  def mySum(list):
5      if len(list) > 0:
6          res = 0
7          for i in list:
8              res += i
9          return res
10     else:
11         return 0
```

ActiveCode (ac_19_4_1)

test-4-1: Which of the following cases fail for the mySum function?

Score: 1.0 / 1

Comment: autograded

- [x] A. an empty list
- [ ] B. a list with one item
- [x] C. a list with more than one item

Check me | Compare me

✔ Correct.

A. Correct, 0 is not returned if the function is given an empty list.

C. Correct, a list with more than one item does not provide the correct response.

Multiple Choice (mc_19_4_1)

test-4-2: Are there any other cases, that we can determine based on the current structure of the function, that also fail for the mySum function?

Score: 1.0 / 1

Comment: autograded

- ○ A. Yes
- ◉ B. No

Check me | Compare me

✔ Correct. At the moment we can't tell if other cases would fail (such as combining integers and floats), but it is possible that the function could have more issues once the current issues are fixed.

Multiple Choice (mc_19_4_2)

Score: 0.0 / 0

Comment: autograded

The class Student is supposed to accept two arguments in its constructor:

1. A name string
2. An optional integer representing the number of years the student has been at Michigan (default:1)

Every student has three instance variables:

1. *self.name* (set to the name provided)
2. *self.years_UM* (set to the number of years the student has been at Michigan)
3. *self.knowledge* (initialized to 0)

There are three methods:

- *.study()* should increase self.knowledge by 1 and return None
- *.getKnowledge()* should return the value of self.knowledge

- *.year_at_umich()* should return the value of self.years_UM

There are one or more errors in the class. Use this space to write test cases to determine what errors there are. You will be using this information to answer the next set of multiple choice questions.

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```
1  class Student:
2      def __init__(self, name, year_UM, knowledge):
3          self.name = name
4          self.year_UM = year_UM
5          self.knowledge = knowledge
6
7      def study(self):
8          self.knowledge += 1
9          return None
10
11     def getKnowledge(self):
12         return self.knowledge
13
14     def year_at_umich(self):
15         return self.year_UM
```

ActiveCode (ac_19_4_2)

test-4-3: Which of the following cases fail for the Student class?

Score: 1.0 / 1

Comment: autograded

- [ ] A. the method study does not return None
- [ ] B. the optional integer in the constructor is not optional
- [x] C. the attributes/instance variables are not correctly assigned in the constructor
- [x] D. the method study does not increase self.knowledge
- [ ] E. the method year_at_umich does not return the value of self.years_UM

Check me Compare me

✔ Correct.

C. Correct! The constructor does not actually use the optional integer that is provided. Instead it sticks with using the default value.

D. Correct! Study does not increase the self.knowledge.

Multiple Choice (mc_19_4_3)

Score: 1.0 / 1

test-4-4: Are there any other cases, that we can determine based on the current structure of the class, that also fail for the Student class?

Comment: autograded

- (•) A. Yes
- ( ) B. No

Check me | Compare me

✔ Correct! There is an issue with the getKnowledge method because it returns None when self.knowledge is 0, even though it returns the correct value when self.knowledge is non-zero.

Multiple Choice (mc_19_4_4)

Score Me