

course_4_assessment_3

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

Description: Assessment for the Test Cases lesson

Score: 0 of 4 = 0.0%

Questions

Not yet
graded

Save & Run

Show Code

Show CodeLens

ActiveCode (ac_19_4_3)

Not yet
graded

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.

Save & Run

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Show CodeLens

```
1 import test
2 test.testEqual(mySum([1,2]),3)
3 test.testEqual(mySum([0]),1)
4 test.testEqual(mySum([]),None)
5 test.testEqual(mySum([]),0)
6 test.testEqual(mySum([2]),2)
7 test.testEqual(mySum([1,2,0,8]),11)
8 test.testEqual(mySum([0,98]),98)
```

ActiveCode (ac_19_4_1)

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

Not yet graded

- ☒ A. an empty list
- ☐ B. a list with one item
- ☒ 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?

Not yet graded

- ☐ 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)

Not yet graded

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.

Save & Run

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Show in CodeLens

```
4 test.testEqual(s.name, 'Mayank')
5
6 test.testEqual(s.years_UM, 5)
7 test.testEqual(s.knowledge, 5)
8
9 test.testEqual(s.study(), None)
10 test.testEqual(s.study(), None)
11
12 test.testEqual(s.knowledge, 1)
13 test.testEqual(s.knowledge, None)
14 test.testEqual(s.getKnowledge(), 1)
15
16 test.testEqual(s.year_at_umich(), s.years_UM)
17
18 test.testEqual(s.year_at_umich(), 5)
```

```
Pass
Test Failed: expected 5 but got 1
Test Failed: expected 5 but got 0
Pass
Pass
Test Failed: expected 1 but got 0
Test Failed: expected None but got 0
Test Failed: expected 1 but got None
Pass
Test Failed: expected 5 but got 1
```

ActiveCode (ac_19_4_2)

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

Not yet
graded

- ☐ A. the method `study` does not return `None`
- ☐ B. the optional integer in the constructor is not optional
- ☒ C. the attributes/instance variables are not correctly assigned in the constructor
- ☒ 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)

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?

Not yet graded

☒ 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