Author: Martin Solum
Date: 22OCT2024Tue
Course: CIS129
Instructor: Brittany Griwzow
Assignment: Module 06 Asgmt
Exercises: Complete exercise 4.3, 4.4, 4.5 in Deitel & Deitel.

Table of Contents

QUESTION... Complete exercise 4.3 in Deitel & Deitel.

4.3 (What’s Wrong with This Code?) What is wrong with the following cube function’s definition?

```
def cube(x):
    """Calculate the cube of x."""
    x ** 3
print('The cube of 2 is', cube(2))
```

ANSWER...

There are a few things wrong with this code:
The function doesn't have a return statement.
The print 2 should be parameterized.
There should be a blank line after the function block for clarity.
A better snippet might look like this...

```
def cube(x):
    """Calculate the cube of x."""
    return x**3

x = 2
print( 'The cube of ' + str(x) + ' is ' + str( cube(x) ) + '.' )
# or...
print( f'The cube of {x} is { cube(x) }.' )
```

QUESTION... Complete exercise 4.4 in Deitel & Deitel.

4.4 (WHAT’S DOES THIS CODE DO?) What does the following mystery function do? Assume you pass the list [1, 2, 3, 4, 5] as an argument.

```
def mystery(x):
    y = 0
    for value in x:
        y += value ** 2
    return y
```

ANSWER...

This code is a function that takes a list of integers as an argument. It squares each item in the list and then returns the sum of the squares.

QUESTION... Complete exercise 4.5 in Deitel & Deitel.

4.5 (Fill in the Missing Code?) Replace the ***s in the seconds_since_midnight function so that it returns the number of seconds since midnight. The function should receive three integers representing the current time of day. Assume that the hour is a value from 0 (midnight) through 23 (11 PM) and that the minute and second are values from 0 to 59. Test your function with actual times. For example, if you call the function for 1:30:45 PM by passing 13, 30 and 45, the function should return 48645.

```
def seconds_since_midnight(***):
    hour_in_seconds = ***
    minute_in_seconds = ***
    return ***
```

ANSWER...

```
def seconds_since_midnight( hours, minutes, seconds ):
    hour_in_seconds = hours * 60 * 60
    minute_in_seconds = minutes * 60
    return hour_in_seconds + minute_in_seconds + seconds

# example data: 1:30:45 aka hours = 13, minutes = 30, seconds = 45 ~>
48645
hours = 13
minutes = 30
seconds = 45
print( "Seconds since midnight: ", seconds_since_midnight( hours,
minutes, seconds ))
```