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CSD325 Advanced Python

Module 7.2 Assignment – Test Cases

1. Write a function that accepts two parameters: a city name and a country name. The function should return a single string of the form City, Country, such as **Santiago, Chile**. Store the function in a file named city_functions.py. In the same file, call the function at least three times using a City, Country values. Excecute city_functions.py and take a screenshot of the result. Paste that screenshot into your Word document.

```
PS C:\Cloud\Github\CSD_325\module-7> py .\city_functions.py
Santiago, Chile
Tokyo, Japan
New York City, USA
```

2. Create a file called test_cities.py that tests the function you just wrote (remember that you need to import unittest and the function you want to test). Write a method called test_city_country() to verify that calling your function with values such as santiago and chile results in the correct string. Run test_cities.py, and make sure test_city_country() passes. When it passes, take a screenshot of the result and paste in into your Word document.

```
PS C:\Cloud\Github\CSD_325\module-7> py .\test_cities.py
Santiago, Chile
Tokyo, Japan
New York City, USA
.
----------------------------------------------------------------------
Ran 1 test in 0.000s

OK
```

3. Modify your city_country function in city_functions.py so it requires a third parameter, population. It should now return a single string of the form City, Country - population xxx, such as **Santiago, Chile - population 5000000.**

```
PS C:\Cloud\Github\CSD_325\module-7> py .\city_functions.py
Santiago, Chile - population 5000000
Tokyo, Japan - population 13960000
New York City, USA - population 8300000
```

4. Run test_cities.py again. It should fail. Take a screenshot of the result and paste into your Word document.

```
PS C:\Cloud\Github\CSD_325\module-7> py .\test_cities.py
Santiago, Chile - population 5000000
Tokyo, Japan - population 13960000
New York City, USA - population 8300000
E
======================================================================
ERROR: test_city_country (__main__.CityCountryTestCase.test_city_country)
Do city and country names like 'Santiago' and 'Chile' work?
----------------------------------------------------------------------
Traceback (most recent call last):
  File "C:\Cloud\Github\CSD_325\module-7\test_cities.py", line 9, in test_city_country
    formatted = format_city_country("Santiago", "Chile")
TypeError: format_city_country() missing 1 required positional argument: 'population'


----------------------------------------------------------------------
Ran 1 test in 0.001s

FAILED (errors=1)
```

5. Now modify your city_country function in city_functions.py so that the population parameter is optional. Run test_cities.py again. It should pass. Take a screenshot of the result and paste into your Word document.

```
PS C:\Cloud\Github\CSD_325\module-7> py .\test_cities.py
Santiago, Chile - population 5000000
Tokyo, Japan
New York City, USA - population 8300000
.
----------------------------------------------------------------------
Ran 1 test in 0.000s

OK
```

6. Modify your city_country function in city_functions.py so it requires a fourth parameter, language. It should now return a single string of the form City, Country - population xxx, Language, such as **Santiago, Chile - population 5000000, Spanish**. Run test_cities.py again. It should fail. Take a screenshot of the result and paste into your Word document.

```
PS C:\Cloud\Github\CSD_325\module-7> py .\test_cities.py
Santiago, Chile - population 5000000, Spanish
Tokyo, Japan, Japanese
New York City, USA - population 8300000, English
E
======================================================================
ERROR: test_city_country (__main__.CityCountryTestCase.test_city_country)
Do city and country names like 'Santiago' and 'Chile' work?
----------------------------------------------------------------------
Traceback (most recent call last):
  File "C:\Cloud\Github\CSD_325\module-7\test_cities.py", line 9, in test_city_country
    formatted = format_city_country("Santiago", "Chile")
TypeError: format_city_country() missing 1 required positional argument: 'language'


----------------------------------------------------------------------
Ran 1 test in 0.001s

FAILED (errors=1)
```

7. Now modify your city_country function in city_functions.py so that the language argument is optional. Run test_cities.py again. It should pass. Take a screenshot of the result and paste into your Word document.

```
PS C:\Cloud\Github\CSD_325\module-7> py .\test_cities.py
Santiago, Chile - population 5000000, Spanish
Tokyo, Japan, Japanese
New York City, USA
.
----------------------------------------------------------------------
Ran 1 test in 0.000s

OK
```

8. Run city_functions.py. Call the function at least three times using a City, Country for one, City, Country, Population for the next and City, Country, Population, Language for the last. Execute city_functions.py and take a screenshot of the result. Paste that screenshot into your Word document.

```
PS C:\Cloud\Github\CSD_325\module-7> py .\city_functions.py
Call 1 (City, Country):
Tokyo, Japan

Call 2 (City, Country, Population):
New York City, USA - population 8300000

Call 3 (City, Country, Population, Language):
Santiago, Chile - population 5000000, Spanish
```