

```
module-7 > city_functions.py > ...
Tabnine | Edit | Test | Explain | Document | Ask
1 def city_country(city, country):
2     return f"{city.title()}, {country.title()}"
3
4 if __name__ == "__main__":
5     print(city_country("santiago", "chile"))
6     print(city_country("tokyo", "japan"))
7     print(city_country("paris", "france"))
8

PROBLEMS 5 OUTPUT DEBUG CONSOLE TERMINAL PORTS GITLEN
~/Bellevue/AdvPython/csd/csd-325/module-6/MOD6_FOREST_FIRE_REV.py
/Users/antondecesare/.pyenv/versions/3.10.2/bin/python /Users/antondecesare/AdvPython/csd/csd-325/module-6/MOD6_FOREST_FIRE_REV.py
● → csd-325 /Users/antondecesare/.pyenv/versions/3.10.2/bin/python /Users/antondecesare/AdvPython/csd/csd-325/module-6/MOD6_FOREST_FIRE_REV.py
Santiago, Chile
Tokyo, Japan
Paris, France
○ → csd-325 git:(main) x
```

```
module-7 > test_cities.py > ...
1 from city_functions import city_country
2
Tabnine | Edit | Test | Explain | Document | Ask
3 def test_city_country():
4     result = city_country('new york', 'usa')
5     assert result == 'New York, Usa'
6
7 if __name__ == "__main__":
8     test_city_country()
9     print("Test passed!")
10

PROBLEMS 5 OUTPUT DEBUG CONSOLE TERMINAL PORTS
● → module-7 git:(main) x /Users/antondecesare/.pyenv/versions/3.10.2/bin/python /Users/antondecesare/AdvPython/csd/csd-325/module-7/test_cities.py
Test passed!
○ → module-7 git:(main) x
```

```
city_functions.py | test_cities.py
module-7 > city_functions.py > ...
1 def city_country(city, country, population):
2     return f"{city.title()}, {country.title()} {population}"
3
4 if __name__ == "__main__":
5     print(city_country("santiago", "chile", 1000000))
6     print(city_country("tokyo", "japan"))
7     print(city_country("paris", "france"))
8
Output
module-7 > test_cities.py > ...
1 from city_functions import city_country
2
3 def test_city_country():
4     result = city_country('new york', 'usa')
5     assert result == 'New York, Usa'
6
7 if __name__ == "__main__":
8     test_city_country()
9     print("Test passed!")
10
PROBLEMS | OUTPUT | DEBUG CONSOLE | TERMINAL | PORTS | GITLENS | COMMENTS
Python - module-7
module-7 git: (main) x /Users/antondecesare/.pyenv/versions/3.10.2/bin/python /Users/antondecesare/Bellevue/AdvPython/csd/csd-325/module-7/test_cities.py
Traceback (most recent call last):
  File "/Users/antondecesare/Bellevue/AdvPython/csd/csd-325/module-7/test_cities.py", line 8, in <module>
    test_city_country()
  File "/Users/antondecesare/Bellevue/AdvPython/csd/csd-325/module-7/test_cities.py", line 4, in test_city_country
    result = city_country('new york', 'usa')
TypeError: city_country() missing 1 required positional argument: 'population'
```

```
city_functions.py U x  city_functions.cpython- ...  test_cities.py U x
module-7 > city_functions.py > ...
Tabnine | Edit | Test | Explain | Document | Ask
1 def city_country(city, country, population=None):
2     if population:
3         return f"{city.title()}, {country} (population {population})"
4     else:
5         return f"{city.title()}, {country}"
6
7 if __name__ == "__main__":
8     print(city_country("santiago", "chile"))
9     print(city_country("tokyo", "japan"))
10    print(city_country("paris", "france"))
11
module-7 > test_cities.py > ...
1 from city_functions import city_country
2
Tabnine | Edit | Test | Explain | Document | Ask
3 def test_city_country():
4     result = city_country('new york', 'usa')
5     assert result == 'New York, Usa'
6
7 if __name__ == "__main__":
8     test_city_country()
9     print("Test passed!")
10
```

```

city_functions.py
1 def city_country(city, country, population):
2     population:
3     return f"{city.title()}, {country.title()} - population {population}"
4
5 def city_country(city, country):
6     return f"{city.title()}, {country.title()}"
7
8 == "__main__":
9 ity_country("santiago", "chile")
10 ity_country("tokyo", "japan")
11 ity_country("paris", "france")

test_cities.py
1 from city_functions import city_country
2
3 def test_city_country():
4     # Test without population
5     result_no_population = city_country('new york', 'usa')
6     assert result_no_population == 'New York, Usa', f"Expected 'New York, Usa'"
7
8     # Test with population
9     result_with_population = city_country('tokyo', 'japan', 13929286)
10    assert result_with_population == 'Tokyo, Japan - population 13929286'
11
12 if __name__ == "__main__":
13     test_city_country()
14     print("Test passed!")

Terminal
Python - module-7
module-7 git:(main) x /Users/antondecasare/.pyenv/versions/3.10.2/bin/python /Users/antondecasare/Bellevue/AdvPython/csd/csd-325/module-7/test_cities.py
Traceback (most recent call last):
  File "/Users/antondecasare/Bellevue/AdvPython/csd/csd-325/module-7/test_cities.py", line 13, in <module>
    test_city_country()
  File "/Users/antondecasare/Bellevue/AdvPython/csd/csd-325/module-7/test_cities.py", line 5, in test_city_country
    result_no_population = city_country('new york', 'usa')
TypeError: city_country() missing 1 required positional argument: 'population'

```

```

city_functions.py
1 def city_country(city, country, population):
2     if population and language:
3         return f"{city.title()}, {country.title()} - population {population}"
4     elif population and not language:
5         return f"{city.title()}, {country.title()}"
6     elif language and not population:
7         return f"{city.title()}, {country.title()}"
8     else:
9         return f"{city.title()}, {country.title()}"
10
11 if __name__ == "__main__":
12     print(city_country("santiago", "chile", 1000000))
13     print(city_country("tokyo", "japan", 13929286))
14     print(city_country("paris", "france", 2148000))

test_cities.py
1 from city_functions import city_country
2
3 def test_city_country():
4     result = city_country('new york', 'usa')
5     assert result == 'New York, Usa'
6
7 if __name__ == "__main__":
8     test_city_country()
9     print("Test passed!")
10

Terminal
Python - module-7
module-7 git:(main) x /Users/antondecasare/.pyenv/versions/3.10.2/bin/python /Users/antondecasare/Bellevue/AdvPython/csd/csd-325/module-7/test_cities.py
Test passed!
module-7 git:(main) x /Users/antondecasare/.pyenv/versions/3.10.2/bin/python /Users/antondecasare/Bellevue/AdvPython/csd/csd-325/module-7/test_cities.py
Test passed!
module-7 git:(main) x /Users/antondecasare/.pyenv/versions/3.10.2/bin/python /Users/antondecasare/Bellevue/AdvPython/csd/csd-325/module-7/test_cities.py
Test passed!
module-7 git:(main) x

```

The screenshot shows a code editor with two files: `city_functions.py` and `test_cities.py`. The `city_functions.py` file contains a function `city_country` that takes `city`, `country`, `language`, and `population` as arguments. It has conditional logic to return a string based on which arguments are provided. The `test_cities.py` file contains a test function `test_city_country` that calls `city_country('new york', 'usa')` and asserts the result is 'New York, Usa'. The terminal shows a `TypeError: city_country() missing 1 required positional argument: 'language'` when running the test.

```

city_functions.py
1 def city_country(city, country, language, population=None):
2     if population and language:
3         return f"{city.title()}, {country.title()} - population {population}"
4     elif population and not language:
5         return f"{city.title()}, {country.title()} - population {population}"
6     elif language and not population:
7         return f"{city.title()}, {country.title()} - language {language}"
8     else:
9         return f"{city.title()}, {country.title()}"
10
11 if __name__ == "__main__":
12     print(city_country("santiago", "chile"))
13     print(city_country("tokyo", "japan"))
14     print(city_country("paris", "france"))

```

```

test_cities.py
1 from city_functions import city_country
2
3 def test_city_country():
4     result = city_country('new york', 'usa')
5     assert result == 'New York, Usa'
6
7 if __name__ == "__main__":
8     test_city_country()
9     print("Test passed!")
10

```

```

module-7 git:(main) x /Users/antondecesare/.pyenv/versions/3.10.2/bin/python /Users/antondecesare/Bellevue/AdvPython/csd/csd-325/module-7/test_cities.py
Traceback (most recent call last):
  File "/Users/antondecesare/Bellevue/AdvPython/csd/csd-325/module-7/test_cities.py", line 8, in <module>
    test_city_country()
  File "/Users/antondecesare/Bellevue/AdvPython/csd/csd-325/module-7/test_cities.py", line 4, in test_city_country
    result = city_country('new york', 'usa')
TypeError: city_country() missing 1 required positional argument: 'language'

```

The screenshot shows the same code editor as before, but with the `city_functions.py` file updated to include the `population` argument in the function signature and the test calls. The `test_cities.py` file remains the same. The terminal now shows the test passing successfully.

```

city_functions.py
1 def city_country(city, country, language=None, population=None):
2     if population and language:
3         return f"{city.title()}, {country.title()} - population {population} {language}"
4     elif population and not language:
5         return f"{city.title()}, {country.title()} - population {population}"
6     elif language and not population:
7         return f"{city.title()}, {country.title()} - language {language}"
8     else:
9         return f"{city.title()}, {country.title()}"
10
11 if __name__ == "__main__":
12     print(city_country("santiago", "chile"))
13     print(city_country("tokyo", "japan", population= 934890))
14     print(city_country("paris", "france", population= 412142, language="fr"))

```

```

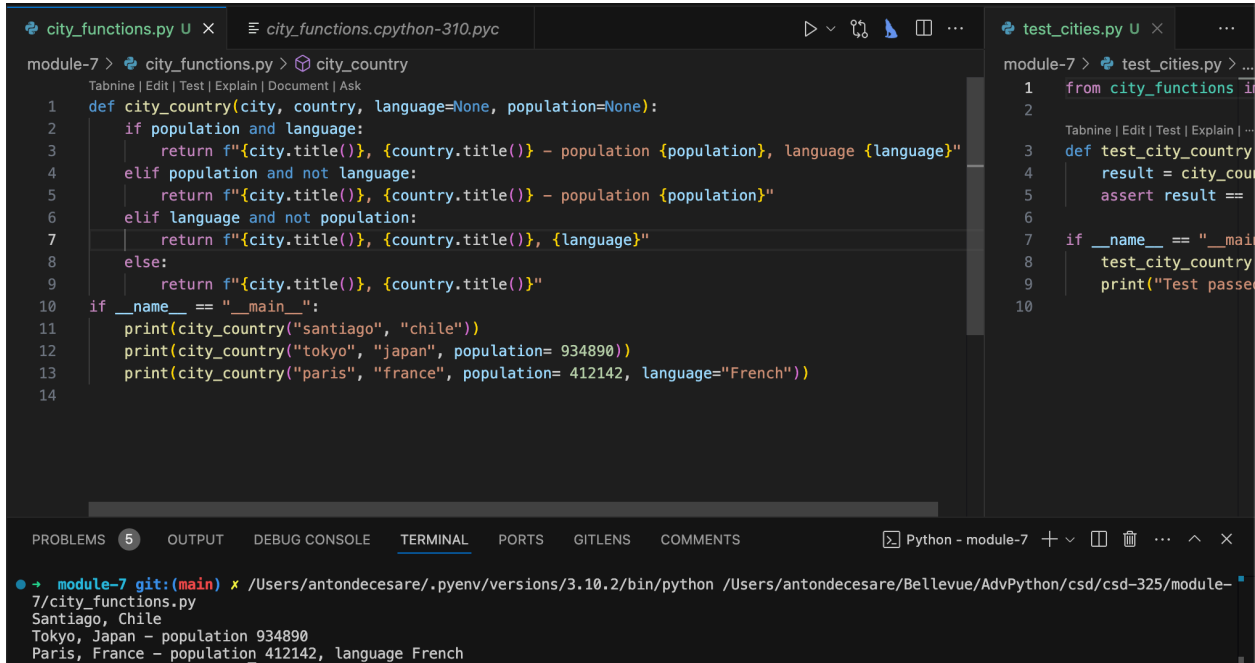
test_cities.py
1 from city_functions import city_country
2
3 def test_city_country():
4     result = city_country('new york', 'usa')
5     assert result == 'New York, Usa'
6
7 if __name__ == "__main__":
8     test_city_country()
9     print("Test passed!")
10

```

```

module-7 git:(main) x /Users/antondecesare/.pyenv/versions/3.10.2/bin/python /Users/antondecesare/Bellevue/AdvPython/csd/csd-325/module-7/test_cities.py
Test passed!

```



```
city_functions.py
1 def city_country(city, country, language=None, population=None):
2     if population and language:
3         return f"{city.title()}, {country.title()} - population {population}, language {language}"
4     elif population and not language:
5         return f"{city.title()}, {country.title()} - population {population}"
6     elif language and not population:
7         return f"{city.title()}, {country.title()}, {language}"
8     else:
9         return f"{city.title()}, {country.title()}"
10
11 if __name__ == "__main__":
12     print(city_country("santiago", "chile"))
13     print(city_country("tokyo", "japan", population= 934890))
14     print(city_country("paris", "france", population= 412142, language="French"))

test_cities.py
1 from city_functions import city_country
2
3 def test_city_country(city, country, language=None, population=None):
4     result = city_country(city, country, language, population)
5     assert result == f"{city.title()}, {country.title()} - population {population}, language {language}"
6
7 if __name__ == "__main__":
8     test_city_country("santiago", "chile")
9     test_city_country("tokyo", "japan", population=934890)
10     test_city_country("paris", "france", population=412142, language="French")

Terminal
module-7 git:(main) x /Users/antondecasare/.pyenv/versions/3.10.2/bin/python /Users/antondecasare/Bellevue/AdvPython/csd/csd-325/module-7/city_functions.py
Santiago, Chile
Tokyo, Japan - population 934890
Paris, France - population 412142, language French
```

