

# Coverage Testing Report

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Please provide your GitHub repository link.

GitHub Repository URL: [https://github.com/DaicosJ/Milestone2\\_Project.git](https://github.com/DaicosJ/Milestone2_Project.git)

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The testing report should focus solely on **testing all the self-defined functions related to the five required features**. There is no need to test the GUI components. Therefore, it is essential to decouple your code and separate the logic from the GUI-related code.

You should perform statement coverage testing and branch coverage testing. For each type, provide a description and an analysis explaining how you evaluated the coverage.

## 1. Test Summary

list all tested functions related to the five required features, for example:

### Tested Functions

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`add(x1, x2)`

---

`divide(x1, x2)`

---

...

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## 2. Statement Coverage Test

### 2.1 Description

Explain how you designed the test cases (i.e., `test_all_functions.py`) to reach 100% statement coverage.

### 2.2 Testing Results

You can use the following command to run the statement coverage test and generate the report in the terminal. Afterward, include a screenshot of the report.

You must provide the `test_all_functions.py` file, which contains all test functions, otherwise pytest will not be able to execute the tests.

```
pytest --cov=all_functions --cov-report=term
```

Note: In the command above, the file/module `all_functions` does not include the `.py` extension. `all_functions.py` should contain all the tested functions related to the five required features.

```

PS C:\SoftwareTech\Milestone2_Project\Milestone2_Project\code> pytest --cov=all_functions --cov-report=term
Initializing the code package
===== test session starts =====
platform win32 -- Python 3.8.19, pytest-7.4.4, pluggy-1.0.0
rootdir: C:\SoftwareTech\Milestone2_Project\Milestone2_Project\code
plugins: cov-4.1.0, html-3.1.1, metadata-3.0.0, mock-3.10.0
collected 5 items

test_unit_testing.py ....F [100%]C
:Users\Daicos\anaconda3\envs\s5390161\lib\site-packages\coverage\inorout.py:507: CoverageWarning: Module all_functions was never imported. (module-not-imported)
  self.warn(f"Module {pkg} was never imported.", slug="module-not-imported")
C:\Users\Daicos\anaconda3\envs\s5390161\lib\site-packages\coverage\control.py:858: CoverageWarning: No data was collected. (no-data-collected)
  self.warn("No data was collected.", slug="no-data-collected")
WARNING: Failed to generate report: No data to report.

C:\Users\Daicos\anaconda3\envs\s5390161\lib\site-packages\pytest_cov\plugin.py:298: CovReportWarning: Failed to generate report: No data to report.
  self.cov_controller.finish()

===== FAILURES =====
test_save_results_to_csv

sample_data =
0      Apple      52      0.3      0.2      ...hicken Breast      165      31.0      3.6      0
3      Broccoli      55      4.0      0.6      11

def test_save_results_to_csv(sample_data):
    test_file_path = 'test_filtered_results.csv'
    save_results_to_csv(sample_data, test_file_path)

> assert os.path.exists(test_file_path), f"CSV file was not created at {test_file_path}"
E   AssertionError: CSV file was not created at test_filtered_results.csv
E   assert False
E   + where False = <function exists at 0x0000026D1D740700>('test_filtered_results.csv')
E   +   where <function exists at 0x0000026D1D740700> = <module 'ntpath' from 'C:\\Users\\Daicos\\anaconda3\\envs\\s5390161\\lib\\ntpath.py'>.exists
E   +     where <module 'ntpath' from 'C:\\Users\\Daicos\\anaconda3\\envs\\s5390161\\lib\\ntpath.py'> = os.path

test_unit_testing.py:52: AssertionError

> assert os.path.exists(test_file_path), f"CSV file was not created at {test_file_path}"
E   AssertionError: CSV file was not created at test_filtered_results.csv
E   assert False
E   + where False = <function exists at 0x0000026D1D740700>('test_filtered_results.csv')
E   +   where <function exists at 0x0000026D1D740700> = <module 'ntpath' from 'C:\\Users\\Daicos\\anaconda3\\envs\\s5390161\\lib\\ntpath.py'>.exists
E   +     where <module 'ntpath' from 'C:\\Users\\Daicos\\anaconda3\\envs\\s5390161\\lib\\ntpath.py'> = os.path

test_unit_testing.py:52: AssertionError

----- Captured stdout call -----
Data successfully saved to test_filtered_results.csv

===== warnings summary =====
..\..\..\Users\Daicos\anaconda3\envs\s5390161\lib\site-packages\numexpr\expressions.py:21
..\..\..\Users\Daicos\anaconda3\envs\s5390161\lib\site-packages\numexpr\expressions.py:21
  C:\Users\Daicos\anaconda3\envs\s5390161\lib\site-packages\numexpr\expressions.py:21: DeprecationWarning: distutils Version classes are deprecated. Use packaging.ver
sion instead.
    _np_version_forbids_neg_powint = LooseVersion(numpy.__version__) >= LooseVersion('1.12.0b1')

-- Docs: https://docs.pytest.org/en/stable/how-to/capture-warnings.html

----- coverage: platform win32, python 3.8.19-final-0 -----

===== short test summary info =====
FAILED test_unit_testing.py::test_save_results_to_csv - AssertionError: CSV file was not created at test_filtered_results.csv
1 failed, 4 passed, 2 warnings in 3.23s
PS C:\SoftwareTech\Milestone2_Project\Milestone2_Project\code>

```

### 3. Branch Coverage Test

#### 3.1 Description

Explain how you designed the test cases (i.e., test\_all\_functions.py) to reach 100% branch coverage.

#### 3.2 Testing Results

You can use the following command to run the branch coverage test and generate the report in the terminal. Afterward, include a screenshot of the report.

You must provide the test\_all\_functions.py file, which contains all test functions, otherwise pytest will not be able to execute the tests.

```
pytest --cov=all_functions --cov-branch --cov-report=term
```

Note: In the command above, the file/module `all_functions` does not include the `.py` extension. `all_functions.py` should contain all the tested functions related to the five required features.

```
(soft_tech) PS D:\M2\my_code> pytest --cov=all_functions --cov-branch --cov-report=term
===== test session starts =====
platform win32 -- Python 3.8.19, pytest-7.4.4, pluggy-1.0.0
rootdir: D:\M2\my_code
plugins: cov-4.1.0, html-3.1.1, metadata-3.0.0
collected 6 items

test_all_functions.py ..... [100%]

----- coverage: platform win32, python 3.8.19-final-0 -----
Name           Stmts   Miss Branch BrPart  Cover
-----
all_functions.py    16     0      8      0   100%
-----
TOTAL              16     0      8      0   100%
```