

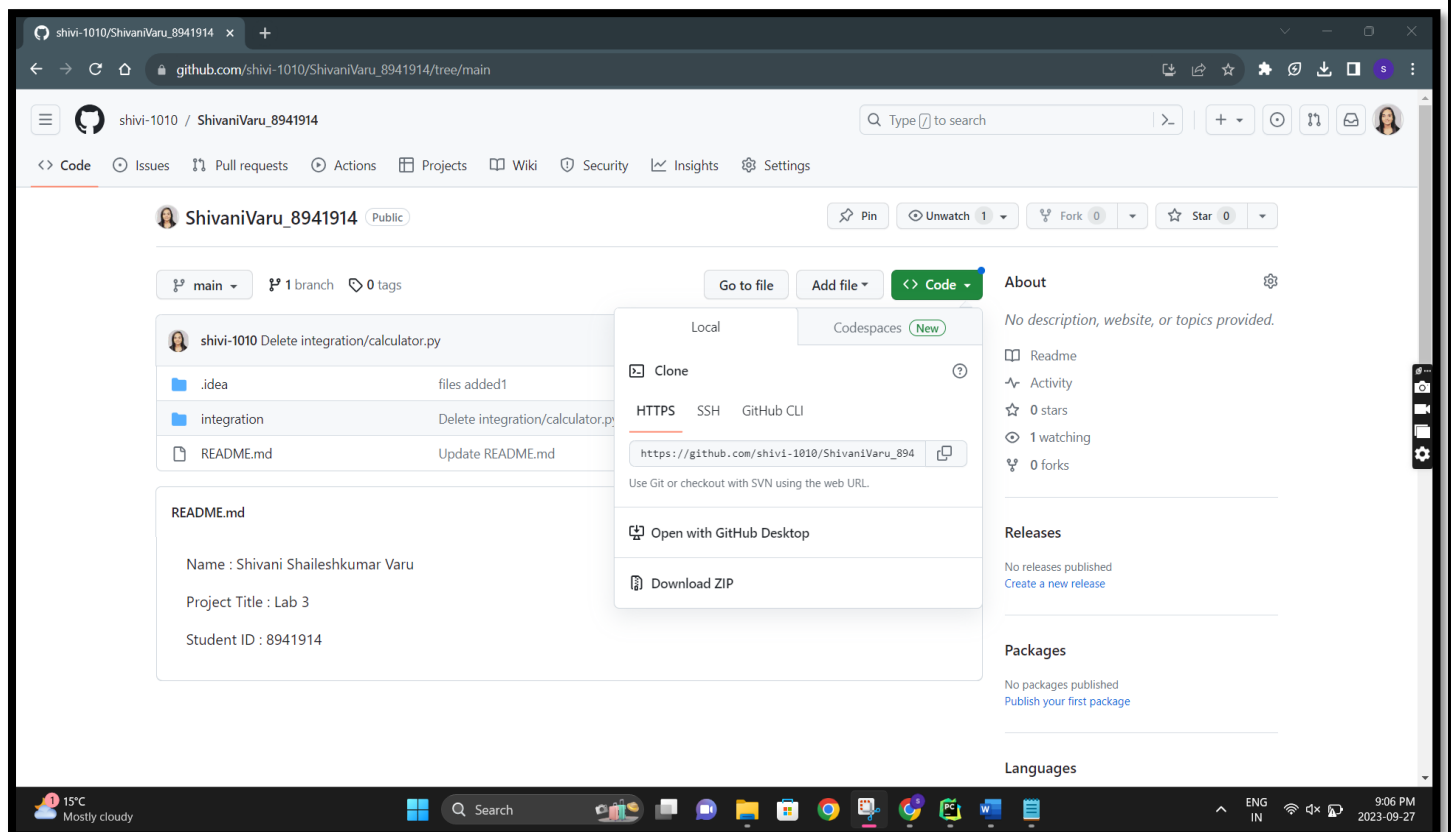
## Lab - 4

**Name: Shivani Shaileshkumar Varu**

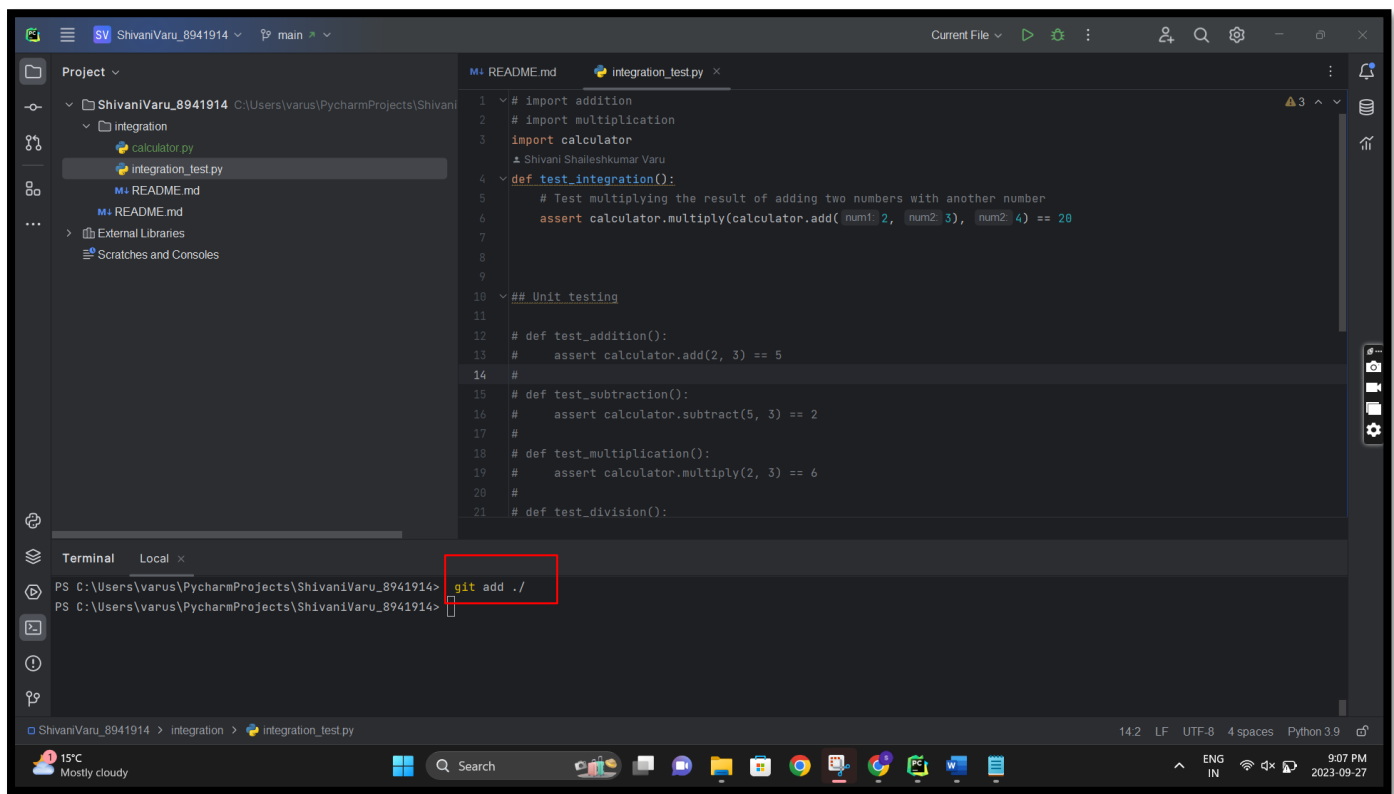
**Student ID: 8941914**

**Section: 4**

**A: git clone : [https://github.com/shivi-1010/ShivaniVaru\\_8941914.git](https://github.com/shivi-1010/ShivaniVaru_8941914.git)**



## B: git add./

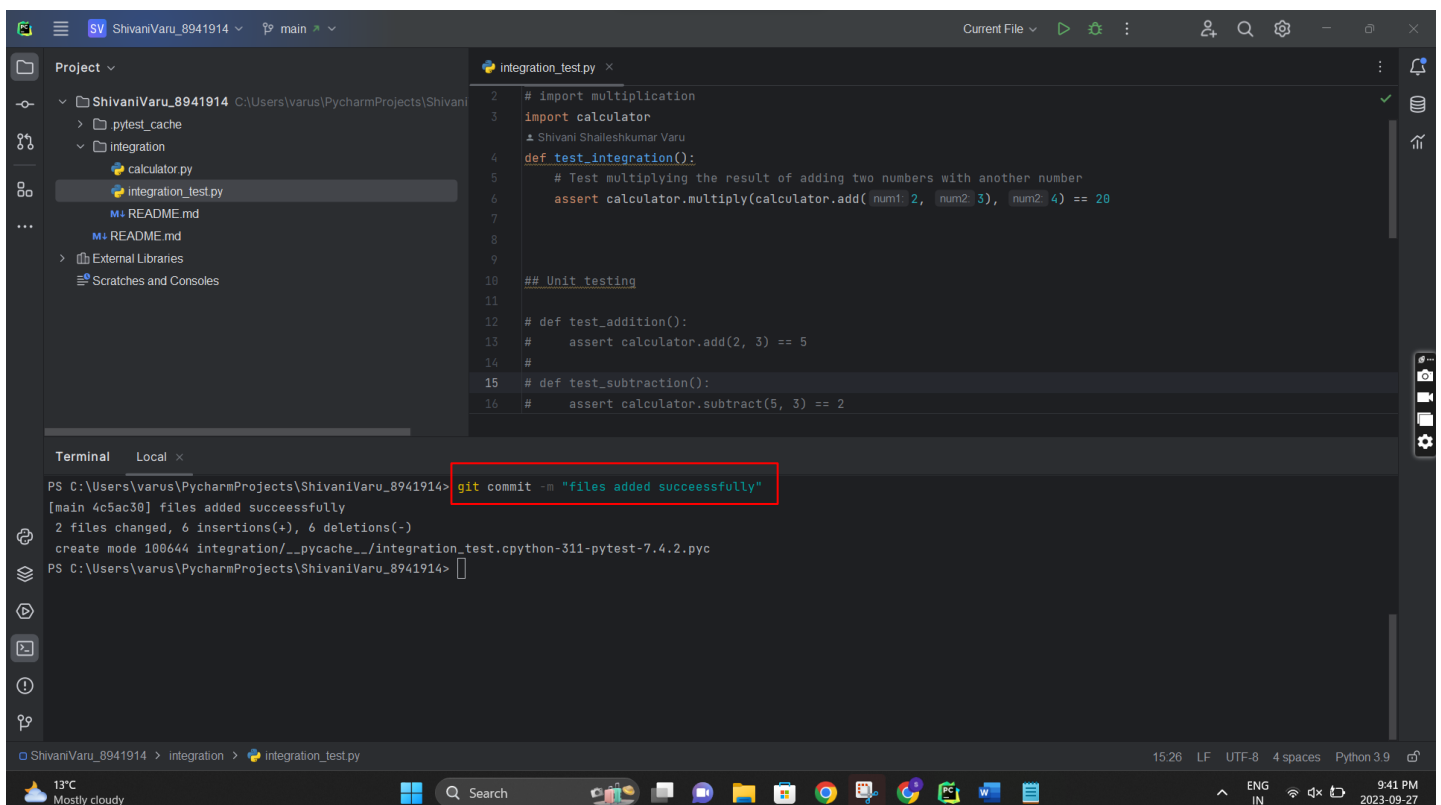


The screenshot shows the PyCharm IDE interface. The left sidebar displays the project structure for 'ShivaniVaru\_8941914', including a folder named 'integration' containing 'calculator.py' and 'integration\_test.py'. The main editor window shows the code in 'integration\_test.py', which includes imports for 'addition', 'multiplication', and 'calculator', followed by a 'test\_integration()' function and a 'Unit testing' section with several test functions. The bottom terminal window shows the command 'git add .' being executed, which is highlighted with a red box. The status bar at the bottom indicates the file encoding as UTF-8 and the Python version as 3.9.

```
1 # import addition
2 # import multiplication
3 import calculator
4
5 def test_integration():
6     # Test multiplying the result of adding two numbers with another number
7     assert calculator.multiply(calculator.add( num1: 2, num2: 3), num2: 4) == 20
8
9
10 ## Unit testing
11
12 # def test_addition():
13 #     assert calculator.add(2, 3) == 5
14 #
15 # def test_subtraction():
16 #     assert calculator.subtract(5, 3) == 2
17 #
18 # def test_multiplication():
19 #     assert calculator.multiply(2, 3) == 6
20 #
21 # def test_division():
```

```
PS C:\Users\varus\PycharmProjects\ShivaniVaru_8941914> git add .
PS C:\Users\varus\PycharmProjects\ShivaniVaru_8941914>
```

## C : git commit

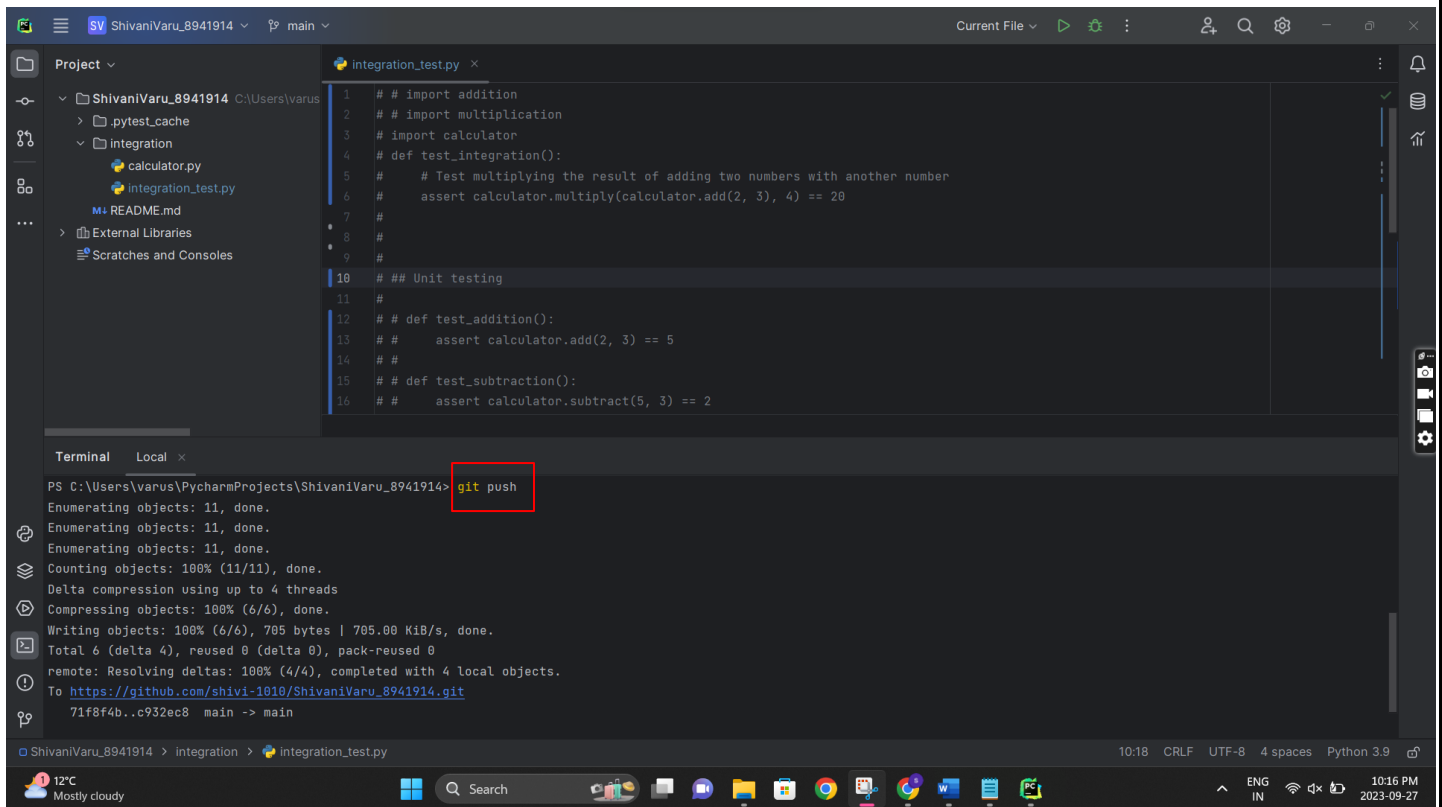


The screenshot shows the PyCharm IDE interface. The left sidebar displays the project structure for 'ShivaniVaru\_8941914', including a folder named 'integration' containing 'calculator.py' and 'integration\_test.py'. The main editor window shows the code in 'integration\_test.py', which includes imports for 'multiplication' and 'calculator', followed by a 'test\_integration()' function and a 'Unit testing' section with several test functions. The bottom terminal window shows the command 'git commit -m "files added successfully"' being executed, which is highlighted with a red box. The status bar at the bottom indicates the file encoding as UTF-8 and the Python version as 3.9.

```
2 # import multiplication
3 import calculator
4
5 def test_integration():
6     # Test multiplying the result of adding two numbers with another number
7     assert calculator.multiply(calculator.add( num1: 2, num2: 3), num2: 4) == 20
8
9
10 ## Unit testing
11
12 # def test_addition():
13 #     assert calculator.add(2, 3) == 5
14 #
15 # def test_subtraction():
16 #     assert calculator.subtract(5, 3) == 2
```

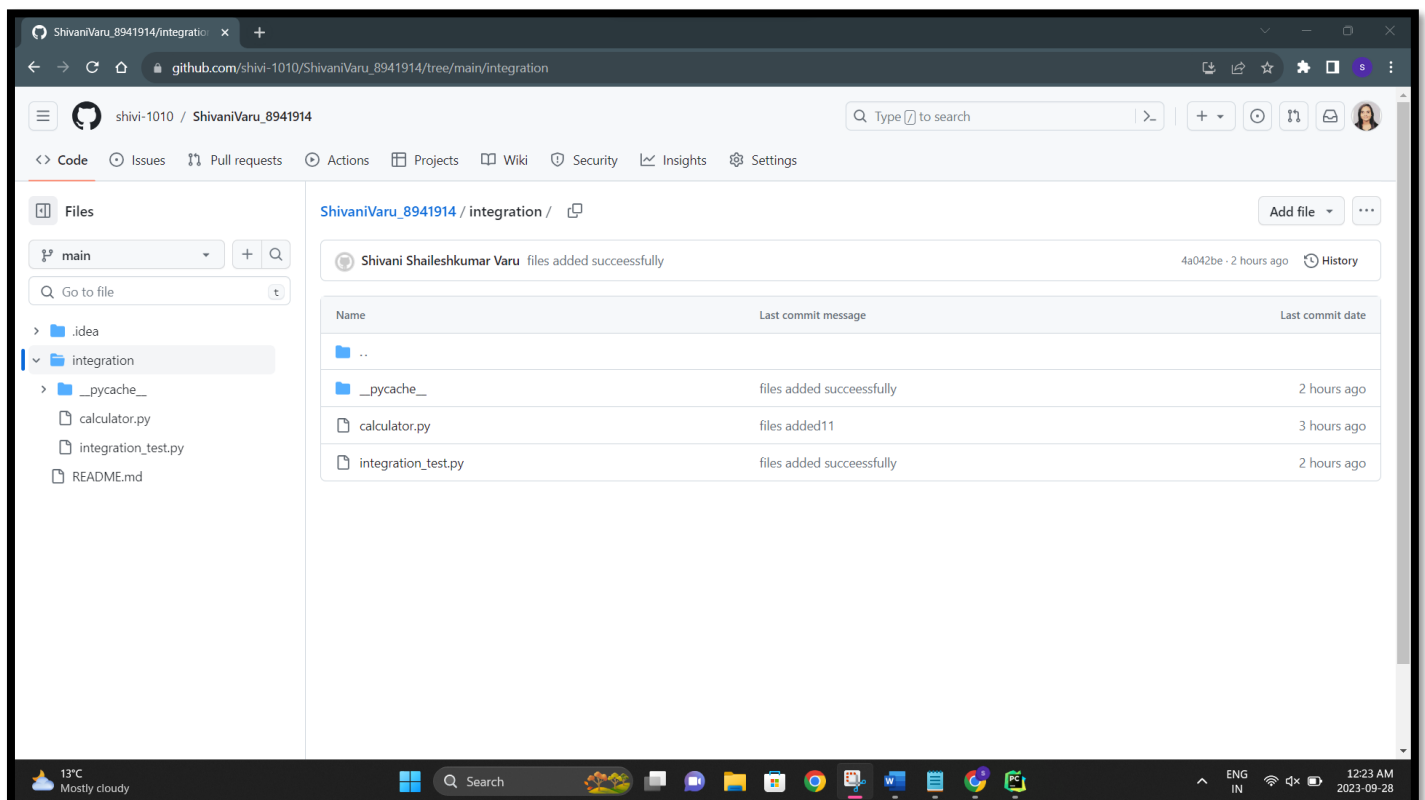
```
PS C:\Users\varus\PycharmProjects\ShivaniVaru_8941914> git commit -m "files added successfully"
[main 4c5ac30] files added successfully
2 files changed, 6 insertions(+), 6 deletions(-)
create mode 100644 integration/_.pycache_/integration_test.cpython-311-pytest-7.4.2.pyc
PS C:\Users\varus\PycharmProjects\ShivaniVaru_8941914>
```

## D : git push



The screenshot shows the PyCharm IDE interface. The left sidebar displays the project structure for 'ShivaniVaru\_8941914', including files like 'calculator.py', 'integration\_test.py', and 'README.md'. The main editor window shows the content of 'integration\_test.py', which contains Python code for testing a calculator module. The bottom terminal window shows the output of the 'git push' command, indicating a successful push to the remote repository. The command 'git push' is highlighted with a red box in the terminal.

```
PS C:\Users\varus\PycharmProjects\ShivaniVaru_8941914> git push
Enumerating objects: 11, done.
Enumerating objects: 11, done.
Enumerating objects: 11, done.
Counting objects: 100% (11/11), done.
Delta compression using up to 4 threads
Compressing objects: 100% (6/6), done.
Writing objects: 100% (6/6), 705 bytes | 705.00 KiB/s, done.
Total 6 (delta 4), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (4/4), completed with 4 local objects.
To https://github.com/shivi-1010/ShivaniVaru_8941914.git
71f8f4b..c932ec8 main -> main
```



The screenshot shows the GitHub repository page for 'ShivaniVaru\_8941914'. The left sidebar shows the repository structure, including the 'integration' folder. The main content area displays the commit history for the 'integration' folder, showing the files added successfully. The commit history table is as follows:

Name	Last commit message	Last commit date
..		
__pycache__	files added successfully	2 hours ago
calculator.py	files added11	3 hours ago
integration_test.py	files added successfully	2 hours ago

## Assignment - 2

Name: Shivani Shaileshkumar Varu

Student ID: 8941914

Section: 4

3. Write commands to run the file:

- pytest integration\_test.py

The screenshot shows the PyCharm IDE interface. The left sidebar displays the project structure for 'ShivaniVaru\_8941914', including folders like '.pytest\_cache' and 'integration', and files like 'calculator.py' and 'integration\_test.py'. The main editor window shows the content of 'integration\_test.py', which includes unit tests for addition, subtraction, multiplication, division, and division by zero. The terminal window at the bottom shows the command 'pytest integration\_test.py' being executed, with the output indicating that all tests passed.

```
PS C:\Users\varus\PycharmProjects\ShivaniVaru_8941914> cd integration
PS C:\Users\varus\PycharmProjects\ShivaniVaru_8941914\integration> pytest integration_test.py
===== test session starts =====
platform win32 -- Python 3.11.5, pytest-7.4.2, pluggy-1.3.0
rootdir: C:\Users\varus\PycharmProjects\ShivaniVaru_8941914\integration
rootdir: C:\Users\varus\PycharmProjects\ShivaniVaru_8941914\integration
collected 6 items

integration_test.py::test_integration PASSED [ 16%]
integration_test.py::test_addition PASSED [ 33%]
integration_test.py::test_subtraction PASSED [ 50%]
integration_test.py::test_multiplication PASSED [ 66%]
integration_test.py::test_division PASSED [ 83%]
integration_test.py::test_divide_by_zero PASSED [100%]
```

- `python -m pytest -v`

The screenshot shows the PyCharm IDE interface. The top toolbar includes icons for running and debugging. The left sidebar shows the project structure with folders for 'ShivaniVaru\_8941914', '.pytest\_cache', 'integration', and 'calculator.py'. The main editor window displays the code for 'integration\_test.py', which includes imports for 'addition', 'multiplication', and 'calculator', a function 'test\_integration()' that uses 'calculator.multiply' and 'calculator.add', and a comment '# Unit testing'. The bottom terminal window shows the command 'python -m pytest -v' being executed. The output indicates that 6 tests passed in 0.05s, with progress bars for each test: 'test\_integration PASSED [16%]', 'test\_addition PASSED [33%]', 'test\_subtraction PASSED [50%]', 'test\_multiplication PASSED [66%]', 'test\_division PASSED [83%]', and 'test\_divide\_by\_zero PASSED [100%]'. The bottom status bar shows the file path 'ShivaniVaru\_8941914 > integration > integration\_test.py', the time '30:44', the encoding 'CRLF', the file type 'UTF-8', the indentation '4 spaces', and the Python version 'Python 3.9'.

```
1 # import addition
2 # import multiplication
3 import calculator
4 # Shivani Shaileshkumar Varu
5 def test_integration():
6     # Test multiplying the result of adding two numbers with another number
7     assert calculator.multiply(calculator.add( num1: 2, num2: 3), num2: 4) == 20
8
9
10 # Unit testing
11
12 Shivani Shaileshkumar Varu
test_divide_by_zero() > else
```

```
PS C:\Users\varus\PycharmProjects\ShivaniVaru_8941914> python -m pytest -v
===== test session starts =====
platform win32 -- Python 3.11.5, pytest-7.4.2, pluggy-1.3.0 -- C:\Users\varus\AppData\Local\Programs\Python\Python311\python.exe
cachedir: .pytest_cache
rootdir: C:\Users\varus\PycharmProjects\ShivaniVaru_8941914
collected 6 items

integration/integration_test.py::test_integration PASSED [ 16%]
integration/integration_test.py::test_addition PASSED [ 33%]
integration/integration_test.py::test_subtraction PASSED [ 50%]
integration/integration_test.py::test_multiplication PASSED [ 66%]
integration/integration_test.py::test_division PASSED [ 83%]
integration/integration_test.py::test_divide_by_zero PASSED [100%]

===== 6 passed in 0.05s =====
PS C:\Users\varus\PycharmProjects\ShivaniVaru_8941914>
```

Git hub repo: [https://github.com/shivi-1010/ShivaniVaru\\_8941914](https://github.com/shivi-1010/ShivaniVaru_8941914)