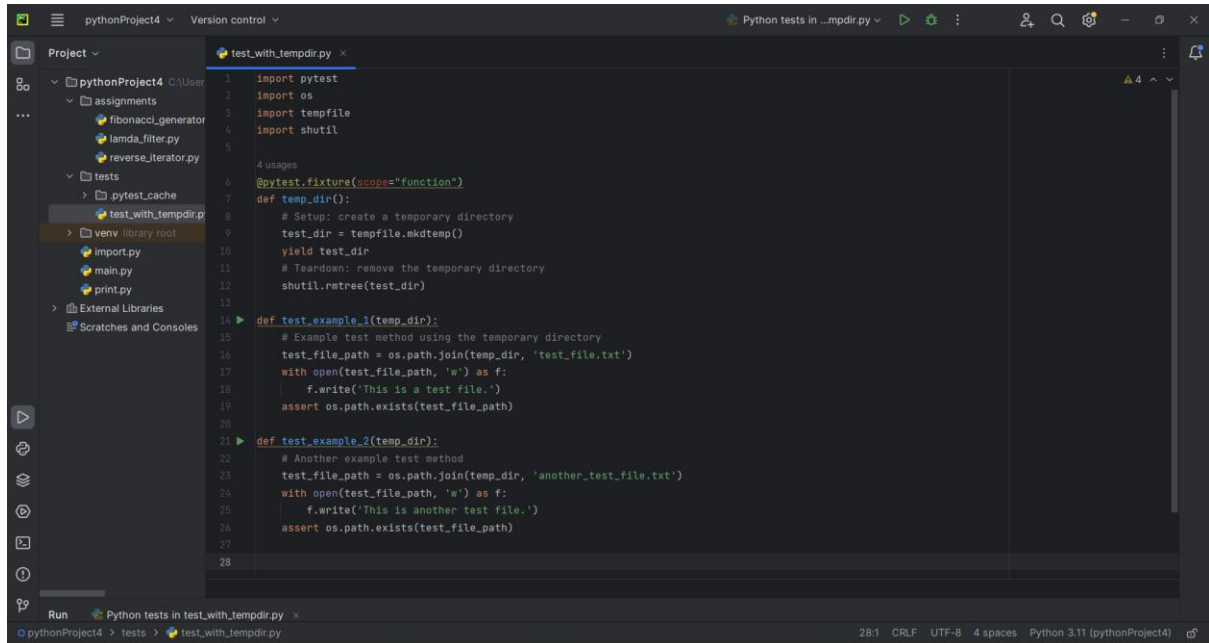


Pytest Day1 Assignment

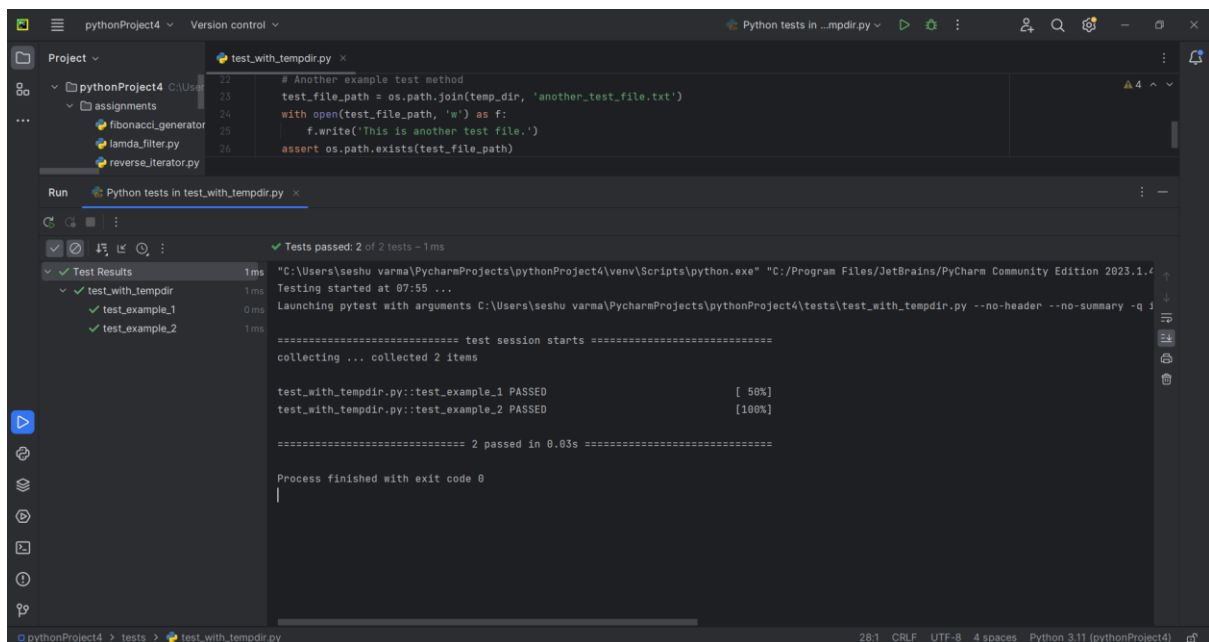
Task 1: Write a program with `setup_method` and `teardown_method` to prepare a temporary directory before each test method and delete it after.

Code Execution:



```
1 import pytest
2 import os
3 import tempfile
4 import shutil
5
6 @pytest.fixture(scope="function")
7 def temp_dir():
8     # Setup: create a temporary directory
9     test_dir = tempfile.mkdtemp()
10    yield test_dir
11    # Teardown: remove the temporary directory
12    shutil.rmtree(test_dir)
13
14 def test_example_1(temp_dir):
15     # Example test method using the temporary directory
16     test_file_path = os.path.join(temp_dir, 'test_file.txt')
17     with open(test_file_path, 'w') as f:
18         f.write('This is a test file.')
19     assert os.path.exists(test_file_path)
20
21 def test_example_2(temp_dir):
22     # Another example test method
23     test_file_path = os.path.join(temp_dir, 'another_test_file.txt')
24     with open(test_file_path, 'w') as f:
25         f.write('This is another test file.')
26     assert os.path.exists(test_file_path)
```

Output:



```
Run Python tests in test_with_tempdir.py
pythonProject4 > tests > test_with_tempdir.py

Tests passed: 2 of 2 tests - 1ms
Test Results
  test_with_tempdir 1ms
    test_example_1 0ms
    test_example_2 1ms

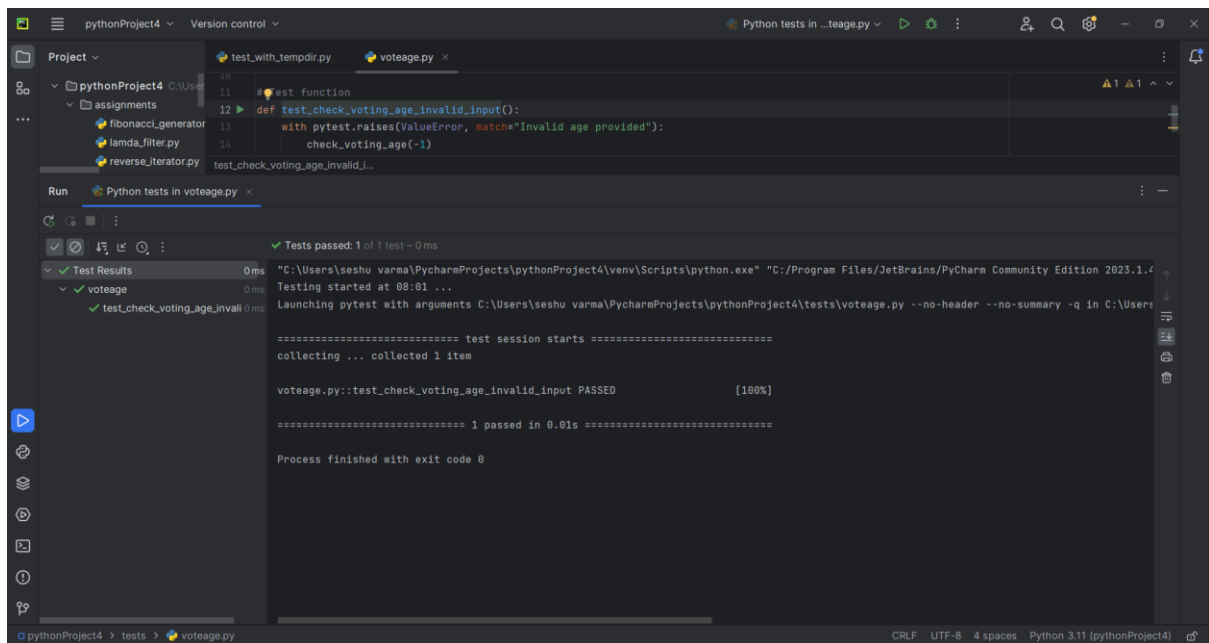
"C:\Users\seshu varma\PycharmProjects\pythonProject4\venv\Scripts\python.exe" "C:/Program Files/JetBrains/PyCharm Community Edition 2023.1.4
Testing started at 07:55 ...
Launching pytest with arguments C:\Users\seshu varma\PycharmProjects\pythonProject4\tests\test_with_tempdir.py --no-header --no-summary -q
===== test session starts =====
collecting ... collected 2 items

test_with_tempdir.py::test_example_1 PASSED [ 50%]
test_with_tempdir.py::test_example_2 PASSED [100%]

===== 2 passed in 0.03s =====

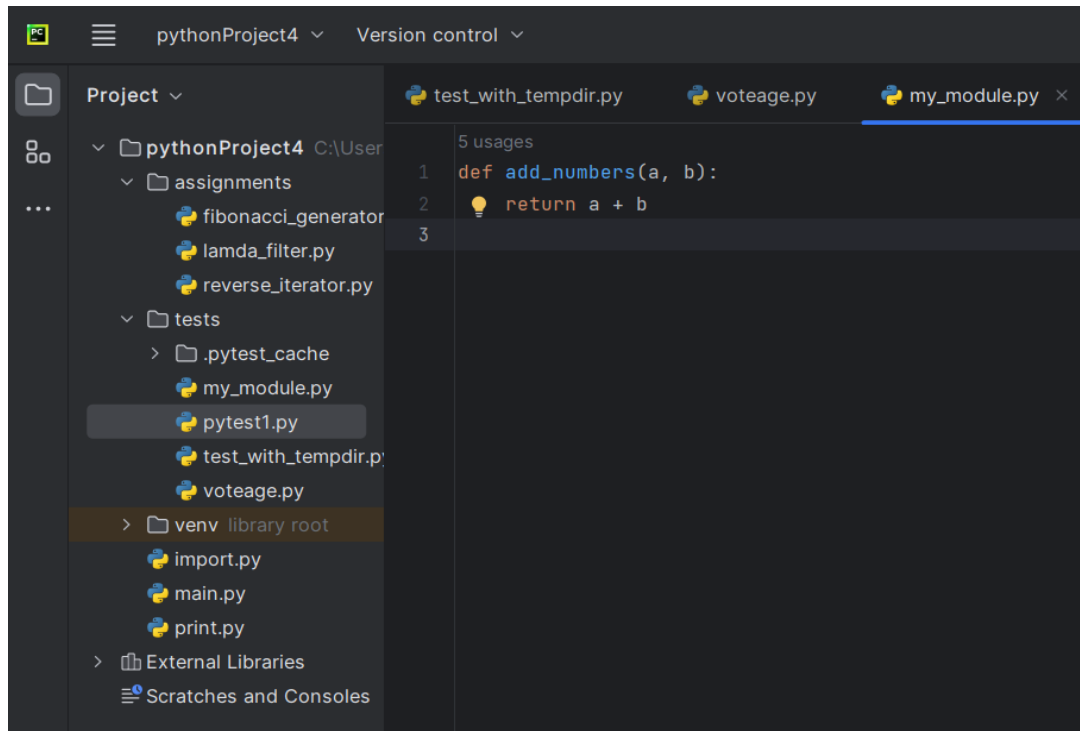
Process finished with exit code 0
```

Execution of Code:



Task 3: Write a simple Python function to add two numbers and then write a pytest test case to test this function.

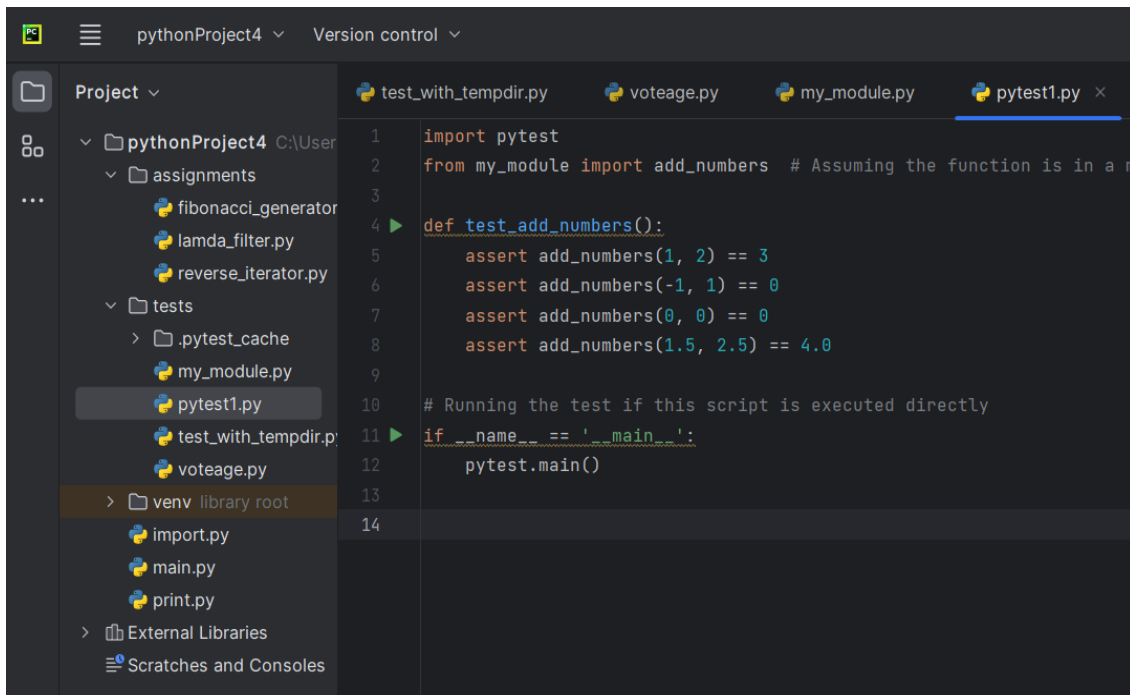
Function to add two numbers:



The screenshot shows an IDE window for 'pythonProject4'. The left sidebar displays a project tree with folders 'assignments' and 'tests'. The 'tests' folder is expanded, showing files like 'my_module.py', 'pytest1.py', and 'test_with_tempdir.py'. The main editor area shows the 'my_module.py' file with the following code:

```
5 usages
1 def add_numbers(a, b):
2     return a + b
3
```

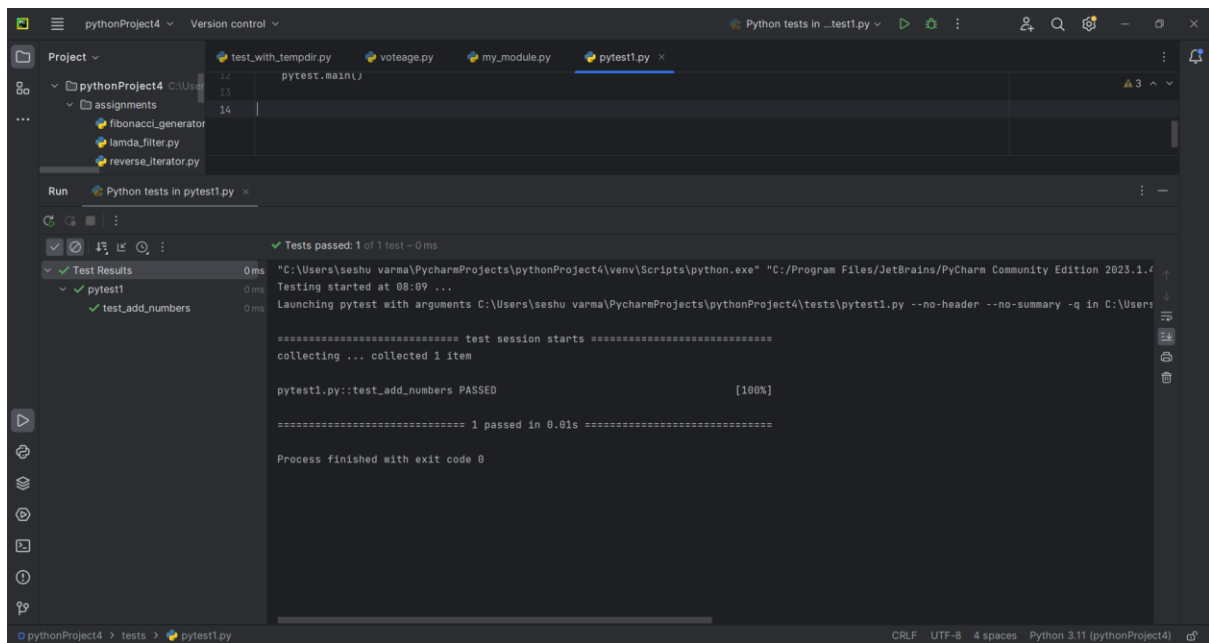
Pytest test case to this function:



The screenshot shows the same IDE window, but now the 'pytest1.py' file is open in the editor. The code in the file is as follows:

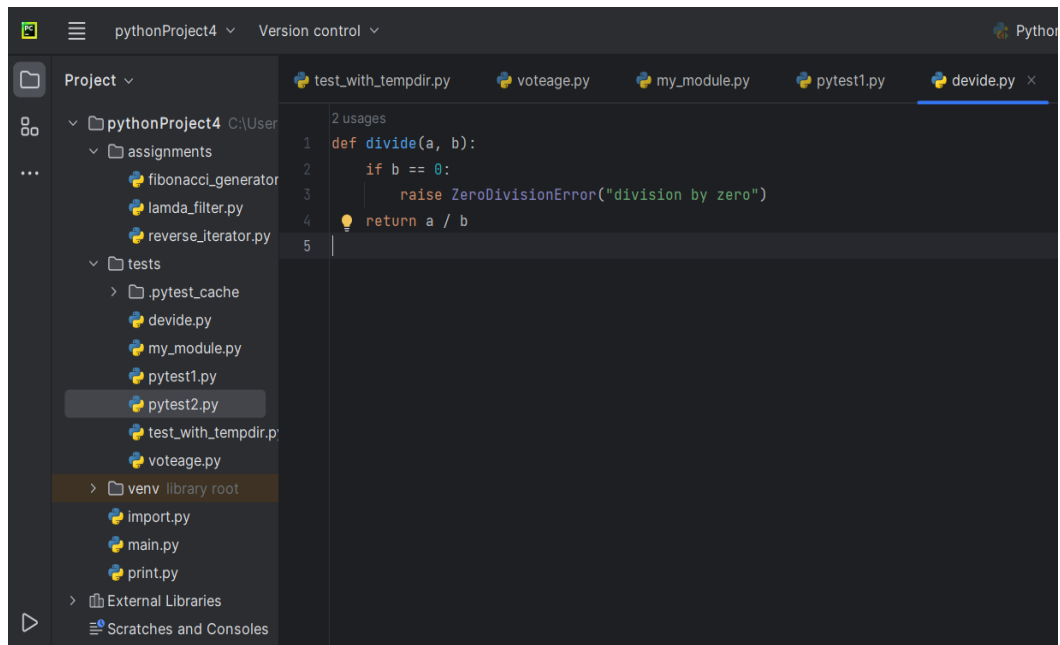
```
1 import pytest
2 from my_module import add_numbers # Assuming the function is in a m
3
4 def test_add_numbers():
5     assert add_numbers(1, 2) == 3
6     assert add_numbers(-1, 1) == 0
7     assert add_numbers(0, 0) == 0
8     assert add_numbers(1.5, 2.5) == 4.0
9
10 # Running the test if this script is executed directly
11 if __name__ == '__main__':
12     pytest.main()
13
14
```

Test case successfully passed:



Task 4: Write a pytest test case to check if an exception is raised for a function that divides two numbers.

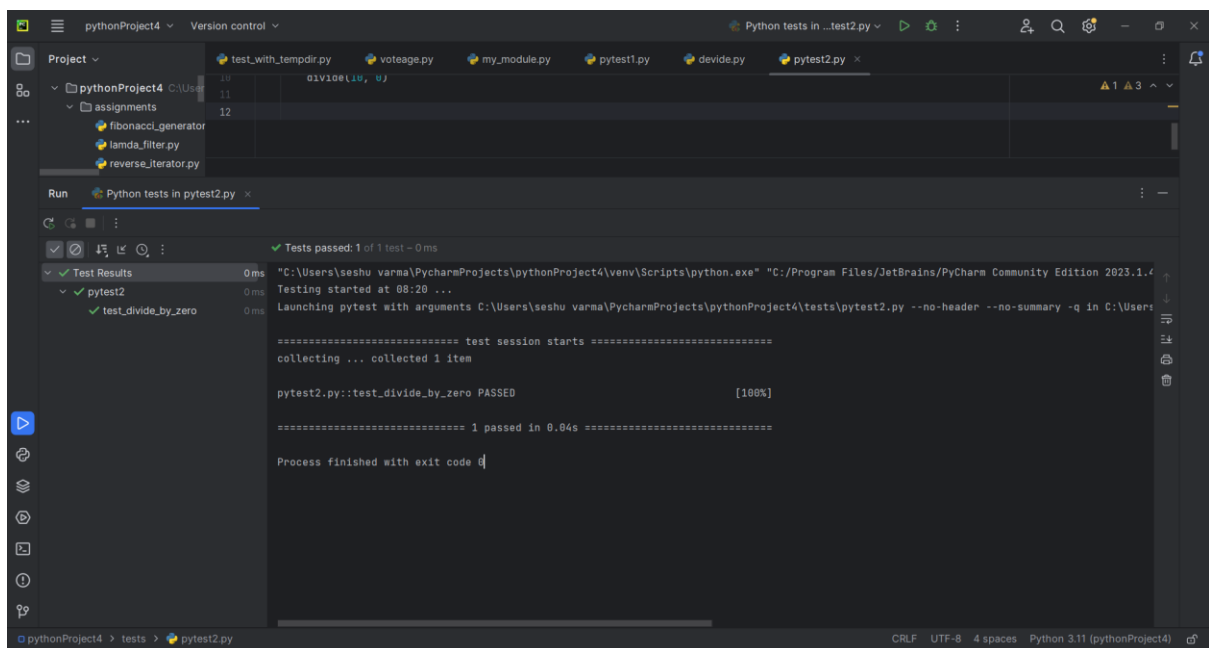
Creating function that divides two numbers:



Pytest test case execution:

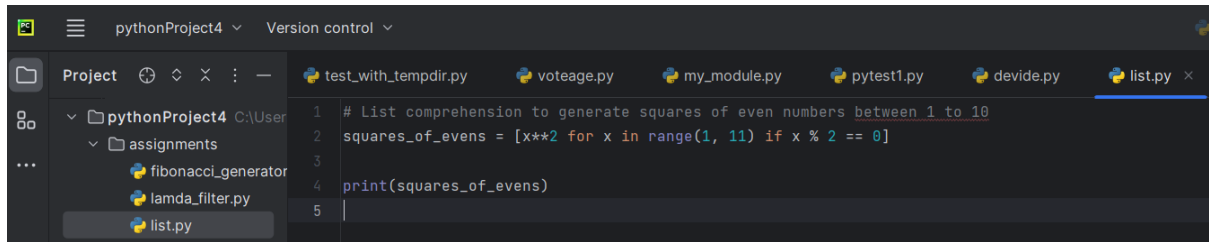


Test case successfully executed:



Task 5: Create a list comprehension in Python to generate squares of even numbers between 1 to 10.

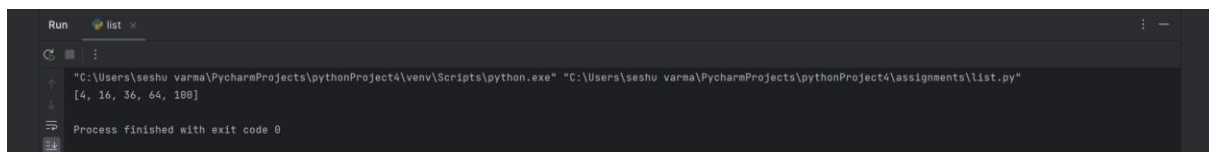
Code execution:



The screenshot shows the PyCharm IDE interface. The left sidebar displays the project structure for 'pythonProject4', with the 'assignments' folder expanded to show 'list.py'. The main editor window has several tabs open, with 'list.py' selected. The code in 'list.py' is as follows:

```
1 # List comprehension to generate squares of even numbers between 1 to 10
2 squares_of_evens = [x**2 for x in range(1, 11) if x % 2 == 0]
3
4 print(squares_of_evens)
5
```

Output:



The screenshot shows the 'Run' console in PyCharm. The command executed is: `"C:\Users\seshu varma\PycharmProjects\pythonProject4\venv\Scripts\python.exe" "C:\Users\seshu varma\PycharmProjects\pythonProject4\assignments\list.py"`. The output displayed is: `[4, 16, 36, 64, 100]`. Below the output, it states: `Process finished with exit code 0`.