

M05 Assignment – Modules, Packages, and PIP

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Course: CIS157 – Intro to Python Programming

1. math_operations.py

```
def add(a, b):  
    return a + b
```

```
def subtract(a, b):  
    return a - b
```

2. string_operations.py

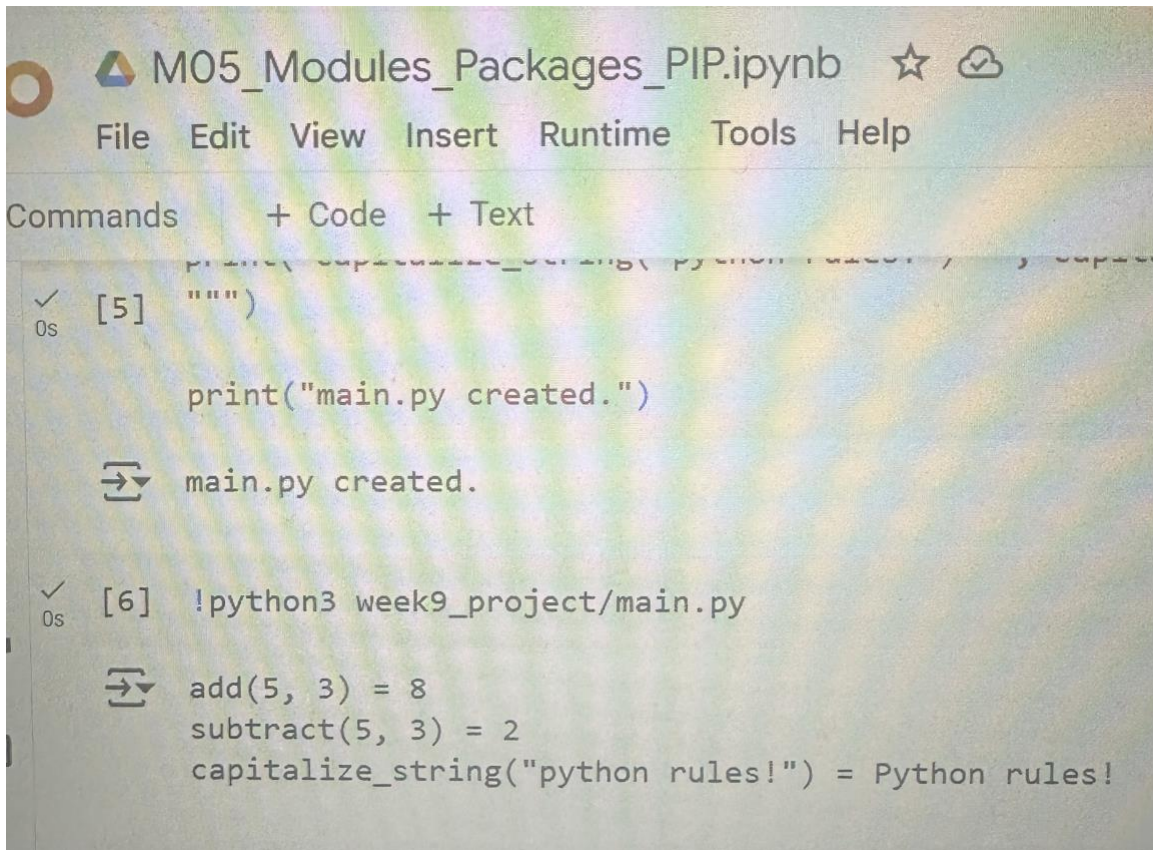
```
def capitalize_string(s):  
    return s.capitalize()
```

3. main.py

```
from utils.math_operations import add, subtract  
from utils.string_operations import capitalize_string
```

```
print("add(5, 3) =", add(5, 3))  
print("subtract(5, 3) =", subtract(5, 3))  
print("capitalize_string('python rules!') =", capitalize_string("python rules!"))
```

Screenshot of main.py output:



The screenshot shows a Jupyter Notebook window titled "M05_Modules_Packages_PIP.ipynb". The interface includes a menu bar with "File", "Edit", "View", "Insert", "Runtime", "Tools", and "Help". Below the menu bar, there are tabs for "Commands", "+ Code", and "+ Text". The notebook displays two code cells. The first cell, labeled "[5]", contains a Python script that prints "main.py created.". The second cell, labeled "[6]", contains a command to run the script: "!python3 week9_project/main.py". The output of the second cell shows the results of the script: "add(5, 3) = 8", "subtract(5, 3) = 2", and "capitalize_string('python rules!') = Python rules!".

```
M05_Modules_Packages_PIP.ipynb ☆ ☁
File Edit View Insert Runtime Tools Help
Commands + Code + Text
[5] print(capitalize_string('python rules!'), capitalize_string('python rules!'))
    print("main.py created.")
    main.py created.
[6] !python3 week9_project/main.py
    add(5, 3) = 8
    subtract(5, 3) = 2
    capitalize_string("python rules!") = Python rules!
```

4. main2.py

```
import requests
```

```
import numpy as np
```

```
# Fetch data from an API
```

```
response = requests.get("https://jsonplaceholder.typicode.com/posts")
```

```
data = response.json()
```

```
# Print the first post's title
```

```
print("First post title:", data[0]["title"])
```

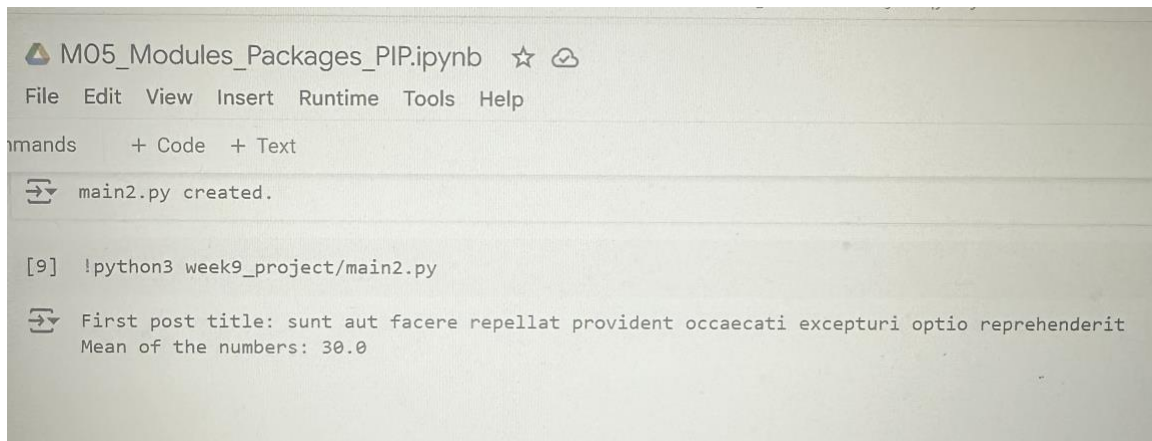
```
# Calculate the mean of a list of numbers using numpy
```

```
numbers = [10, 20, 30, 40, 50]
```

```
mean = np.mean(numbers)
```

```
print("Mean of the numbers:", mean)
```

Screenshot of main2.py output:



The screenshot shows a Jupyter Notebook window titled "M05_Modules_Packages_PIP.ipynb". The interface includes a menu bar with "File", "Edit", "View", "Insert", "Runtime", "Tools", and "Help". Below the menu bar, there are tabs for "Commands", "+ Code", and "+ Text". The notebook content shows a cell with the command `!python3 week9_project/main2.py` being executed. The output of this command is displayed below the cell, showing the first post title and the mean of the numbers.

```
M05_Modules_Packages_PIP.ipynb ☆ ☁
File Edit View Insert Runtime Tools Help
Commands + Code + Text
main2.py created.

[9] !python3 week9_project/main2.py

First post title: sunt aut facere repellat provident occaecati excepturi optio reprehenderit
Mean of the numbers: 30.0
```