

This assignment is intended to ensure that you are able to edit and submit Jupyter Notebooks.

The goal is to write a function to count the frequency of different characters in a given string. For example: `character_frequency('google')` should return a `dict`: `{'g': 2, 'o': 2, 'l': 1, 'e': 1}`.

There are many tutorials on the web that can show you how to use the Python data structures. Quite a few examples at:

<https://docs.python.org/3/tutorial/datastructures.html>

You should edit the function definition below, make sure to press 'Shift + Enter' to execute it, and then execute the two function calls to check that the output is correct.

```
In [4]: def character_frequency(s):  
        ret = dict()  
        for char in s:  
            if char in ret:  
                ret[char] += 1  
            else:  
                ret[char] = 1  
        return ret
```

```
In [5]: character_frequency('google')
```

```
Out[5]: {'g': 2, 'o': 2, 'l': 1, 'e': 1}
```

```
In [6]: character_frequency('This assignment is intended to ensure that you are able
```

```
Out[6]: {'T': 1,
        'h': 2,
        'i': 6,
        's': 7,
        ' ': 15,
        'a': 5,
        'g': 1,
        'n': 6,
        'm': 2,
        'e': 10,
        't': 10,
        'd': 4,
        'o': 6,
        'u': 4,
        'r': 3,
        'y': 2,
        'b': 3,
        'l': 1,
        'j': 1,
        'p': 1,
        'N': 1,
        'k': 1,
        '.': 1}
```

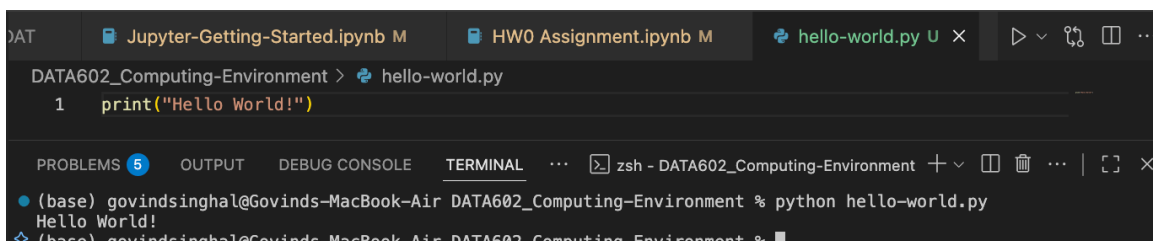
In Below, Provide GitHub Repository URL:

https://github.com/govinds108/DATA602_Computing-Environment/tree/main

In Below, GitHub Page URL:

https://govinds108.github.io/DATA602_Computing-Environment/

Below, add the screenshots. You can include additional markdown or text cells if needed.

A screenshot of a Jupyter Notebook interface. The top bar shows three tabs: 'Jupyter-Getting-Started.ipynb M', 'HW0 Assignment.ipynb M', and 'hello-world.py U x'. The active tab is 'hello-world.py U x'. Below the tabs, the code editor shows a single line of Python code: `1 print("Hello World!")`. The bottom panel is divided into 'PROBLEMS' (with a blue circle icon and the number 5), 'OUTPUT', 'DEBUG CONSOLE', and 'TERMINAL'. The 'TERMINAL' tab is active, showing a terminal window with the command `(base) govindsinghal@Govinds-MacBook-Air DATA602_Computing-Environment % python hello-world.py` and the output `Hello World!`. The terminal prompt is `(base) govindsinghal@Govinds-MacBook-Air DATA602_Computing-Environment %`.

HW0 Google Colab

File Edit View Insert Runtime Tools Help

Commands + Code + Text Run all

```
[1] ✓ 0s
print("Hello World!")
Hello World!

[2] ✓ 4s
import torch
print("PyTorch Version: ", torch.version)
print("PyTorch Version Number: ", torch.__version__)
print("GPU Available: ", torch.cuda.is_available())

PyTorch Version: <module 'torch.version' from '/usr/local/lib/python3.12/dist-packages/torch/version.py'>
PyTorch Version Number: 2.0.0+cu126
GPU Available: False
```

Jupyter-Getting-Started.ipynb M HW0 Assignment.ipynb M version-script.py 1, U X

DATA602_Computing-Environment > version-script.py

```
1 import torch
2 print("PyTorch Version: ", torch.version)
3 print("PyTorch Version Number: ", torch.__version__)
4 print("GPU Available: ", torch.cuda.is_available())
5
```

PROBLEMS 5 OUTPUT DEBUG CONSOLE TERMINAL

zsh - DATA602_Computing-Environment

```
(base) govindsinghal@Govinds-MacBook-Air DATA602_Computing-Environment % python version-script.py
PyTorch Version: <module 'torch.version' from '/Users/govindsinghal/opt/anaconda3/lib/python3.9/site-packages/torch/version.py'>
PyTorch Version Number: 2.2.2
GPU Available: False
(base) govindsinghal@Govinds-MacBook-Air DATA602_Computing-Environment %
```