Spring 2024: CS5720 Neural Networks & Deep Learning -

ICP-3Assignment-3

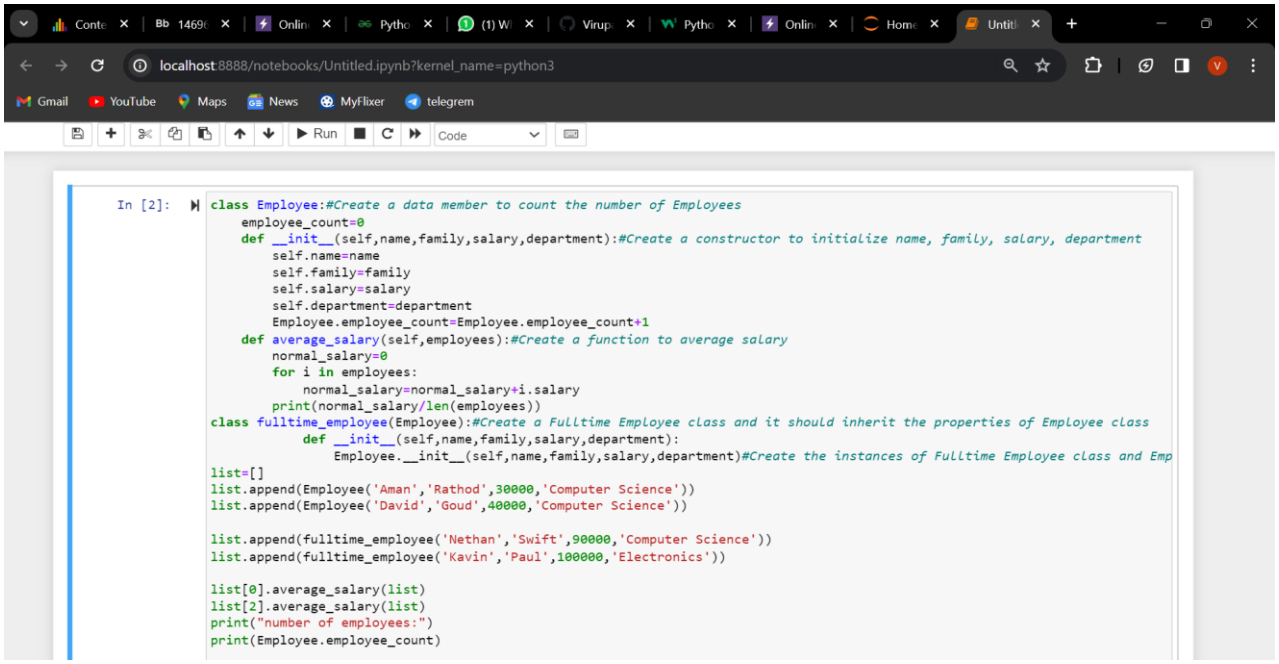
Name: Pushkara Naga Sai Sri Vyshnavi Chakka

STUDENT ID:700752861

Github link: https://github.com/PushkaraChakka/Assignment_3_icp3

Video link:
https://drive.google.com/file/d/1sDyo5xLGp3S2Dm1caC3w7_zW3kiw5Yok/view?usp=sharing

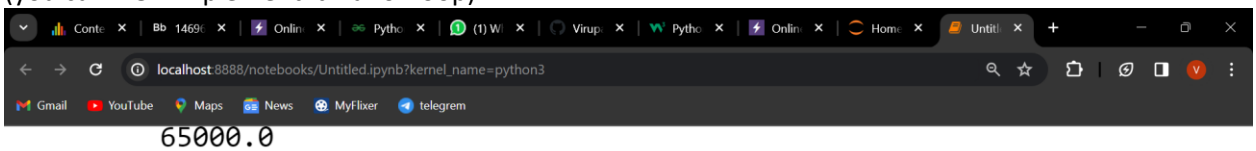
1. Create a class Employee and then do the following
   • Create a data member to count the number of Employees
   • Create a constructor to initialize name, family, salary, department
   • Create a function to average salary
   • Create a Fulltime Employee class and it should inherit the properties of Employee class
   • Create the instances of Fulltime Employee class and Employee class and call their member functions.



Output:

2. Numpy

Using NumPy create random vector of size 20 having only float in the range 1-20.
Then reshape the array to 4 by 5
Then replace the max in each row by 0 (axis=1)
(you can NOT implement it via for loop)



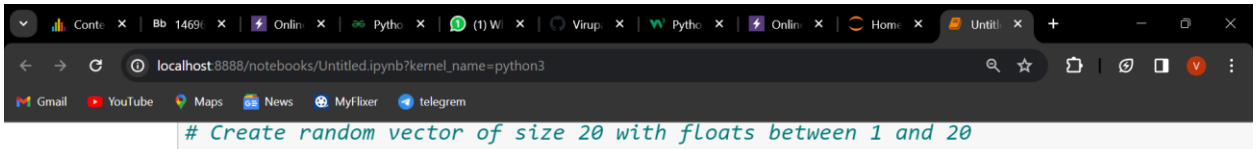

```
65000.0
number of employees:
4
```

[3]:

```
import numpy as np
# Create random vector of size 20 with floats between 1 and 20
vec = np.random.uniform(9, 6, 20)
# Reshape the vector to 4 by 5
mat = vec.reshape(4, 5)
# Replacing the max in each row by 0
mat[np.arange(4), mat.argmax(axis=1)] = 0
# Print the output
print(mat)
```

```
[[6.16609835 7.57934912 8.59580213 0.         8.47324501]
```

Output:

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```
[[6.16609835 7.57934912 8.59580213 0.         8.47324501]
 [6.37335039 8.62410654 6.59939819 7.50061315 0.        ]
 [6.40314712 7.12251805 0.         7.26664749 7.72637134]
 [8.05537403 6.46703327 8.15758698 6.73592106 0.        ]]
```

In [ ]:

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