Neural Networks & Deep Learning - ICP-2

CS 5720 (CRN 23216)

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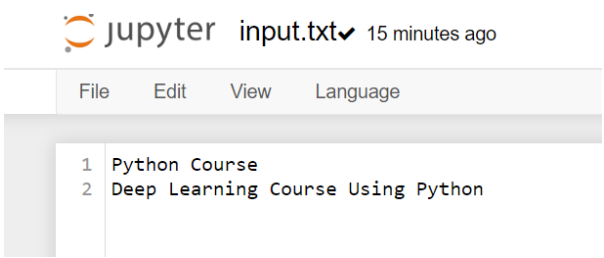
1. The purpose of this program is to get the first and last name from the user and return the full name in the output. Also, to pass the same full name to a function that prints the alternate characters from the input string.

In [146]:
```
#get the name from user
first_name = str(input("Enter First Name:"));
last_name = str(input("Enter Last Name:"));

#fullname function call
full_name = str (fullname(first_name,last_name));
print("Your Full Name: " + full_name);

#alternate String function call
alternate_String = str (string_alternative(full_name));
print(alternate_String);

def fullname(fname,lname):
    fullName = (fname + " " + lname); #concat first and last name
    return fullName; #return full name

def string_alternative(altStr):
    resultStr = "";
    for i in range(0,len(altStr),2):
        resultStr += altStr[i]; #append alternate characters from the input string
    return resultStr; #return the resultant string
```

```
Enter First Name:Kamala
Enter Last Name:Ramesh
Your Full Name: Kamala Ramesh
Kml aeh
```

2. This program reads the words in an input file and stores each word and its number of occurrences in the output file.

Input File:



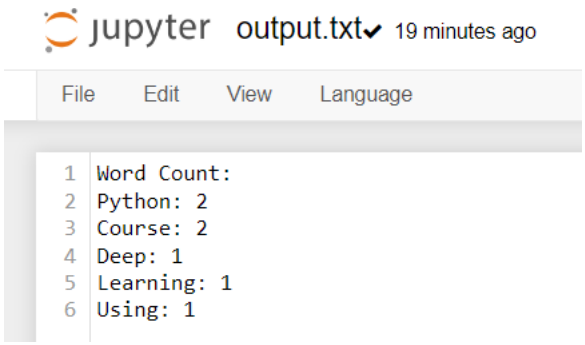
Program to read the input and store output:

In [148]:

```
#open file in read mode
inputFile = open("input.txt", "r");

#create a dictionary
wordCount = dict();

#loop through each line of the file
for lines in inputFile:
    words = lines.split(); #split the line into words

    #iterate over each word in line
    for word in words:

        #check if the word is already in dictionary
        if word in wordCount:
            wordCount[word] = wordCount[word] + 1; #increment the count by 1
        else:
            wordCount[word] = 1; #add the entry to dictionary with count 1

#open the file in write mode to store the results
outputFile = open("output.txt", "w");

outputFile.writelines("Word Count:");
print("Word Count:")
#for loop is used to print the results one by one
for key in list(wordCount.keys()):
    print('%s: %s' % (key,wordCount[key])); #print the dictionary content
    outputFile.write('\n%s: %s' % (key,wordCount[key])); #store in the output file

#close file
outputFile.close();
```

```
Word Count:
Python: 2
Course: 2
Deep: 1
Learning: 1
Using: 1
```

Output File:



3. This program gets the number of customers and their heights in Inches from the user and store it in a list using loop. Using list comprehension, we are converting each element of the input (in inches) list to centimeters and storing it in a new list.

In [149]:

```
#create an empty list
height_list = []

#get the list size and input from the user
noOfCustomers = int (input("Enter the No. of Customers: "))
for i in range(0,noOfCustomers):
    item = int(input())
    height_list.append(item)

#print the input list
print("Height in Inches: ", height_list)

#create the new list of height in cm using list comprehension
newList = [x*2.54 for x in height_list]
print ("Height in Centimeters: ",newList)
```

```
Enter the No. of Customers: 5
43
55
67
87
56
Height in Inches:  [43, 55, 67, 87, 56]
Height in Centimeters:  [109.22, 139.7, 170.18, 220.98, 142.24]
```