

ICP_2 : https://github.com/jxc84430/NeuralNetworks/tree/main/ICP_2

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Neural Networks & Deep Learning ICP_2 : Jahnvi Chadalavada (700728443)

1. Write a program that takes two strings from the user: first_name, last_name. Pass these variables to fullname function that should return the (full name)

```
In [1]: def full_name(first_name, last_name):  
        return " ".join([first_name.strip(), last_name.strip()]) #concatenates first & last names
```

Write function named "string_alternative" that returns every other char in the full_name string.

```
In [2]: def string_alternative(fullname):  
        return fullname[::2] # takes only alternate character in a string
```

2. Write a python program to find the wordcount in a file (input.txt) for each line and then print the output.

```
In [3]: def wordcount():  
        with open("input.txt", "r") as input_file : # reads data from input file  
            lines = input_file.read()  
  
        output_file = open("output.txt", "w") # write data to output file  
        output_file.writelines(lines)  
        output_file.write("\nWord_Count : ")  
  
        print("INPUT : ")  
        print(lines)  
  
        print("\nOUTPUT : ")  
        print("\nWord_Count : ")  
  
        word_counts = {}  
        lines = lines.replace("\n", " ").strip().split(" ") # split into words  
  
        for word in lines:  
            word_counts[word] = word_counts.get(word, 0) + 1 # counts words  
  
        for key, values in word_counts.items():  
            op = "\n"+key+" : "+str(values)  
            output_file.write(op) # write output to file  
            print(op)  
  
        output_file.close()
```

3. Write a program, which reads heights (inches.) customers into a list and convert these heights to centimeters in a separate list using:

```
In [4]: def inch_to_cm_converter():  
        cms = []  
        inches = []  
  
        while True: # Interactive loop, takes input untill 0 or a negative number is entered  
            try:  
                #accepts only numbers  
                print("Enter 0 or a -ve number to quit !!!")  
                height = float(input("Please enter the height inches : "))  
  
                if height <= 0:  
                    break  
                else:  
                    inches.append(height) # adding heights into a list  
  
            except:  
                print("Only numbers are allowed. Please try again")  
  
        for item in inches:  
            cms.append(item*2.54) # converts inches to centimeters  
  
        print("\n Inches List : ", inches)  
        print("\n1. For Loop - Centimeters List : ", cms)  
        print("\n2. List comprehensions - Centimeters List : ", [item*2.54 for item in inches])
```

Main function which calls all other functions

```
In [5]: def main():  
  
    print("----- Question 1 -----")  
  
    first_name = input("Please enter your First Name : ")  
    last_name = input("Please enter your Last Name : ")  
  
    fullName = full_name(first_name,last_name)  
  
    print("\nYour Full Name is : ",fullName)  
    print("\nAlternative Char in string is. : ",string_alternative(fullName))  
  
    print("\n----- Question 2 -----")  
    wordcount()  
  
    print("\n----- Question 3 -----")  
    inch_to_cm_converter()
```

Run main function to see the output

```
In [6]: main()  
  
----- Question 1 -----  
Please enter your First Name : Jahnavi  
Please enter your Last Name : Chadalavada  
  
Your Full Name is :  Jahnavi Chadalavada  
  
Alternative Char in string is. :  JhaiCaaaaa  
  
----- Question 2 -----  
INPUT :  
Python Course  
Deep Learning Course  
  
OUTPUT :  
  
Word_Count :  
  
Python : 1  
  
Course : 2  
  
Deep : 1  
  
Learning : 1  
  
  
  
----- Question 3 -----  
Enter 0 or a -ve number to quit !!!  
Please enter the heigth inches : 150  
Enter 0 or a -ve number to quit !!!  
Please enter the heigth inches : 155  
Enter 0 or a -ve number to quit !!!  
Please enter the heigth inches : 145  
Enter 0 or a -ve number to quit !!!  
Please enter the heigth inches : 148  
Enter 0 or a -ve number to quit !!!  
Please enter the heigth inches : 0  
  
Inches List :  [150.0, 155.0, 145.0, 148.0]  
  
1. For Loop – Centimeters List :  [381.0, 393.7, 368.3, 375.92]  
  
2. List comprehensions – Centimeters List :  [381.0, 393.7, 368.3, 375.92]
```