

Neural Networks and Deep Learning – ICP-2

NALLURI PRAJWALA

STUDENT ID: 700766230

Github link: <https://github.com/Prajwalanalluri/Neural-Assignment-2.git>

Video link:

https://drive.google.com/file/d/1aNzV6nDvUPhyEuQgJBdTImaXrIktYY6g/view?usp=drive_link

Question- 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).

Output:

```
In [6]: def fullname(first_name, last_name):
        return first_name + " " + last_name

        def string_alternative(full_name):
            return full_name[::2]

        def main():
            first_name = input("Enter your first name: ")
            last_name = input("Enter your last name: ")
            full_name = fullname(first_name, last_name)
            result_string = string_alternative(full_name)
            print("Full Name:", full_name)
            print("Every other character in full name:", result_string)

        main()
```

```
Enter your first name: Prajwala
Enter your last name: Nalluri
Full Name: Prajwala Nalluri
Every other character in full name: Pawl alr
```

Question – 2

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

Output:

```
In [15]: sample_text = """This is prajwala
Neural Network course
Machine learning course"""

with open('input.txt', 'w') as file:
    file.write(sample_text)

with open('input.txt', 'r') as file:
    lines = file.readlines()

word_counts = {}
for line in lines:
    words = line.split()
    for word in words:
        word_counts[word] = word_counts.get(word, 0) + 1

print("Input:")
for line in lines:
    print(line.strip())

print("Word count:")
for word, count in word_counts.items():
    print(f"{word}: {count}")

with open('output.txt', 'w') as output_file:
    output_file.write("Input:\n")
    for line in lines:
        output_file.write(line)

    output_file.write("\nWord count:\n")
    for word, count in word_counts.items():
        output_file.write(f"{word}: {count}\n")
```

```
Input:
This is prajwala
Neural Network course
Machine learning course
Word count:
This: 1
is: 1
prajwala: 1
Neural: 1
Network: 1
course: 2
Machine: 1
learning: 1
```

Question – 3

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

- 1) Nested Interactive loop.
- 2) List comprehensions

Output:

```
In [17]: def inches_to_cm(inches):  
         return inches * 2.54  
         heights_in_inches = []  
         n = int(input("Enter the number of customers: "))  
         for i in range(n):  
             height = float(input(f"Enter height of customer {i+1} in inches: "))  
             heights_in_inches.append(height)  
         heights_in_cm = []  
         for height in heights_in_inches:  
             heights_in_cm.append(inches_to_cm(height))  
         print("Heights in inches:", heights_in_inches)  
         print("Heights in centimeters:", heights_in_cm)
```

```
Enter the number of customers: 4  
Enter height of customer 1 in inches: 5  
Enter height of customer 2 in inches: 6  
Enter height of customer 3 in inches: 7  
Enter height of customer 4 in inches: 3  
Heights in inches: [5.0, 6.0, 7.0, 3.0]  
Heights in centimeters: [12.7, 15.24, 17.78, 7.62]
```