Neural Networks and Deep Learning – ICP-2

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GitHub Link: https://github.com/Avinash-hub1/Assignment-2.git

Video Link:
https://drive.google.com/file/d/1NymzS1wk1cDODx1iYbfAHPZi3lXpcTHQ/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).

```
In [1]: 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: Avinash
Enter your last name: Borra
Full Name: Avinash Borra
Every other character in full name: AiahBra
```

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.

```python
In [2]: sample_text = """This is Avinash
        The weather is good today"""

        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 Avinash
        The weather is good today
        Word count:
        This: 1
        is: 2
        Avinash: 1
        The: 1
        weather: 1
        good: 1
        today: 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

```python
In [4]: 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: 2
Enter height of customer 1 in inches: 30
Enter height of customer 2 in inches: 40
Heights in inches: [30.0, 40.0]
Heights in centimeters: [76.2, 101.6]
```