

ASSIGNMENT - 1

Original file is located at

<https://colab.research.google.com/drive/1zbXlcGugK4kvnxbIBBfopjQxETUiolkY>

Video Link:

<https://drive.google.com/file/d/10pyTPJ9F1YqGy--ZOigJF4IQNN5yhaVz/view>

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).

For example:

First_name = "your first name", last_name = "your last name"

Full_name = "your full name"

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

Str = "Good evening"

Output: Go vnn

"""

```
# combine first and last names into full name
```

```
def fullname(first_name, last_name):
```

```
    return f"{first_name} {last_name}"
```

```
# Function to return every other character
```

```
def string_alternative(input_string):
```

```
    return input_string[::2]
```

```
def main():
```

```
    first_name = input("Enter your first name: ").strip()
```

```
    last_name = input("Enter your last name: ").strip()
```

```
    full_name = fullname(first_name, last_name)
```

```
    print(f"Full Name: {full_name}")
```

```
# Getting the every other character
```

```
alt_string = string_alternative(full_name)
```

```
print(f"String with every other character: {alt_string}")
```

```
if __name__ == "__main__":  
    main()
```

"""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.
"""

```
from google.colab import files  
uploaded = files.upload()
```

```
from collections import Counter
```

```
def word_count_file(input_file, output_file):  
    try:
```

```
        with open(input_file, 'r') as file:  
            lines = file.readlines()
```

```
        word_counter = Counter()
```

```
        with open(output_file, 'w') as file:  
            file.write("Original Lines:\n")  
            file.writelines(lines)  
            file.write("\nWord_Count:\n")
```

```
        for line in lines:  
            words = line.strip().split()  
            word_counter.update(words)
```

```
        # Write the word count to the output file  
        for word, count in word_counter.items():  
            file.write(f"{word}: {count}\n")
```

```
    print(f"Word counts written to '{output_file}' successfully!")
```

```
except FileNotFoundError:  
    print(f"Error: The file '{input_file}' does not exist.")  
except Exception as e:  
    print(f"An error occurred: {e}")
```

```
# Main function to execute
if __name__ == "__main__":
    input_filename = "input.txt"
    output_filename = "output.txt"
    word_count_file(input_filename, output_filename)
```

```
from google.colab import files
files.download('output.txt')
```

"""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

"""

Method 1: Using Nested Interactive Loop

def convert_heights_to_cm():

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:

cm = round(height * 2.54, 2)

heights_in_cm.append(cm)

return heights_in_cm

result = convert_heights_to_cm()

print("Converted Heights in Centimeters:", result)

Method 2: Using List Comprehension

def convert_heights_to_cm_comprehension():

n = int(input("Enter the number of customers: "))

```
heights_in_inches = [float(input(f"Enter height of customer {i + 1} in inches: ")) for i in range(n)]
```

```
heights_in_cm = [round(height * 2.54, 2) for height in heights_in_inches]  
return heights_in_cm
```

```
result_comprehension = convert_heights_to_cm_comprehension()  
print("Converted Heights in Centimeters:", result_comprehension)
```