Spring 2025: CS5720

Neural Networks and Deep Learning - ICP-1

Name : Jyothi Kiran Boddeda

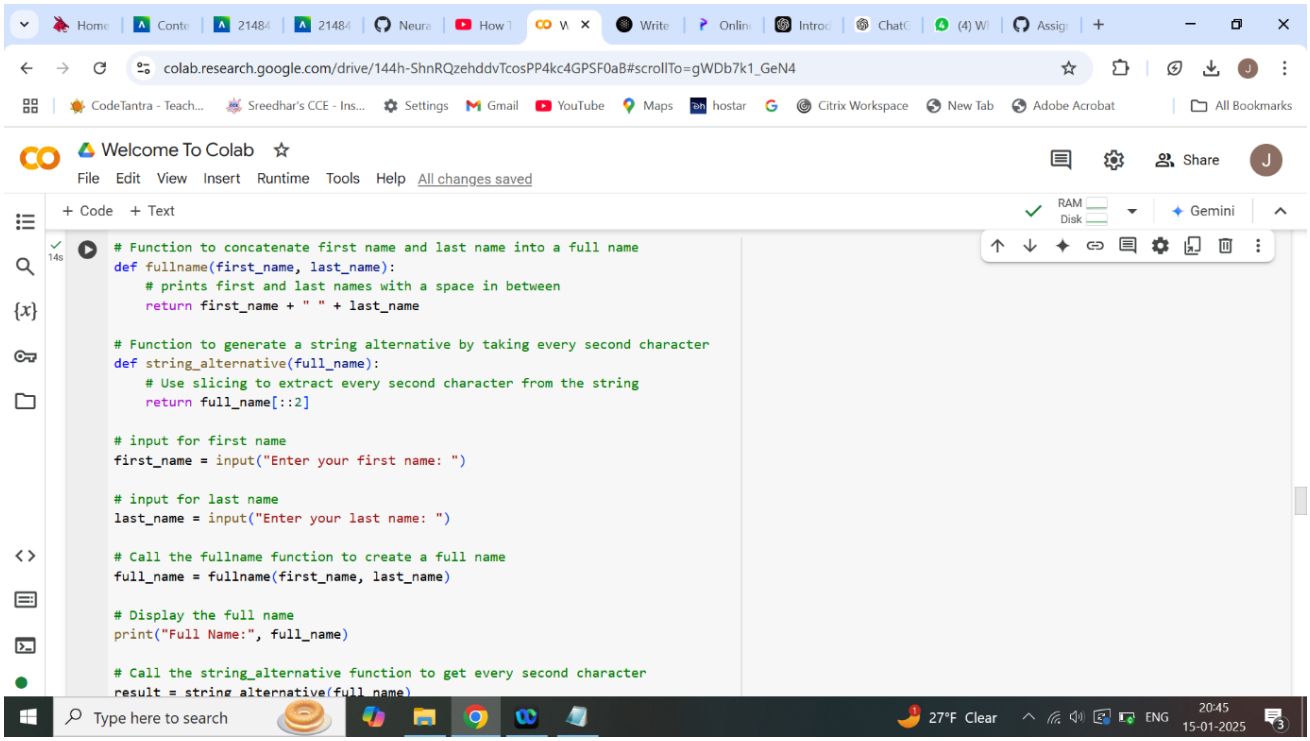
Student ID: 700769023

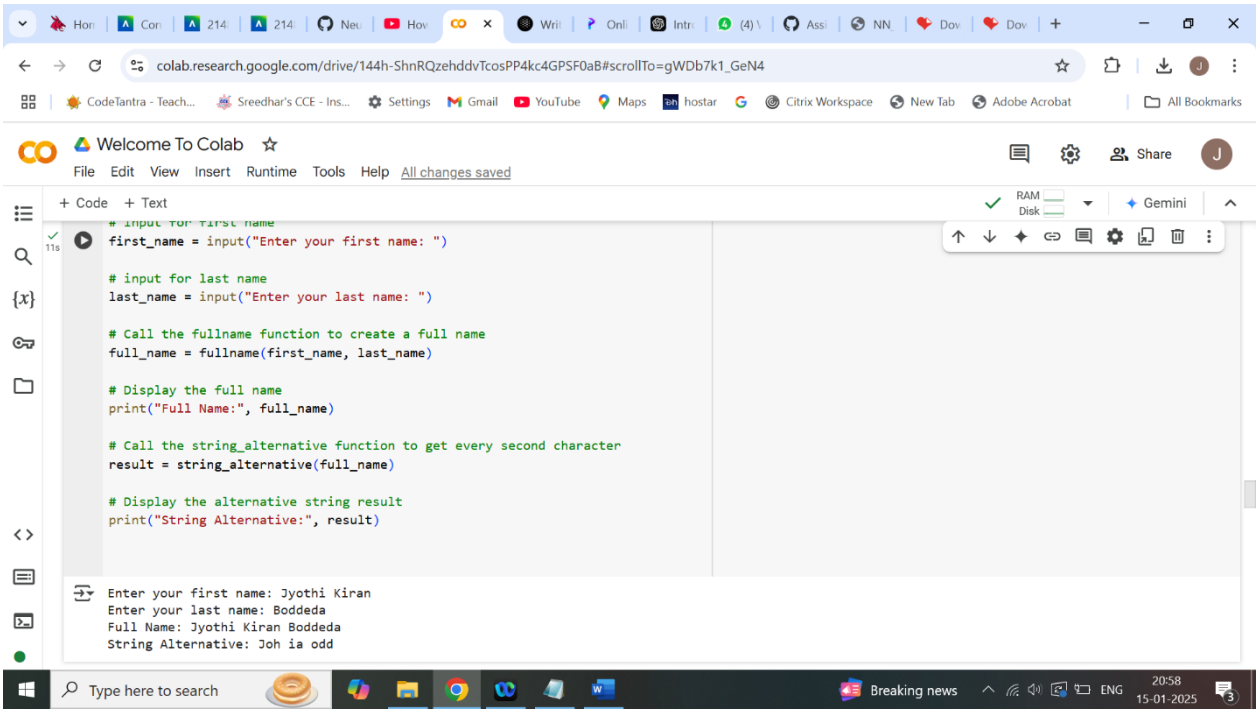
GITHUB LINK : https://github.com/jyothikiranboddeda/Neural-Network-Deep-Learning.git

VIDEO LINK : https://drive.google.com/file/d/1JLLHkrxgEcTF_6GmSOs2GbdGJIceKmtH/view?usp=drive_link

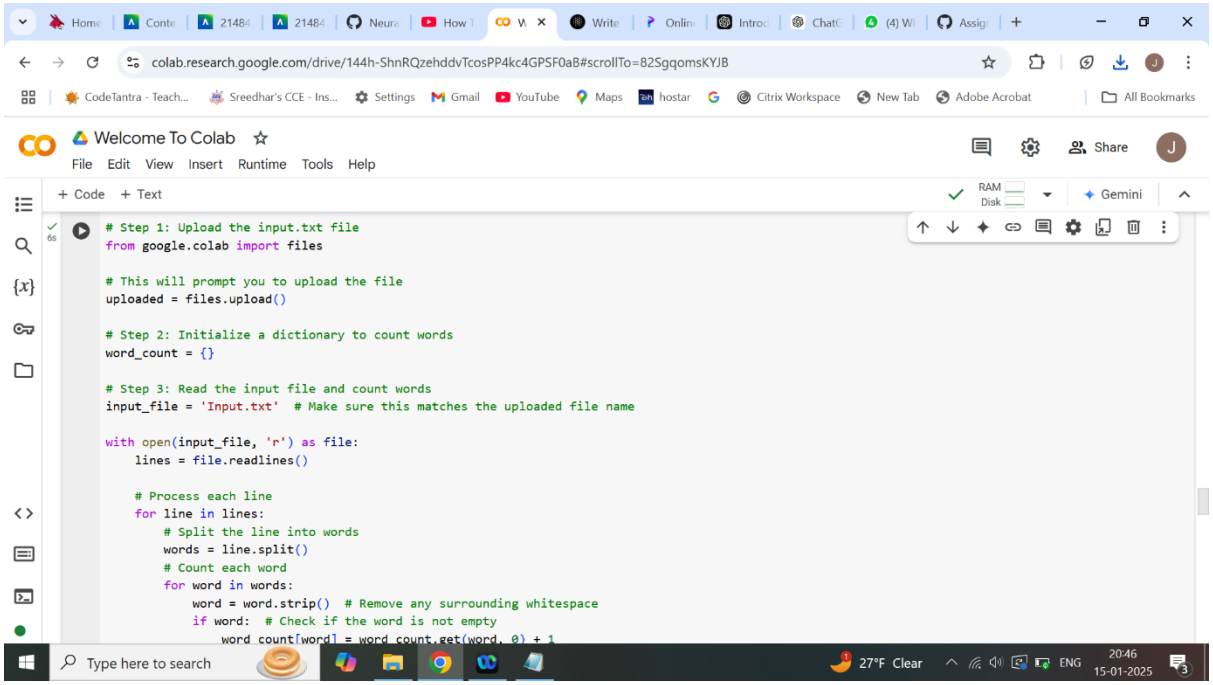
1.Write a program that takes two strings from the user: first_name, last_name. Pass these variables to fullname function that should return the (full name).

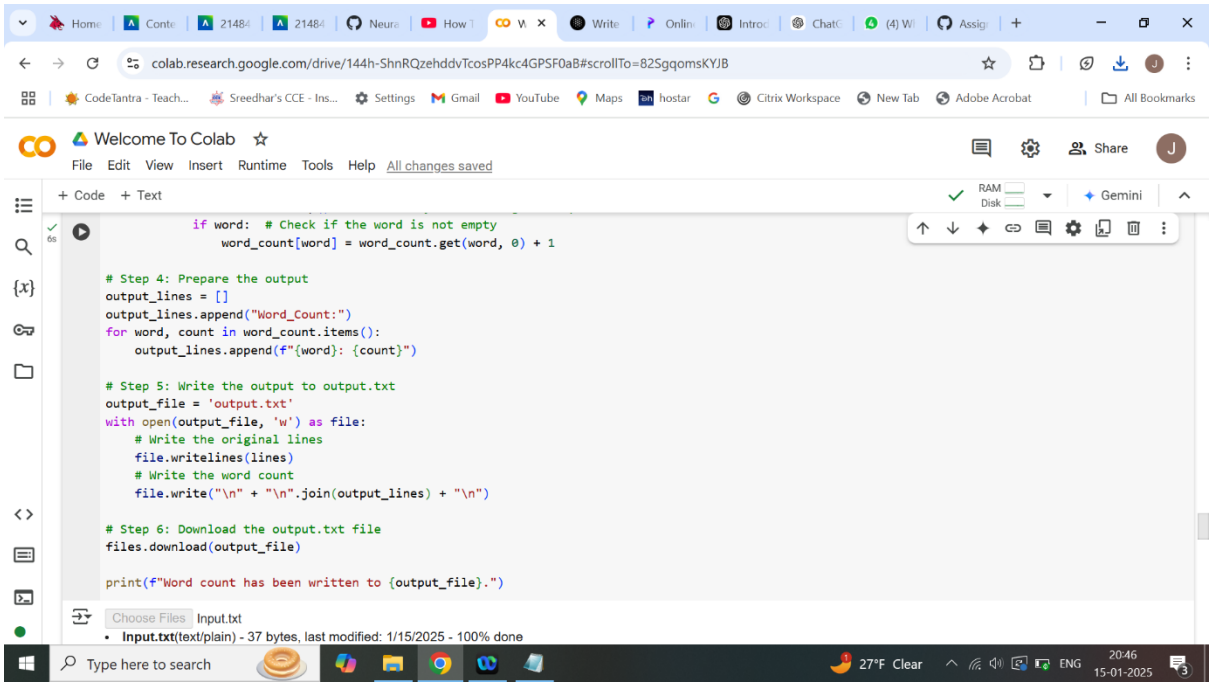
- For example:
  - First_name = “your first name”, last_name = “your last name”
  - Full_name = “your full name”
- Write function named “string_alternative” that returns every other char in the full_name string. Str = “**G**oo**d** e**v**e**n**i**n**g”
  Output: Go vnn

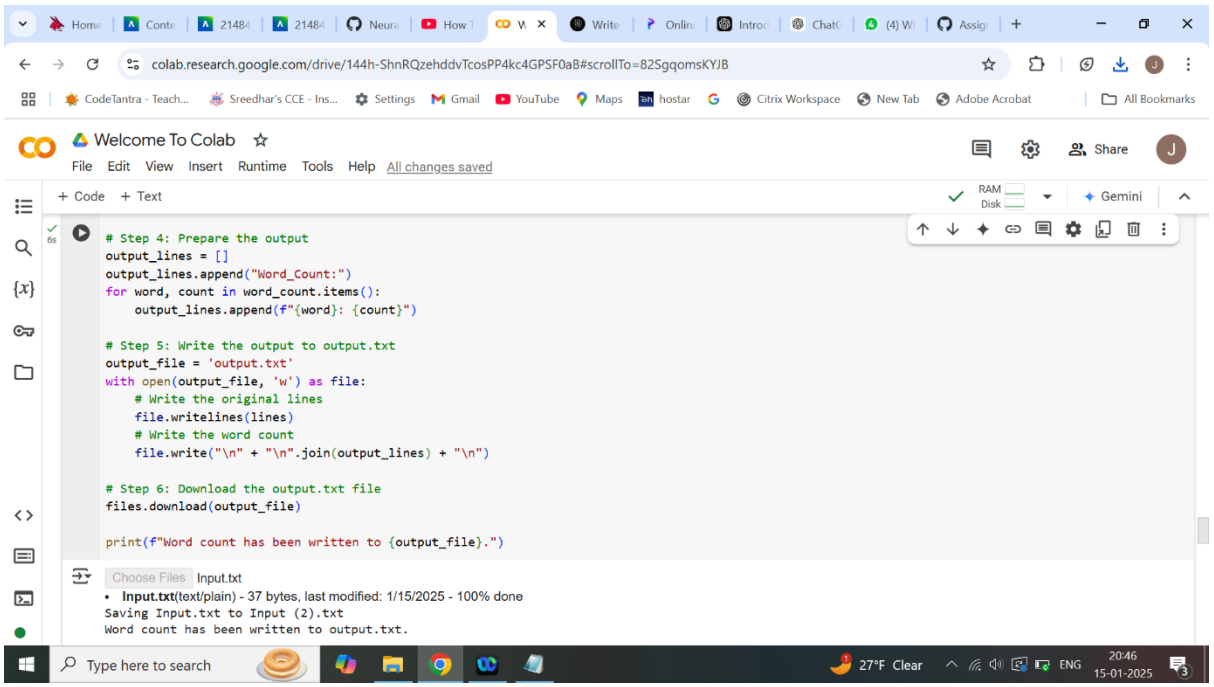




2.Write a python program to find the wordcount in a file (input.txt) for each line and then print the output.
Finally store the output in **output.txt** file.

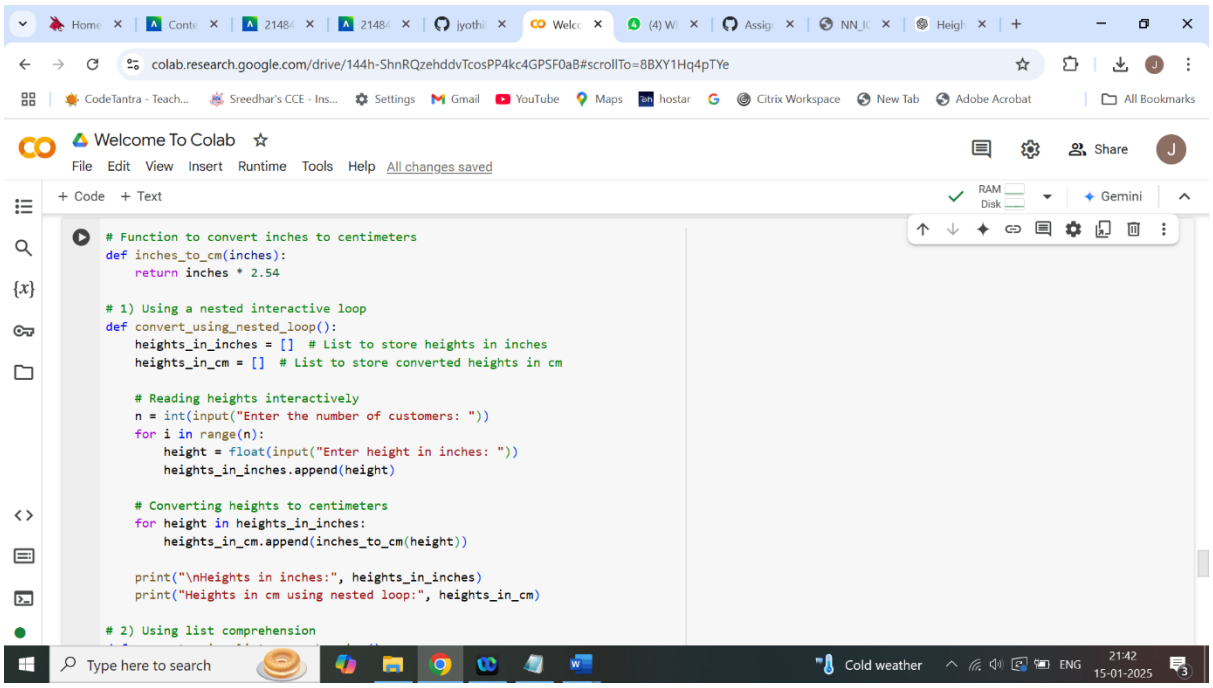


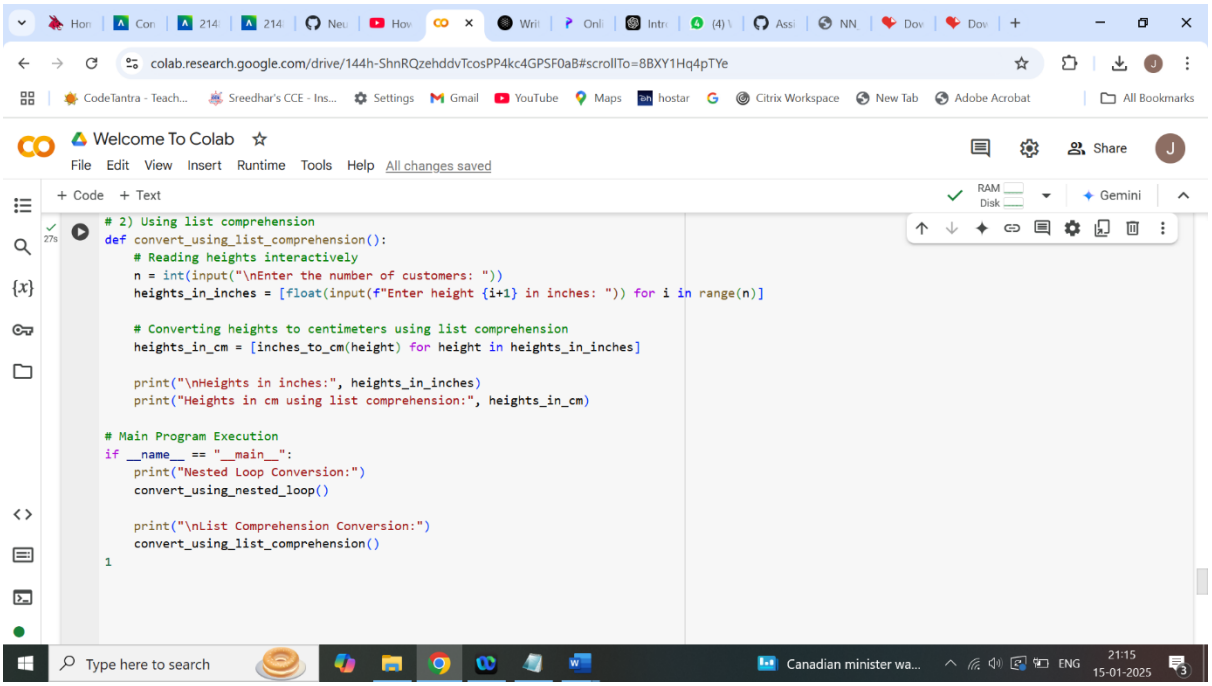

colab.research.google.com/drive/144h-ShnRQzehddvTcosPP4kc4GPSF0aB#scrollTo=82SgqomsKYJB
Welcome To Colab
File Edit View Insert Runtime Tools Help All changes saved
Share
+ Code + Text
Gemini
if word: # Check if the word is not empty
word_count[word] = word_count.get(word, 0) + 1
# Step 4: Prepare the output
output_lines = []
output_lines.append("Word_Count:")
for word, count in word_count.items():
output_lines.append(f"{word}: {count}")
# Step 5: Write the output to output.txt
output_file = 'output.txt'
with open(output_file, 'w') as file:
# Write the original lines
file.writelines(lines)
# Write the word count
file.write("\n" + "\n".join(output_lines) + "\n")
# Step 6: Download the output.txt file
files.download(output_file)
print(f"Word count has been written to {output_file}.")
Choose Files Input.txt
Input.txt(text/plain) - 37 bytes, last modified: 1/15/2025 - 100% done
Type here to search
27°F Clear
ENG
20:46
15-01-2025

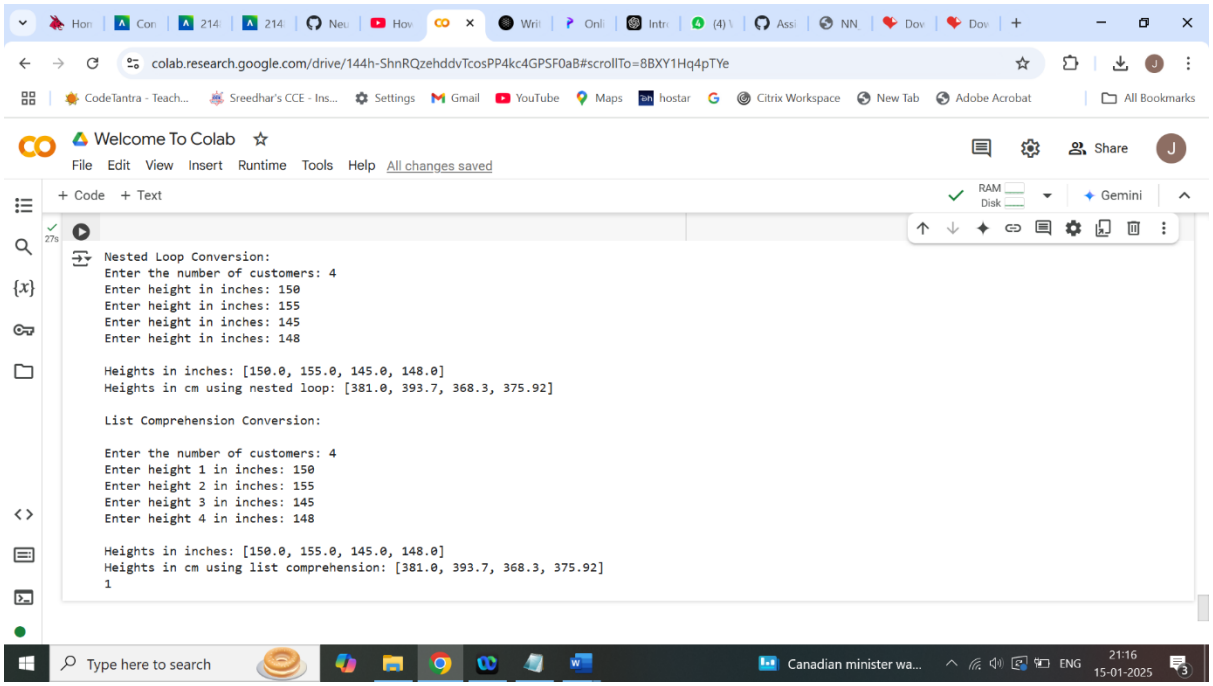

colab.research.google.com/drive/144h-ShnRQzehddvTcosPP4kc4GPSF0aB#scrollTo=82SgqomsKYJB
Welcome To Colab
File Edit View Insert Runtime Tools Help All changes saved
Share
+ Code + Text
Gemini
# Step 4: Prepare the output
output_lines = []
output_lines.append("Word_Count:")
for word, count in word_count.items():
output_lines.append(f"{word}: {count}")
# Step 5: Write the output to output.txt
output_file = 'output.txt'
with open(output_file, 'w') as file:
# Write the original lines
file.writelines(lines)
# Write the word count
file.write("\n" + "\n".join(output_lines) + "\n")
# Step 6: Download the output.txt file
files.download(output_file)
print(f"Word count has been written to {output_file}.")
Choose Files Input.txt
Input.txt(text/plain) - 37 bytes, last modified: 1/15/2025 - 100% done
Saving Input.txt to Input (2).txt
Word count has been written to output.txt.
Type here to search
27°F Clear
ENG
20:46
15-01-2025

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




colab.research.google.com/drive/144h-ShnRQzehddvTcosPP4kc4GPSF0aB#scrollTo=8BXY1Hq4pTYe
Welcome To Colab
File Edit View Insert Runtime Tools Help All changes saved
Share
+ Code + Text
RAM
Disk
Gemini
# 2) Using list comprehension
def convert_using_list_comprehension():
# Reading heights interactively
n = int(input("\nEnter the number of customers: "))
heights_in_inches = [float(input(f"Enter height {i+1} in inches: ")) for i in range(n)]
# Converting heights to centimeters using list comprehension
heights_in_cm = [inches_to_cm(height) for height in heights_in_inches]
print("\nHeights in inches:", heights_in_inches)
print("Heights in cm using list comprehension:", heights_in_cm)
# Main Program Execution
if __name__ == "__main__":
print("Nested Loop Conversion:")
convert_using_nested_loop()
print("\nList Comprehension Conversion:")
convert_using_list_comprehension()
1
Type here to search
Canadian minister wa...
ENG
21:15
15-01-2025


colab.research.google.com/drive/144h-ShnRQzehddvTcosPP4kc4GPSF0aB#scrollTo=8BXY1Hq4pTYe
Welcome To Colab
File Edit View Insert Runtime Tools Help All changes saved
Share
+ Code + Text
RAM
Disk
Gemini
Nested Loop Conversion:
Enter the number of customers: 4
Enter height in inches: 150
Enter height in inches: 155
Enter height in inches: 145
Enter height in inches: 148
Heights in inches: [150.0, 155.0, 145.0, 148.0]
Heights in cm using nested loop: [381.0, 393.7, 368.3, 375.92]
List Comprehension Conversion:
Enter the number of customers: 4
Enter height 1 in inches: 150
Enter height 2 in inches: 155
Enter height 3 in inches: 145
Enter height 4 in inches: 148
Heights in inches: [150.0, 155.0, 145.0, 148.0]
Heights in cm using list comprehension: [381.0, 393.7, 368.3, 375.92]
1
Type here to search
Canadian minister wa...
ENG
21:16
15-01-2025