Lab Exam:

Hall Ticket no: 2403A51241

Task-1: write a python code to calculate the sum of odd and even numbers in a given list using GITHUB copilot along with vs code. use zero shot prompting.

Prompt: Calculate the sum of odd and even numbers in a given list

Code:

# Sum of odd and even numbers in a list

numbers = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]

even\_sum = sum(num for num in numbers if num % 2 == 0)

odd\_sum = sum(num for num in numbers if num % 2 != 0)

print(f"Sum of even numbers: {even\_sum}")

print(f"Sum of odd numbers: {odd\_sum}")

output:

Sum of even numbers: 30

Sum of odd numbers: 25

Task-2: write a python code for a given list of integers, remove duplicates and print the sorted result. GITHUB copilot along with vs code. Use one shot prompting.

Prompt: # Given a list of integers, remove duplicates and print the sorted result.

Code:

# Remove duplicates and sort a list of integers

numbers = [5, 3, 8, 3, 1, 5, 7, 2, 8, 1]

unique\_sorted = sorted(set(numbers))

print("Sorted list without duplicates:", unique\_sorted)

output:

Sorted list without duplicates: [1, 2, 3, 5, 7, 8]

Task-3: write a python function that converts the temperature between celsius, fahrenheit, and kelvin based on user choice. use the cursor AI tool. use few shot prompting.

Prompt: Convert temperature between Celsius, Fahrenheit, and Kelvin

Code:

def convert\_temperature(value, from\_unit, to\_unit):

"""

Converts temperature between Celsius, Fahrenheit, and Kelvin.

from\_unit and to\_unit must be 'C', 'F', or 'K'.

"""

# Convert input to Celsius

if from\_unit == 'C':

celsius = value

elif from\_unit == 'F':

celsius = (value - 32) \* 5 / 9

elif from\_unit == 'K':

celsius = value - 273.15

else:

raise ValueError("Invalid from\_unit")

# Convert Celsius to target unit

if to\_unit == 'C':

return round(celsius, 2)

elif to\_unit == 'F':

return round(celsius \* 9 / 5 + 32, 2)

elif to\_unit == 'K':

return round(celsius + 273.15, 2)

else:

raise ValueError("Invalid to\_unit")

# Examples

print(convert\_temperature(100, 'C', 'F')) # Output: 212.0

print(convert\_temperature(0, 'K', 'C')) # Output: -273.15

print(convert\_temperature(32, 'F', 'K')) # Output: 273.15

output:

212.0

-273.15

273.15

Task-4:

**Prompt :**

write a python function to remove punctuation convert to lowercase and remove stop words from a given text user the cursor ai tool .use zero shot prompting.give better prompt for above question

**code:**

import string

# Sample list of stop words

stop\_words = {"a", "an", "the", "and", "or", "in", "on", "at", "to", "is", "of"}

def clean\_text(text):

"""

Removes punctuation, converts to lowercase, and removes stop words.

"""

# Convert to lowercase

text = text.lower()

# Remove punctuation

text = text.translate(str.maketrans('', '', string.punctuation))

# Remove stop words

words = text.split()

filtered\_words = [word for word in words if word not in stop\_words]

return ' '.join(filtered\_words)

# Example usage

sample\_text = "The quick brown fox jumps over the lazy dog in the park."

cleaned\_text = clean\_text(sample\_text)

print(cleaned\_text)

**output:**

quick brown fox jumps over lazy dog park