COURSE: AI Assisted Coding

NAME : **SANJAY KARUPOTHULA**

BATCH-34

HALLTICKET.NO : **2303A52337**

AIAC-ASS-3.2

Lab 3:

Prompt Engineering – Improving Prompts and Context Management.

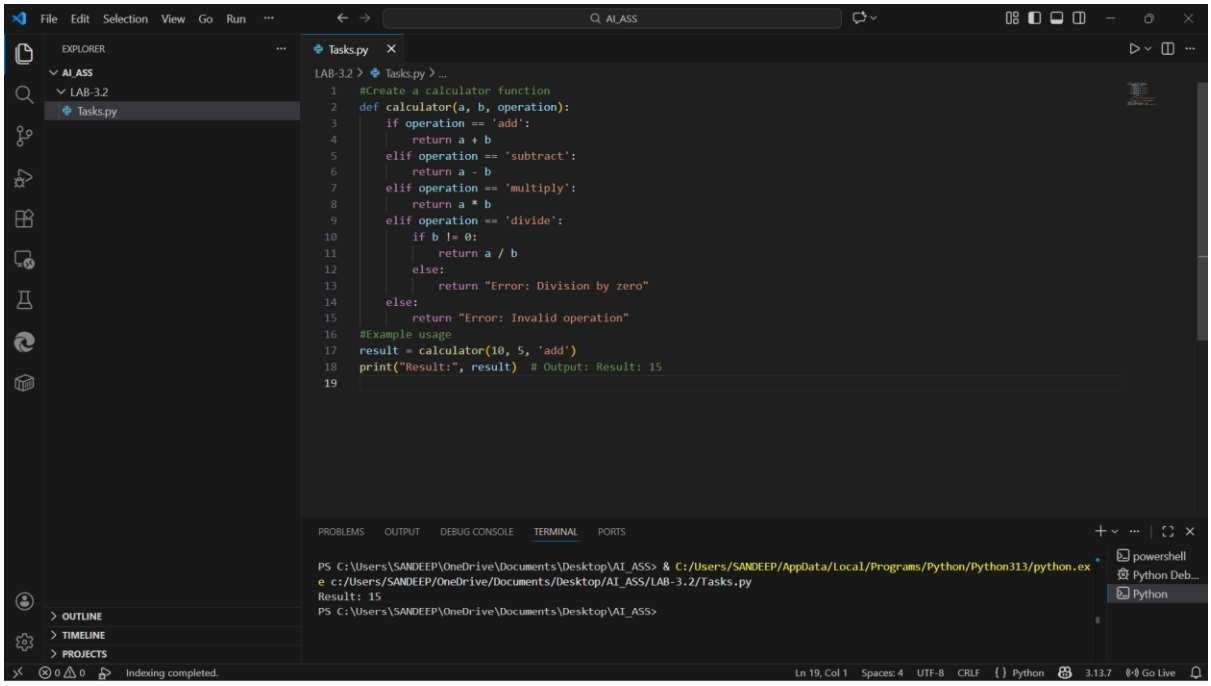
Task Description – 1

Progressive Prompting for Calculator Design

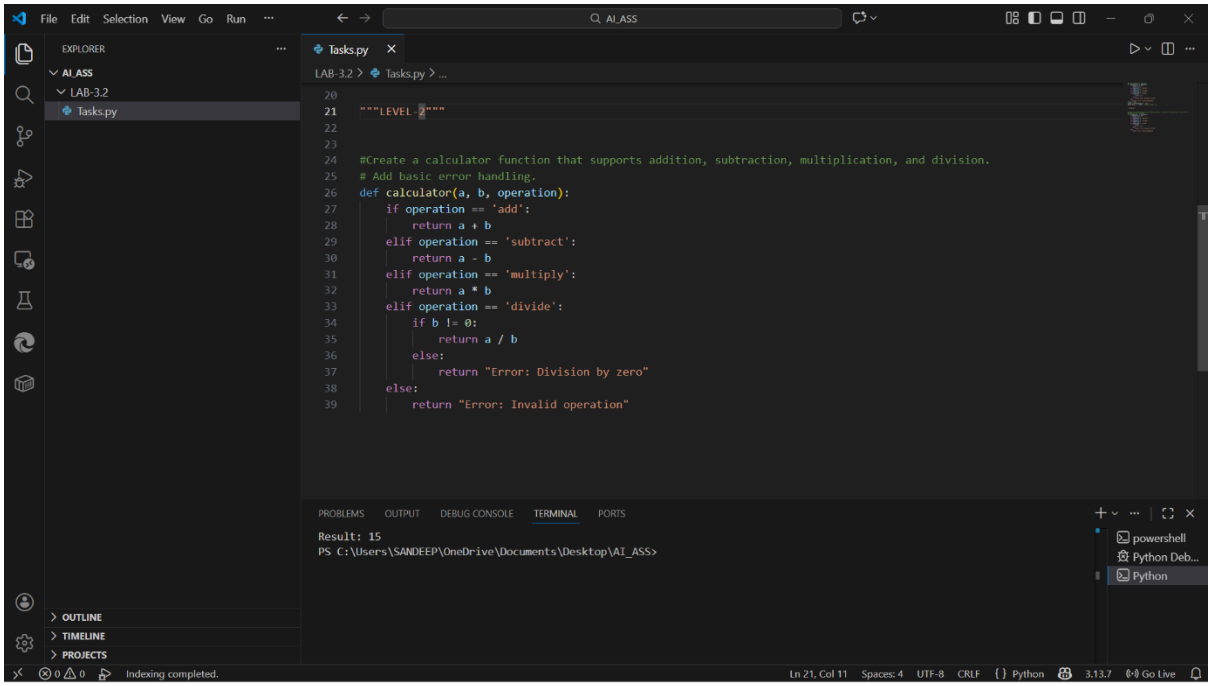
Objective:

To observe how AI-generated code improves as prompt clarity and context increase.

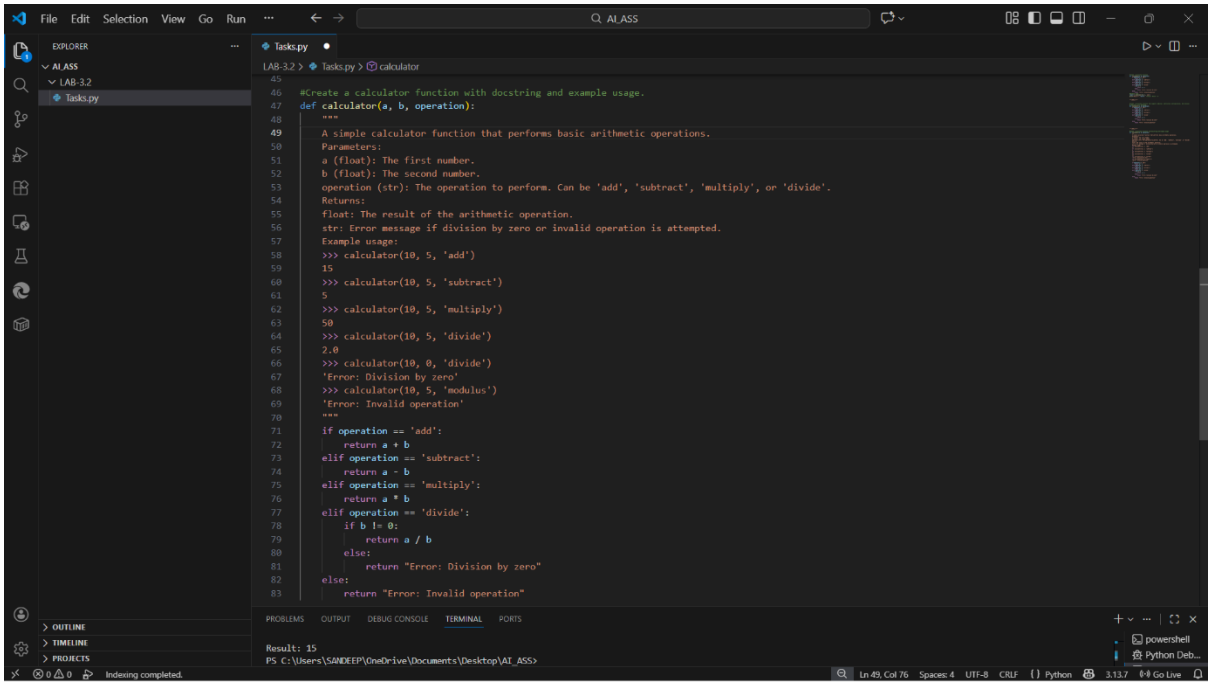
AI Output – Level 1



LEVEL-2:

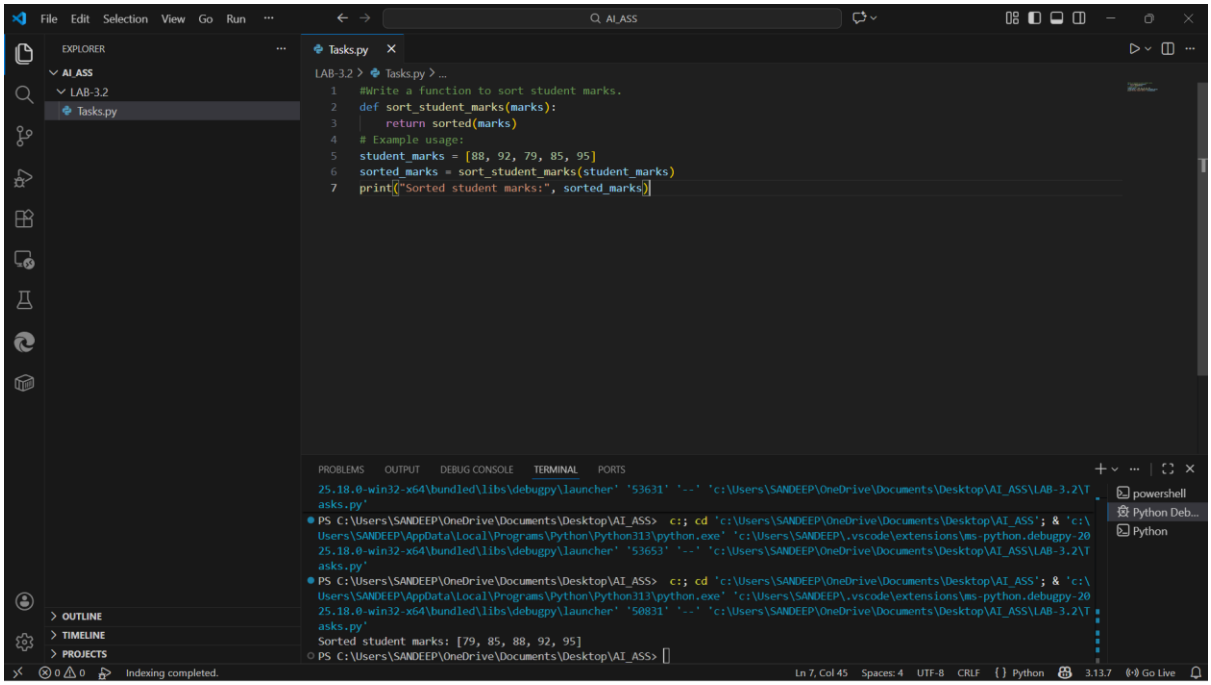


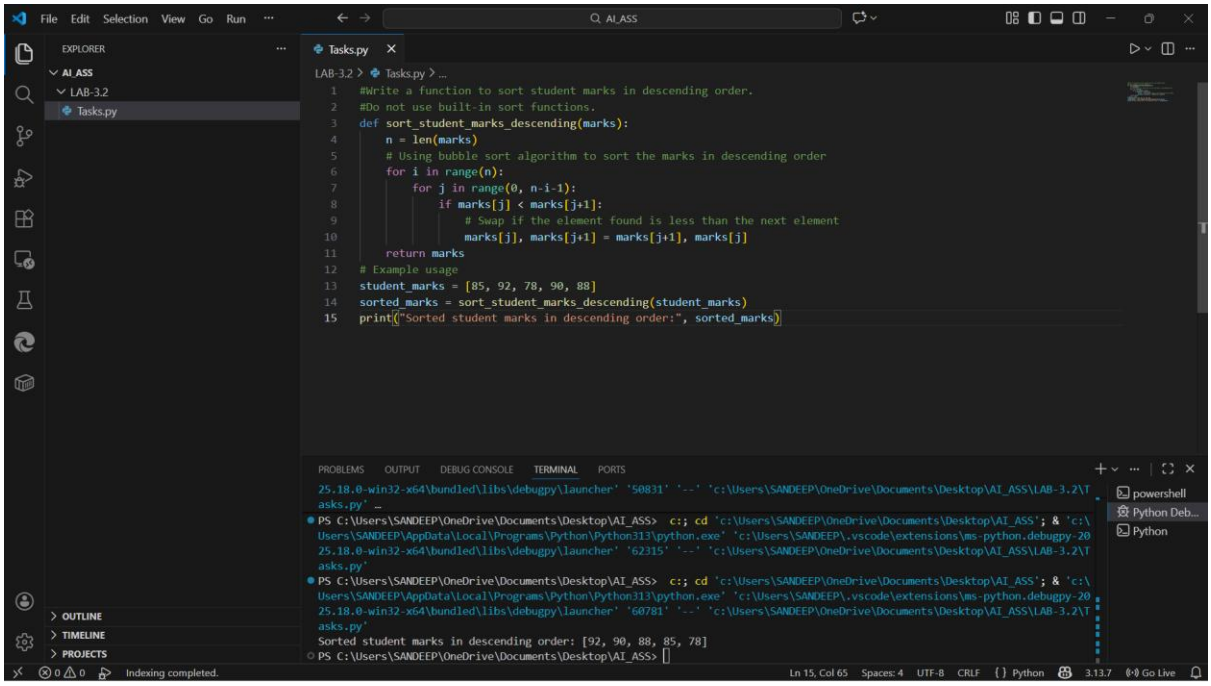
LEVEL-3:



Task -2:

• Refining Prompts for Sorting Logic: Start with a vague prompt for sorting student marks, then refine it to clearly specify sorting order and constraints.

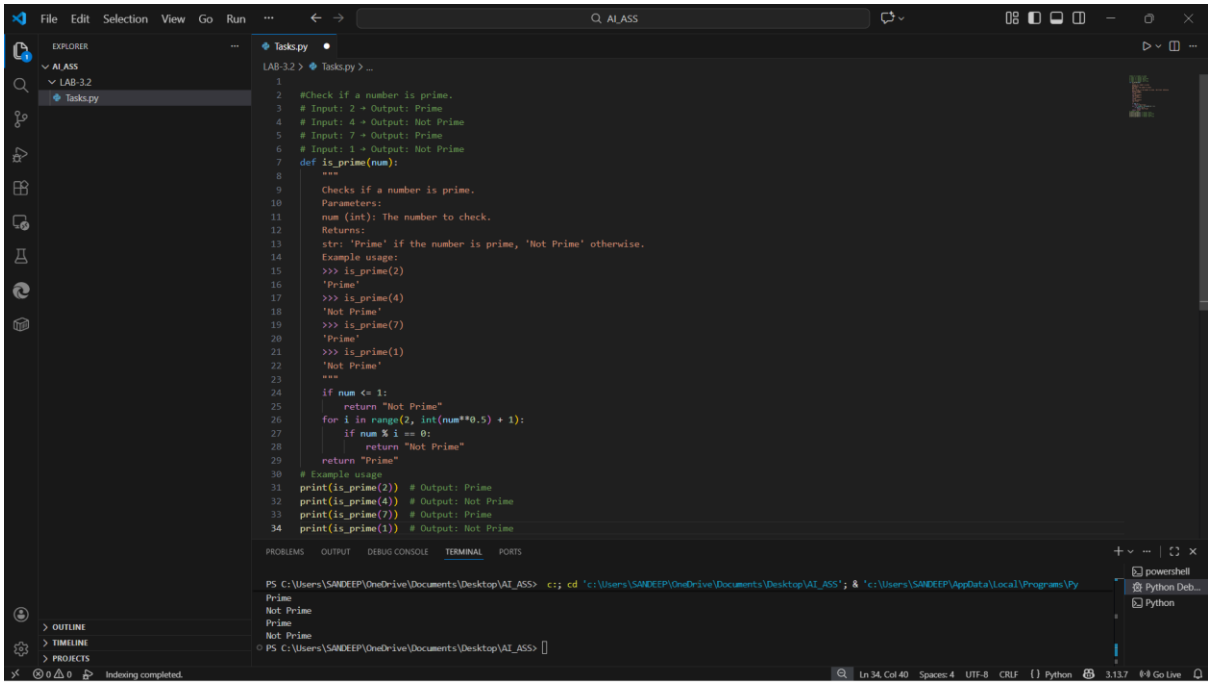




Task -3

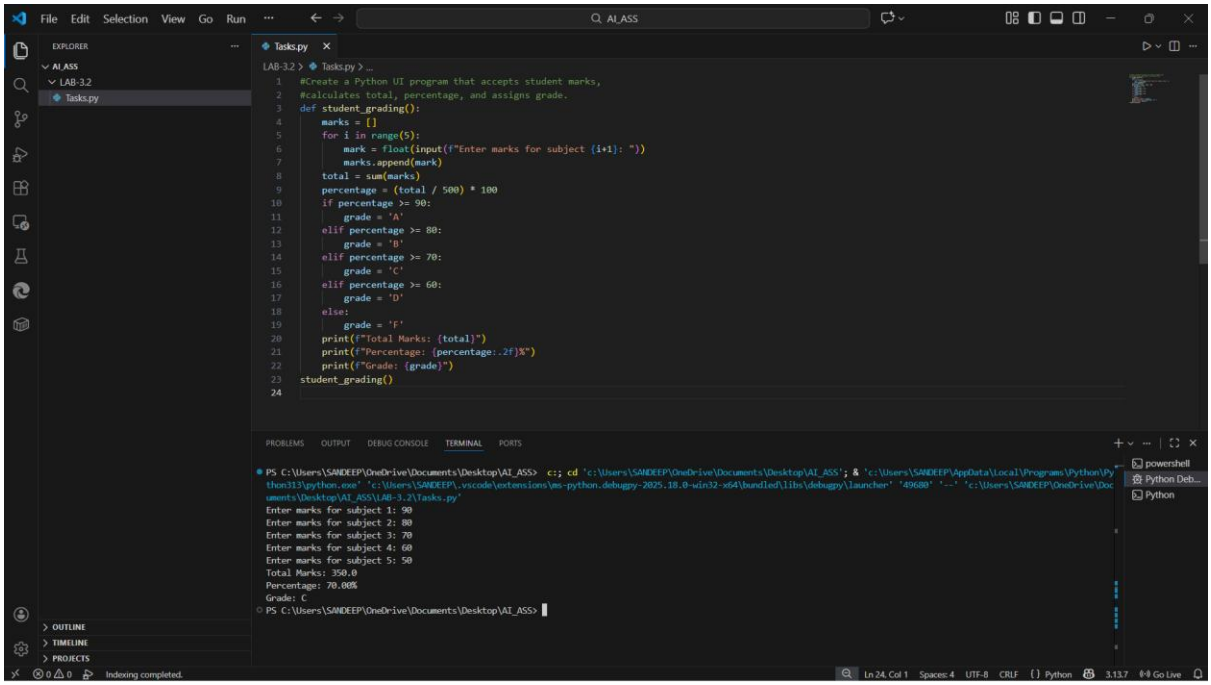
• Few-Shot Prompting for Prime Number Validation: Provide multiple input-output examples for a function that checks whether a number is prime. Observe how few-shot

prompting improves correctness.



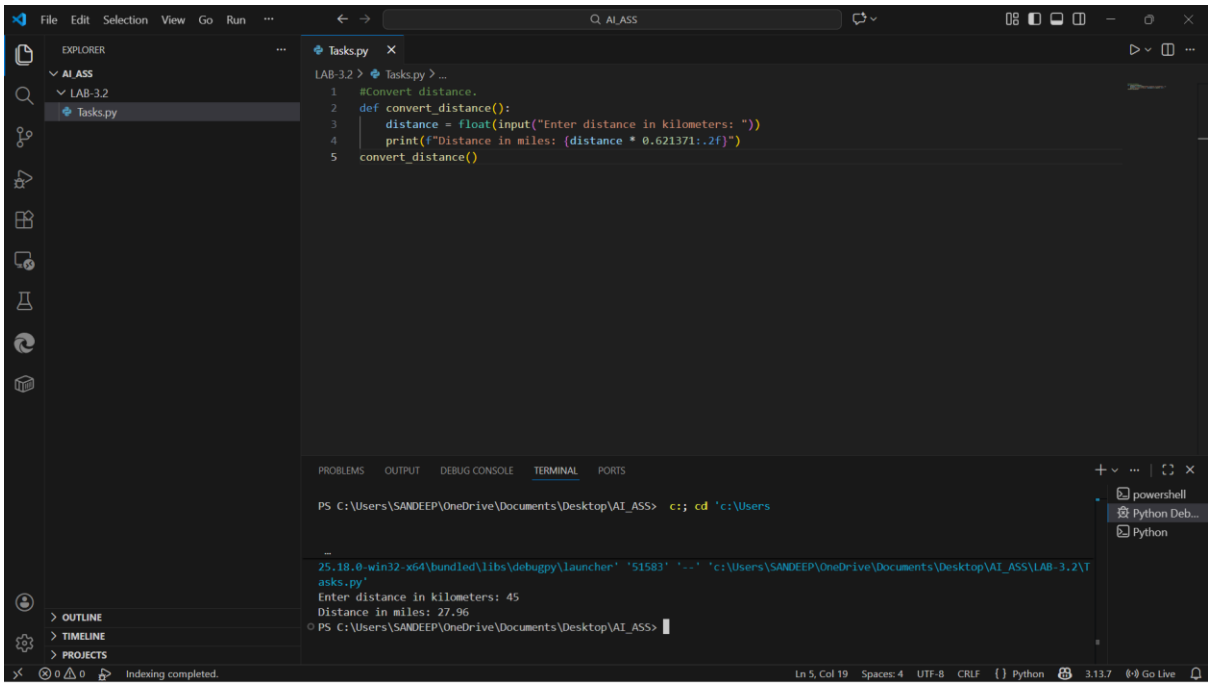
Task -4

• Prompt-Guided UI Design for Student Grading System: Create a user interface for a student grading system that calculates total marks, percentage, and grade based on user input.

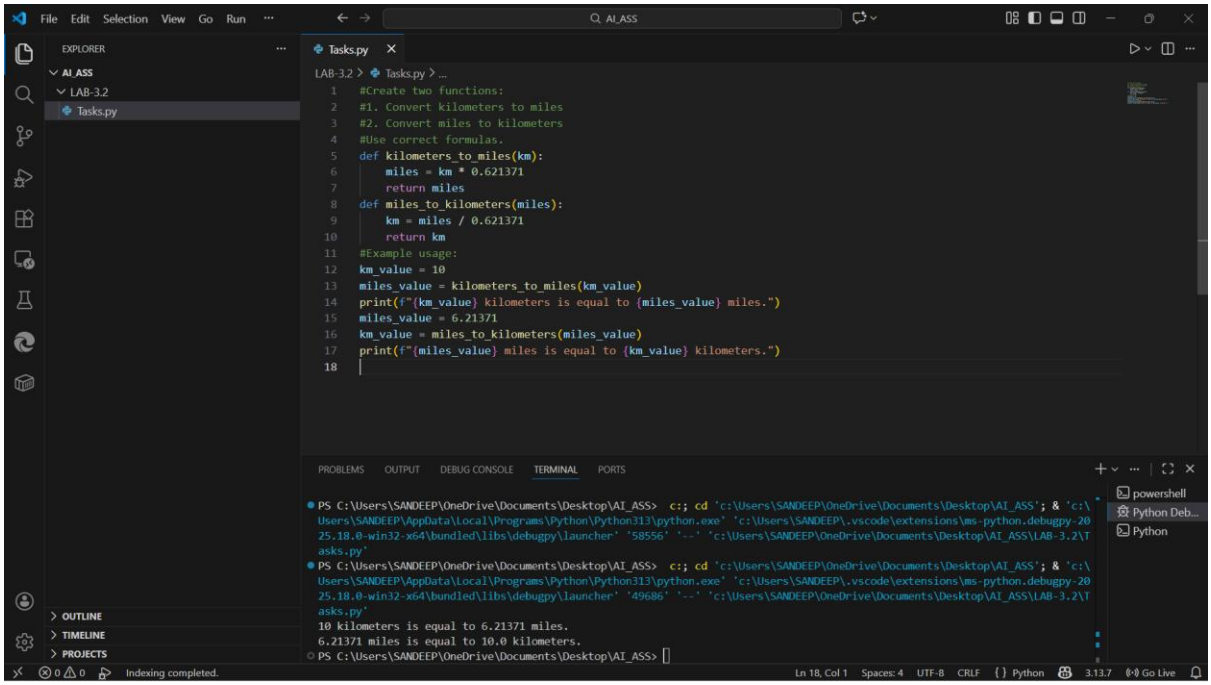


Task Description-5

• Analyzing Prompt Specificity in Unit Conversion Functions: Improving a Unit Conversion Function (Kilometers to Miles and Miles to Kilometers) Using Clear Instructions.



- **(Kilometers to Miles and Miles to Kilometers)**


File Edit Selection View Go Run
AI_ASS
EXPLORER
AI_ASS
LAB-3.2
Tasks.py
Tasks.py
LAB-3.2 > Tasks.py > ...
#Create two functions:
#1. Convert kilometers to miles
#2. Convert miles to kilometers
#Use correct formulas.
def kilometers_to_miles(km):
miles = km * 0.621371
return miles
def miles_to_kilometers(miles):
km = miles / 0.621371
return km
#Example usage:
km_value = 10
miles_value = kilometers_to_miles(km_value)
print(f"{km_value} kilometers is equal to {miles_value} miles.")
miles_value = 6.21371
km_value = miles_to_kilometers(miles_value)
print(f"{miles_value} miles is equal to {km_value} kilometers.")
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\SANDEEP\OneDrive\Documents\Desktop\AI_ASS> c:; cd 'c:\Users\SANDEEP\OneDrive\Documents\Desktop\AI_ASS'; & 'c:\Users\SANDEEP\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\SANDEEP\.vscode\extensions\ms-python.debugpy-2025.18.0-win32-x64\bundled\libs\debugpy\launcher' '58556' '--' 'c:\Users\SANDEEP\OneDrive\Documents\Desktop\AI_ASS\LAB-3.2\Tasks.py'
PS C:\Users\SANDEEP\OneDrive\Documents\Desktop\AI_ASS> c:; cd 'c:\Users\SANDEEP\OneDrive\Documents\Desktop\AI_ASS'; & 'c:\Users\SANDEEP\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\SANDEEP\.vscode\extensions\ms-python.debugpy-2025.18.0-win32-x64\bundled\libs\debugpy\launcher' '49686' '--' 'c:\Users\SANDEEP\OneDrive\Documents\Desktop\AI_ASS\LAB-3.2\Tasks.py'
10 kilometers is equal to 6.21371 miles.
6.21371 miles is equal to 10.0 kilometers.
PS C:\Users\SANDEEP\OneDrive\Documents\Desktop\AI_ASS>
powershell
Python Deb...
Python
OUTLINE
TIMELINE
PROJECTS
Indexing completed.
Ln 18, Col 1 Spaces: 4 UTF-8 CRLF { } Python 3.13.7 Go Live