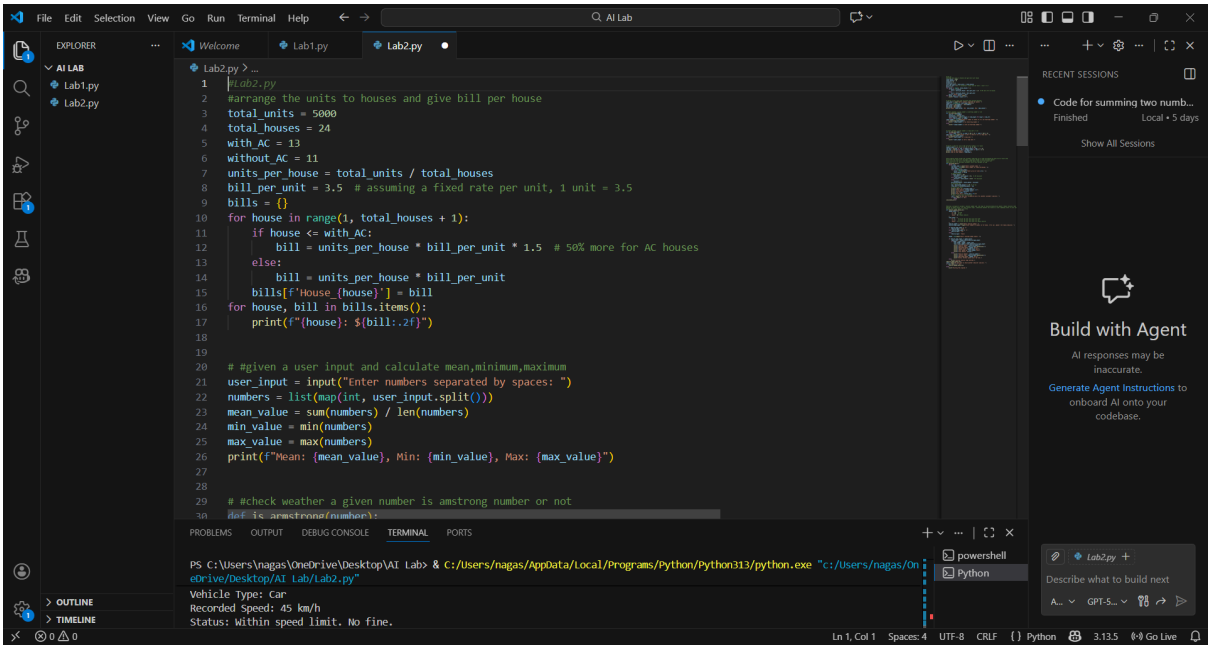
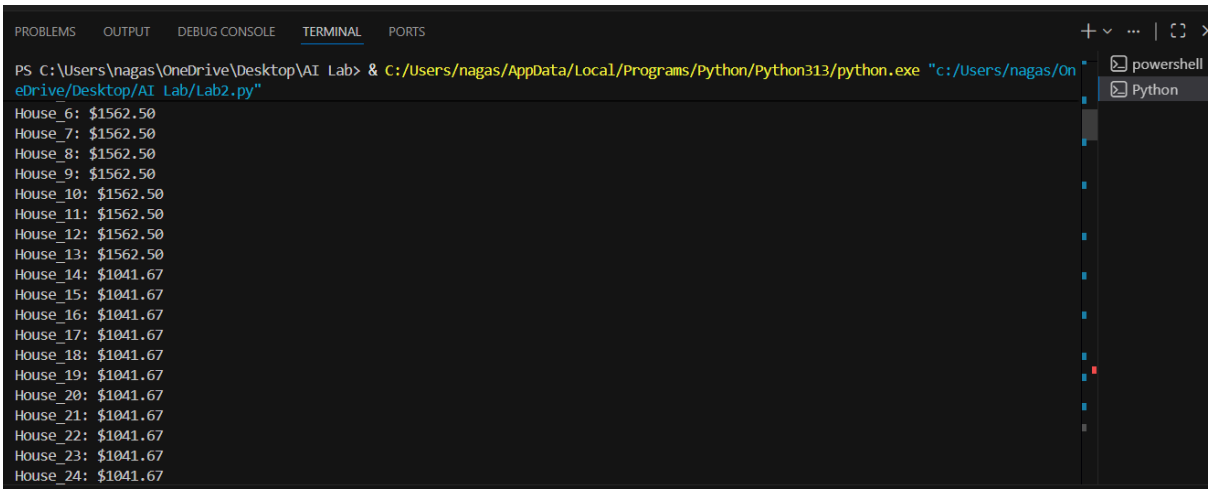
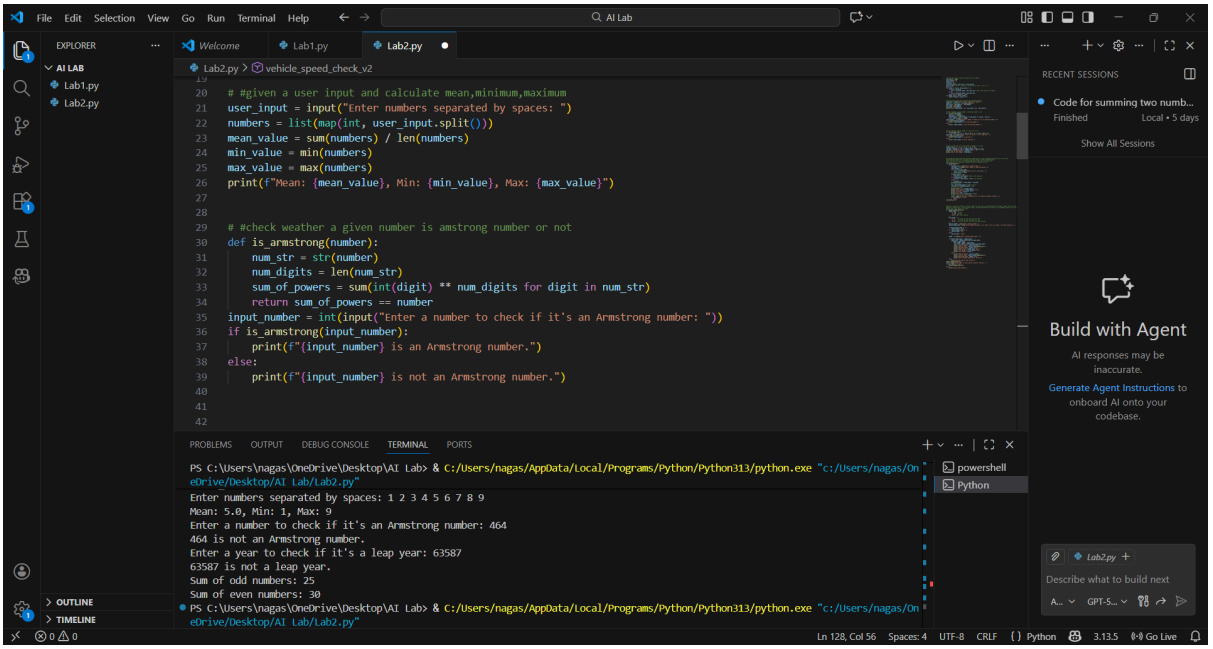
AI Assisted Coding - LAB_1

2303A51247
Batch_18

TASK-1






File Edit Selection View Go Run Terminal Help
AI Lab
EXPLORER
AI LAB
Lab1.py
Lab2.py
Welcome
Lab1.py
Lab2.py
Lab2.py > vehicle_speed_check_v2
# #given a user input and calculate mean,minimum,maximum
user_input = input("Enter numbers separated by spaces: ")
numbers = list(map(int, user_input.split()))
mean_value = sum(numbers) / len(numbers)
min_value = min(numbers)
max_value = max(numbers)
print(f"Mean: {mean_value}, Min: {min_value}, Max: {max_value}")
# #check weather a given number is amstrong number or not
def is_armstrong(number):
num_str = str(number)
num_digits = len(num_str)
sum_of_powers = sum(int(digit) ** num_digits for digit in num_str)
return sum_of_powers == number
input_number = int(input("Enter a number to check if it's an Armstrong number: "))
if is_armstrong(input_number):
print(f"{input_number} is an Armstrong number.")
else:
print(f"{input_number} is not an Armstrong number.")
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\nagas\OneDrive\Desktop\AI Lab> & C:/Users/nagas/AppData/Local/Programs/Python/Python313/python.exe "c:/Users/nagas/OneDrive/Desktop/AI Lab/Lab2.py"
Enter numbers separated by spaces: 1 2 3 4 5 6 7 8 9
Mean: 5.0, Min: 1, Max: 9
Enter a number to check if it's an Armstrong number: 464
464 is not an Armstrong number.
Enter a year to check if it's a leap year: 63587
63587 is not a leap year.
Sum of odd numbers: 25
Sum of even numbers: 30
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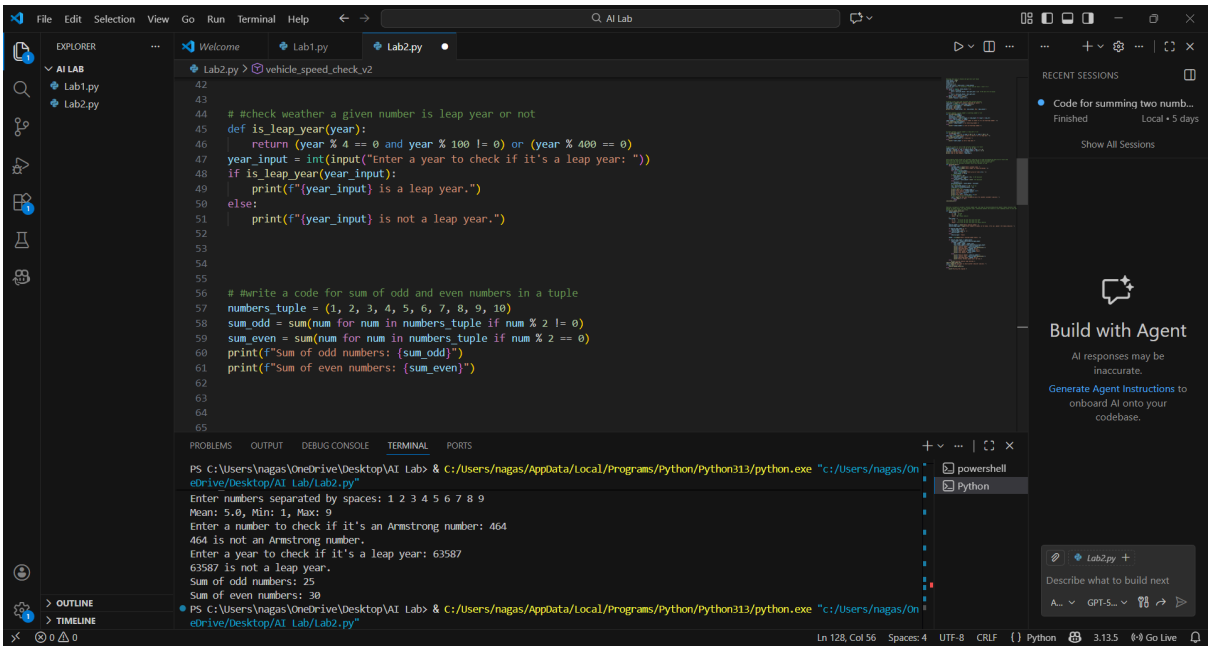
powershell
Python
RECENT SESSIONS
Code for summing two numb...
Finished
Local • 5 days
Show All Sessions
Build with Agent
AI responses may be inaccurate.
Generate Agent Instructions to onboard AI onto your codebase.
Describe what to build next
OUTLINE
TIMELINE
Ln 128, Col 56 Spaces: 4 UTF-8 CRLF Python 3.13.5 Go Live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# #check weather a given number is leap year or not
def is_leap_year(year):
return (year % 4 == 0 and year % 100 != 0) or (year % 400 == 0)
year_input = int(input("Enter a year to check if it's a leap year: "))
if is_leap_year(year_input):
print(f"{year_input} is a leap year.")
else:
print(f"{year_input} is not a leap year.")
# #write a code for sum of odd and even numbers in a tuple
numbers_tuple = (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
sum_odd = sum(num for num in numbers_tuple if num % 2 != 0)
sum_even = sum(num for num in numbers_tuple if num % 2 == 0)
print(f"Sum of odd numbers: {sum_odd}")
print(f"Sum of even numbers: {sum_even}")
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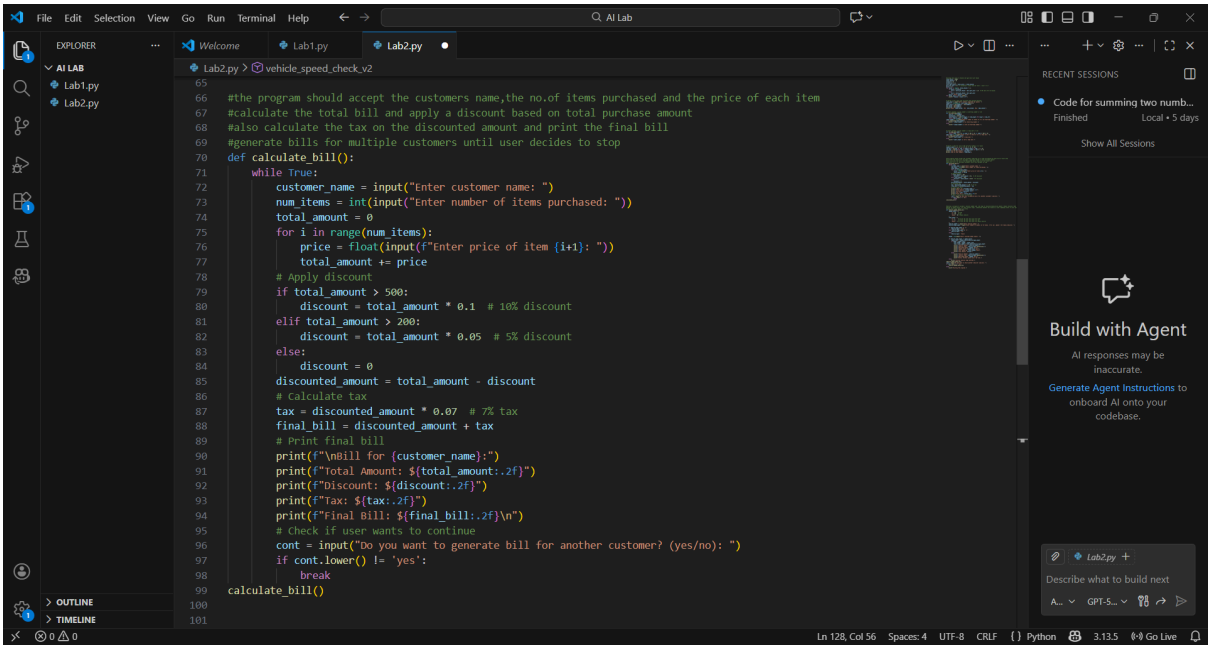
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#the program should accept the customers name,the no.of items purchased and the price of each item
#calculate the total bill and apply a discount based on total purchase amount
#also calculate the tax on the discounted amount and print the final bill
#generate bills for multiple customers until user decides to stop
def calculate_bill():
while True:
customer_name = input("Enter customer name: ")
num_items = int(input("Enter number of items purchased: "))
total_amount = 0
for i in range(num_items):
price = float(input(f"Enter price of item {i+1}: "))
total_amount += price
# Apply discount
if total_amount > 500:
discount = total_amount * 0.1 # 10% discount
elif total_amount > 200:
discount = total_amount * 0.05 # 5% discount
else:
discount = 0
discounted_amount = total_amount - discount
# Calculate tax
tax = discounted_amount * 0.07 # 7% tax
final_bill = discounted_amount + tax
# Print final bill
print(f"\nBill for {customer_name}:")
print(f"Total Amount: ${total_amount:.2f}")
print(f"Discount: ${discount:.2f}")
print(f"Tax: ${tax:.2f}")
print(f"Final Bill: ${final_bill:.2f}\n")
# Check if user wants to continue
cont = input("Do you want to generate bill for another customer? (yes/no): ")
if cont.lower() != 'yes':
break
calculate_bill()
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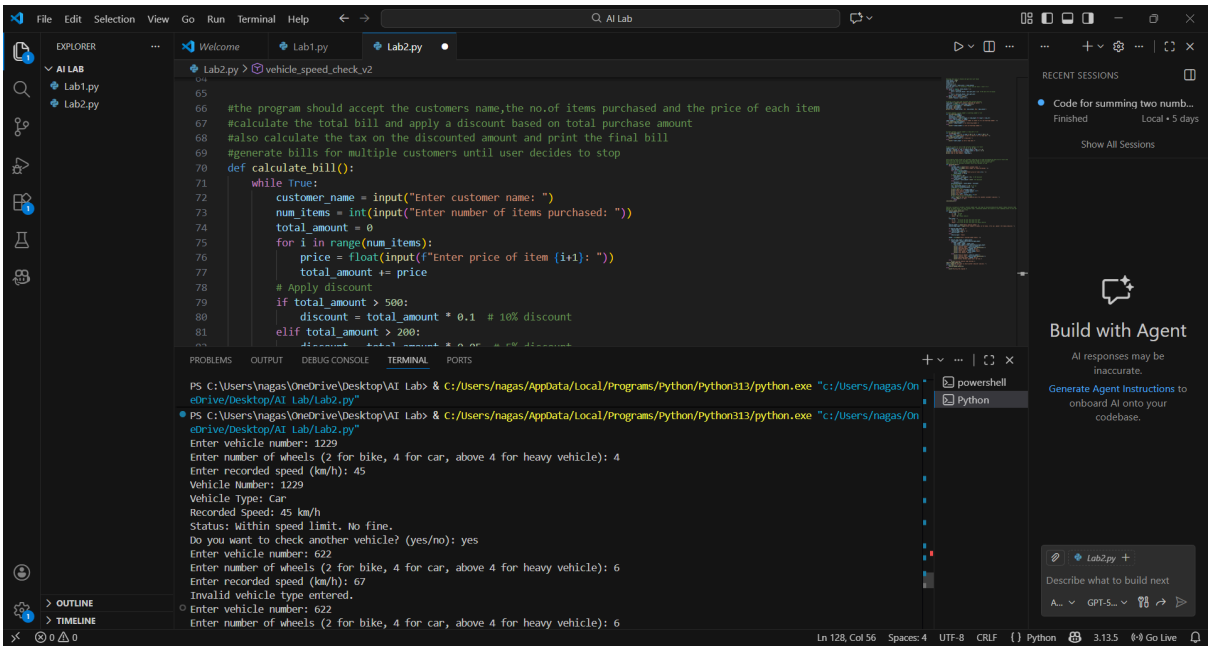
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Enter vehicle number: 1229
Enter number of wheels (2 for bike, 4 for car, above 4 for heavy vehicle): 4
Enter recorded speed (km/h): 45
Vehicle Number: 1229
Vehicle Type: Car
Recorded Speed: 45 km/h
Status: Within speed limit. No fine.
Do you want to check another vehicle? (yes/no): yes
Enter vehicle number: 622
Enter number of wheels (2 for bike, 4 for car, above 4 for heavy vehicle): 6
Enter recorded speed (km/h): 67
Invalid vehicle type entered.
Enter vehicle number: 622
Enter number of wheels (2 for bike, 4 for car, above 4 for heavy vehicle): 6
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