CAB COMPANY WEB APPLICATION

About the Deployment

This document provides a snapshot of the production processes involved in creating an interactive Cab platform utilizing Flask, a robust web framework for Python. It serves as a continuation of the previously offered insights into the performance of Pink Cab and Yellow Cab companies. The initial analysis delved into cab transactions, holidays, and customer demographics, revealing key metrics such as the number of transactions, transactions on holidays, number of customers, cost per kilometer, price charged per kilometer, and average profit per kilometer. Additionally, it included a one-year profit forecast for both Pink Cab and Yellow Cab, initially implemented with Facebook Prophet and later with Scikit-Learn due to additional features that needed consideration.

Key Features:

Calculate Price and Profit: Users can input the distance of a trip (with plans for automation improvement) and select the cab company (Pink Cab or Yellow Cab) to calculate the trip's price and profit.

How to Use:

Visit the home page to access the "Calculate Price and Profit" feature.

Input the distance of your trip in kilometers and select the cab company (Pink Cab or Yellow Cab).

Click "Calculate" to view the price and profit for the specified trip.

Important Note:

The application is designed for educational and analytical purposes, forming part of the tasks undertaken during a data science internship at Data Glacier. It utilizes a dataset containing information on cab transactions, customer details, and holiday data. The data has undergone preprocessing and analysis to provide meaningful insights into the operations of the cab companies.

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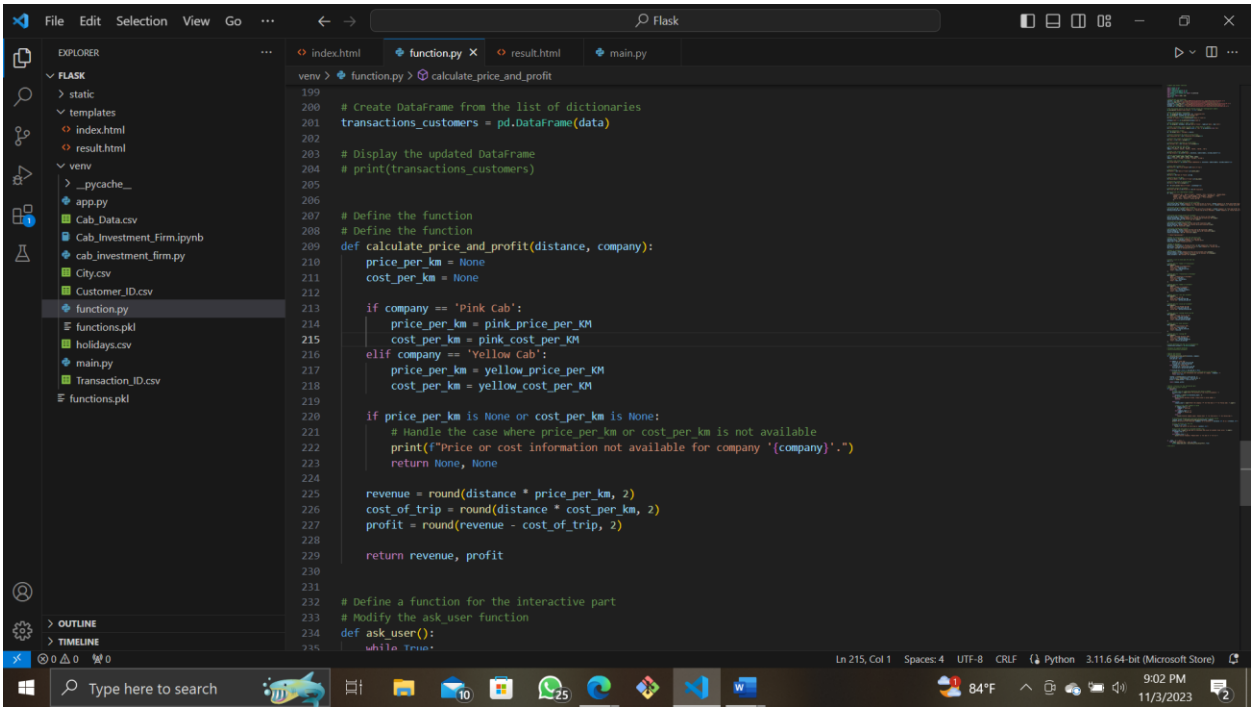
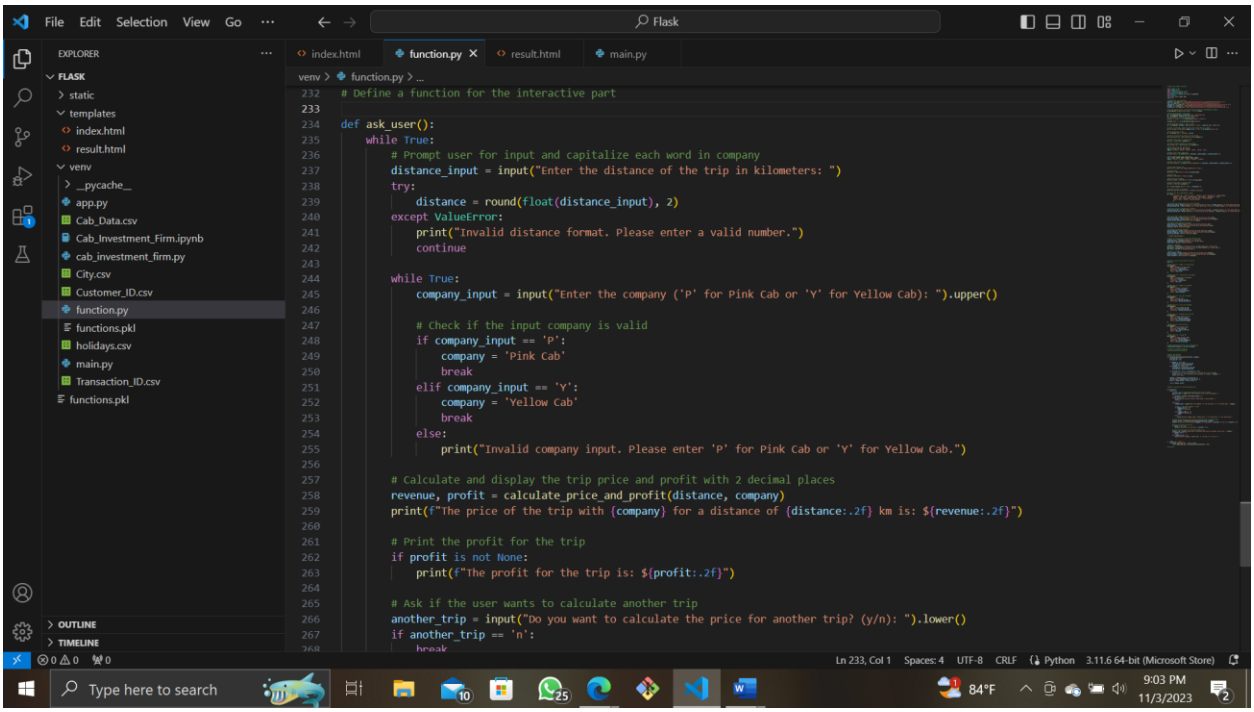
Function Definition:



```
# Create DataFrame from the list of dictionaries
transactions_customers = pd.DataFrame(data)

# Display the updated DataFrame
# print(transactions_customers)


# Define the function
# Define the function
def calculate_price_and_profit(distance, company):
    price_per_km = None
    cost_per_km = None

    if company == 'Pink Cab':
        price_per_km = pink_price_per_KM
        cost_per_km = pink_cost_per_KM
    elif company == 'Yellow Cab':
        price_per_km = yellow_price_per_KM
        cost_per_km = yellow_cost_per_KM

    if price_per_km is None or cost_per_km is None:
        # Handle the case where price_per_km or cost_per_km is not available
        print(f"Price or cost information not available for company '{company}'.")
        return None, None

    revenue = round(distance * price_per_km, 2)
    cost_of_trip = round(distance * cost_per_km, 2)
    profit = round(revenue - cost_of_trip, 2)

    return revenue, profit


# Define a function for the interactive part
# Modify the ask_user function
def ask_user():
```



```
# Define a function for the interactive part

def ask_user():
    while True:
        # Prompt user for input and capitalize each word in company
        distance_input = input("Enter the distance of the trip in kilometers: ")
        try:
            distance = round(float(distance_input), 2)
        except ValueError:
            print("Invalid distance format. Please enter a valid number.")
            continue

        while True:
            company_input = input("Enter the company ('P' for Pink Cab or 'Y' for Yellow Cab): ").upper()

            # Check if the input company is valid
            if company_input == 'P':
                company = 'Pink Cab'
                break
            elif company_input == 'Y':
                company = 'Yellow Cab'
                break
            else:
                print("Invalid company input. Please enter 'P' for Pink Cab or 'Y' for Yellow Cab.")

        # Calculate and display the trip price and profit with 2 decimal places
        revenue, profit = calculate_price_and_profit(distance, company)
        print(f"The price of the trip with {company} for a distance of {distance:.2f} km is: ${revenue:.2f}")

        # Print the profit for the trip
        if profit is not None:
            print(f"The profit for the trip is: ${profit:.2f}")

        # Ask if the user wants to calculate another trip
        another_trip = input("Do you want to calculate the price for another trip? (y/n): ").lower()
        if another_trip == 'n':
            break
```

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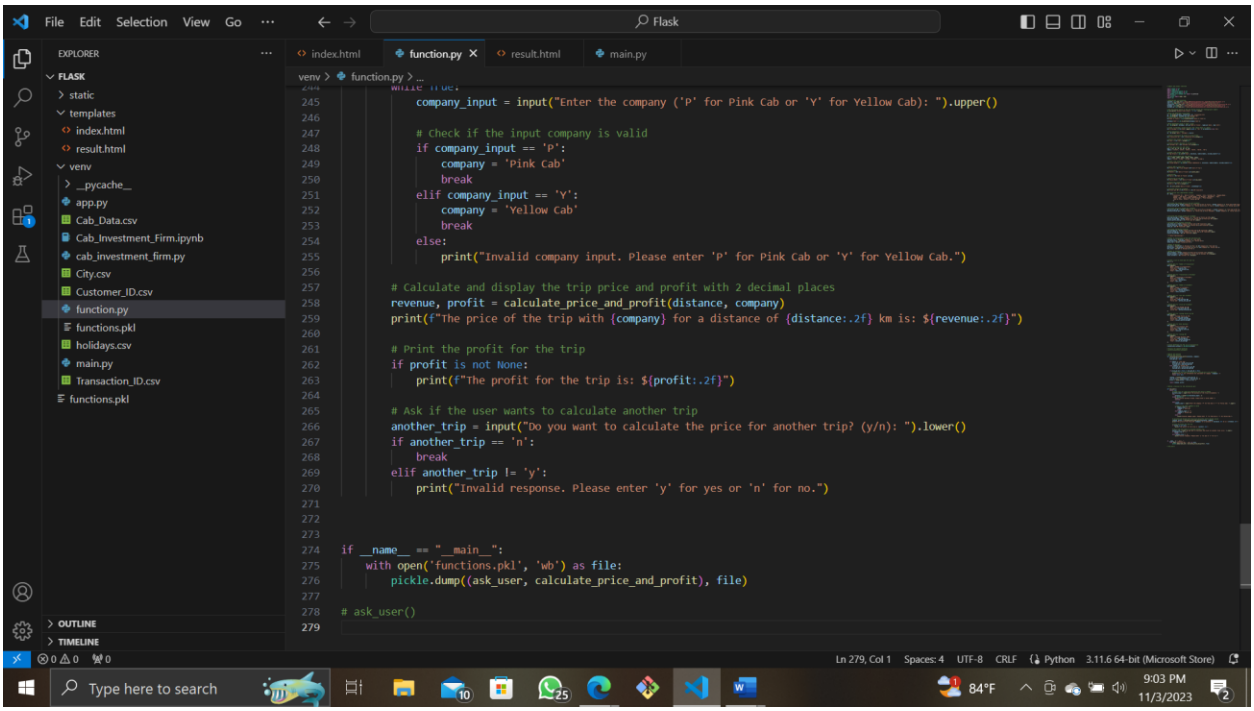
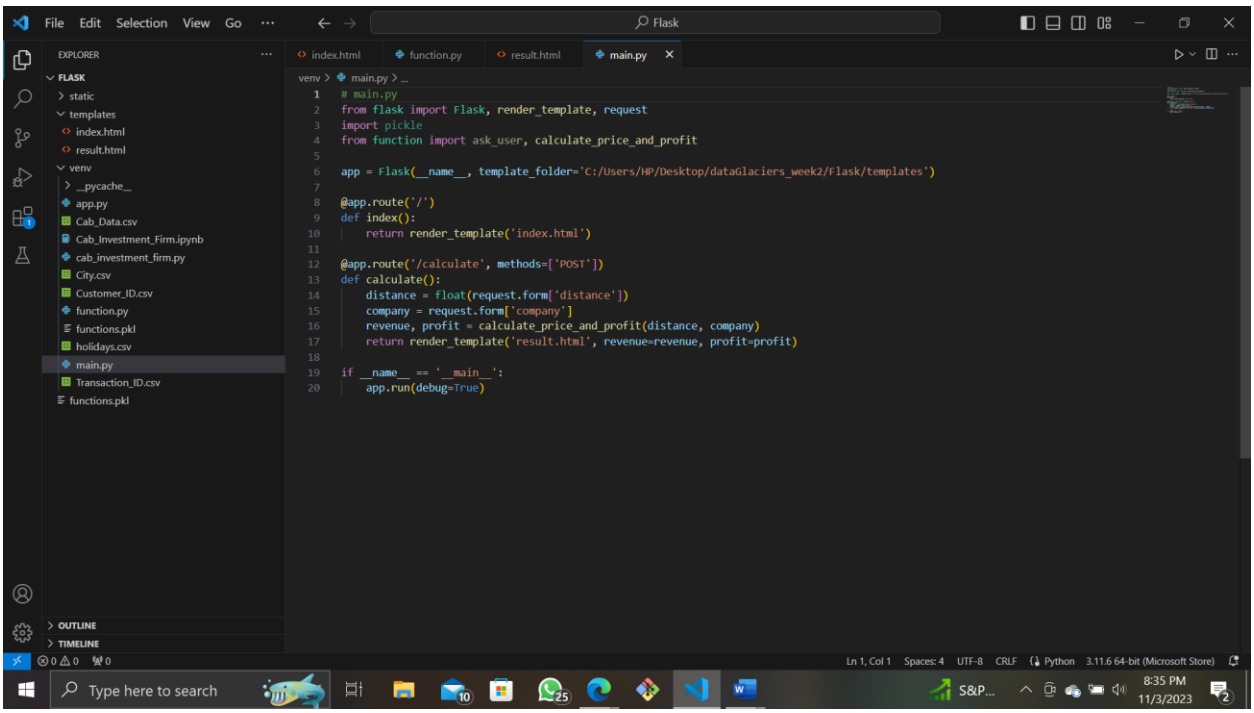


Main App Snapshot:



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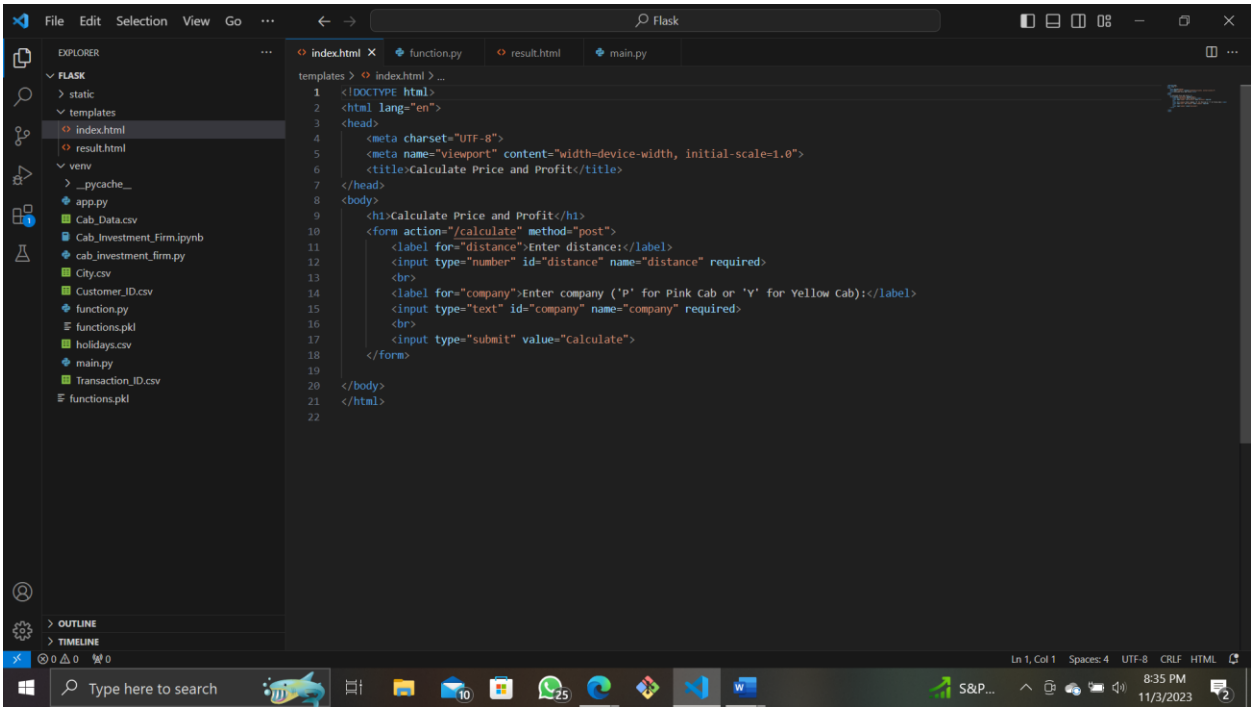
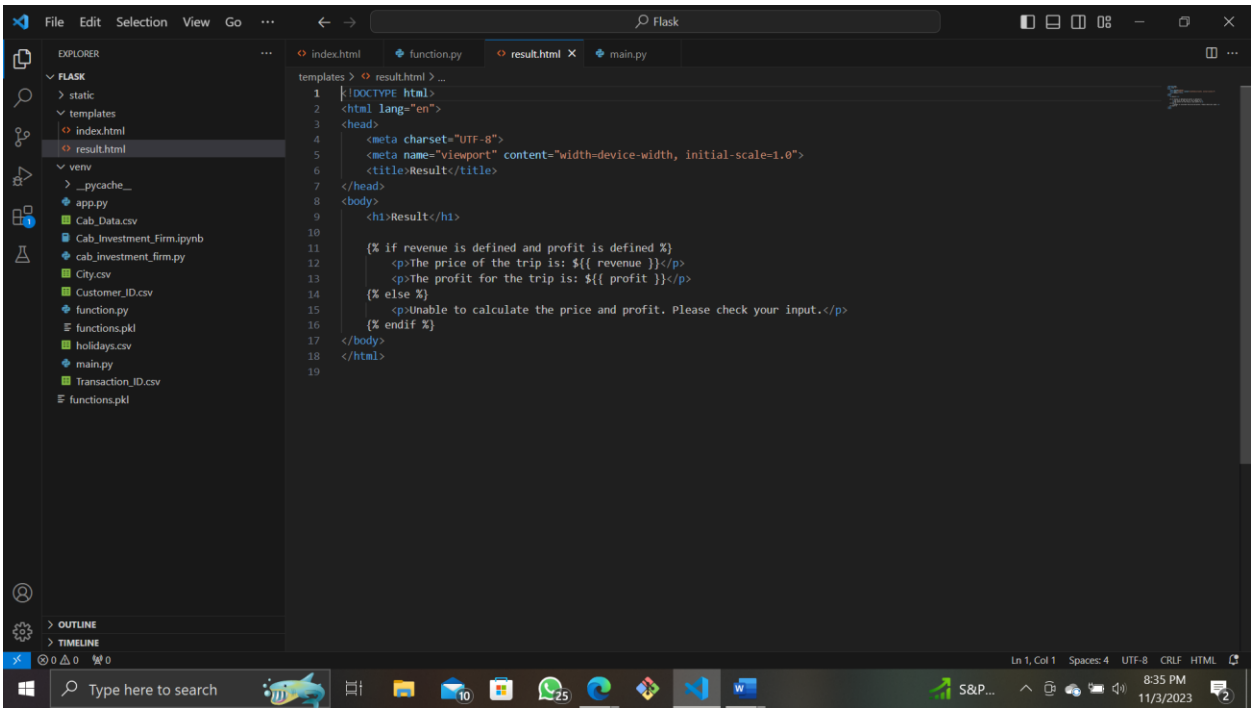
Homepage Snapshot:



Result Page Snapshot:



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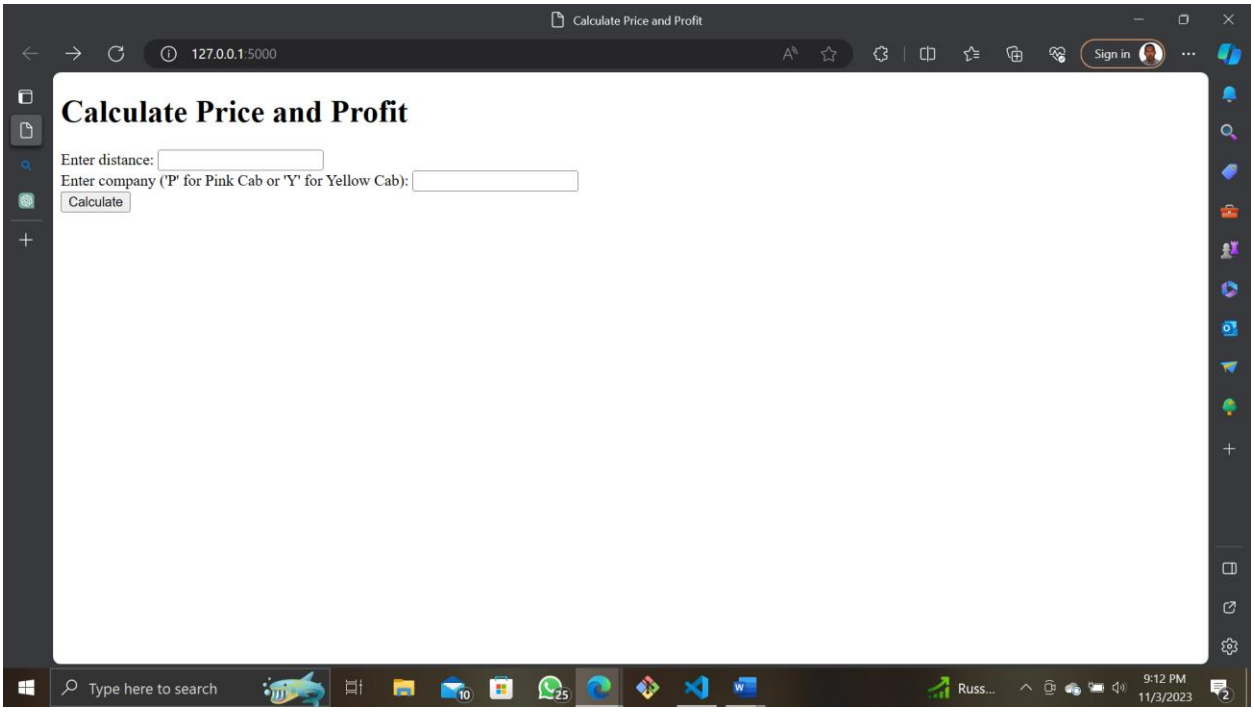
Homepage View:



Name: Tomisin Adeniyi

Batch code: LISUM26

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