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In [2]: import csv
import os

def menu():
    print("1. Individual Book")
    print("2. Company Book")
    print("3. Exit")

# individual book
def i_book():
    filename = input('Enter the filename of the CSV file to open: ')

    # Read the CSV file into a list of dictionaries
    file_path = os.path.join('./data', filename)
    with open(file_path, 'r') as csvfile:
        reader = csv.DictReader(csvfile)
        data = list(reader)

    # Function to add a new row to the CSV data
    def create_row():
        file_path = os.path.join('./data', filename)
        with open(file_path, 'r') as csvfile:
            reader = csv.DictReader(csvfile)
            data = list(reader)
        if len(data) == 0:
            highest_id = 0
        else:
            highest_id = max([int(row['Individual Id']) for row in data])
        id = highest_id + 1
        fname = input('Enter an First name: ')
        lname = input('Enter an Last name: ')
        wp = int(input('Enter a Work Pno: '))
        pp = int(input('Enter a Private Pno: '))
        addr = input('Enter a Address: ')
        new_row = {'Individual Id': id, 'First Name': fname, 'Last Name': lname, 'Work Ph.No':
                    'Address': addr}
        data.append(new_row)
        file_path = os.path.join('./data', filename)
        with open(file_path, 'w', newline='') as csvfile:
            fieldnames = ['Individual Id', 'First Name', 'Last Name', 'Work Ph.No', 'Private
            writer = csv.DictWriter(csvfile, fieldnames=fieldnames)
            writer.writeheader()
            writer.writerows(data)
        print(f'Data saved to {filename}')

    # Function to read the CSV data
    def read_data():
        file_path = os.path.join('./data', filename)
        with open(file_path, 'r') as csvfile:
            reader = csv.DictReader(csvfile)
            readdata = list(reader)
        if len(readdata) != 0:
            for row in readdata:
                print(row)
        else:
            print("The Csv File is Empty No Data Is available")

    def search_string():
        file_path = os.path.join('./data', filename)
        with open(file_path, 'r') as csvfile:

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        reader = csv.DictReader(csvfile)
        dataSearch = list(reader)
        sreach_string = input('Enter an search Name: ')
        # if search_string.isnumeric():
        #     user_input = int(search_string)
        results = []
        for row in dataSearch:
            for field in row:
                if sreach_string.lower() in row['First Name']:
                    results.append(row)
                    break
        if len(results) != 0:
            print(results)
        else:
            print("result not found")

# Function to delete a row from the CSV data
def update_row():
    file_path = os.path.join('./data', 'i.csv')
    # Open the CSV file in 'read' mode and store the contents in a list
    with open(file_path, mode='r') as csv_file:
        csv_reader = csv.reader(csv_file)
        datatoup = [row for row in csv_reader]

    # Display the contents of the CSV file
    print('Current data in the CSV file:')
    for row in datatoup:
        print(row)

    # Ask the user which row they want to update
    row_num = int(input('Which row do you want to update? (Enter a number): '))

    # Ask the user for the new data
    new_data = input('Enter the new data for this row, separated by commas: ')

    # Split the user's input into a list of values
    new_data_list = new_data.split(',')

    # Update the selected row in the 'data' list
    datatoup[row_num] = new_data_list

    # Open the CSV file in 'write' mode and write the updated data to it
    with open("./data/i.csv", mode='w', newline='') as csv_file:
        csv_writer = csv.writer(csv_file)
        print("writing data")
        csv_writer.writerows(datatoup)

    # Display the updated contents of the CSV file
    print('Updated data in the CSV file:')

    for row1 in datatoup:
        print(row1)

# Function to delete a row from the CSV data
def delete_row():
    file_path = os.path.join('./data', 'i.csv')
    # Open the CSV file in 'read' mode and store the contents in a list
    with open(file_path, mode='r') as csv_file:
        csv_reader = csv.reader(csv_file)
        dataDelete1 = [row for row in csv_reader]
    index = int(input("Enter id to delete: "))
    if index < 0 or index >= len(dataDelete1):
        print("your are enter Id Not in the list")

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else:
    del dataDelete1[index]
    with open("./data/i.csv", mode='w', newline='') as csv_file:
        csv_writer = csv.writer(csv_file)
        print("writing data")
        csv_writer.writerows(dataDelete1)
        print("Contact deleted successfully!")

# # Function to save the CSV data to the same file
# def save_data():
#     file_path = os.path.join('./data', filename)
#     with open(file_path, 'w', newline='') as csvfile:
#         fieldnames = ['Individual Id', 'First Name', 'Last Name', 'Work Ph.No', 'Privat
#         writer = csv.DictWriter(csvfile, fieldnames=fieldnames)
#         writer.writeheader()
#         writer.writerows(data)
#         print(f'Data saved to {filename}')

# Main loop to prompt the user for CRUD operations
while True:
    print('Enter "1" to create a new row')
    print('Enter "2" to read the data')
    print('Enter "3" to update a row')
    print('Enter "4" to delete a row')
    print('Enter "5" to search data')
    print('Enter "6" to quit')
    choice = input('Enter your choice: ')
    if choice == '1':
        create_row()
    elif choice == '2':
        read_data()
    elif choice == '3':
        update_row()
    elif choice == '4':
        delete_row()
    elif choice == '5':
        search_string()
    elif choice == '6':
        break
    else:
        print('Invalid choice')

# Company book
def c_book():
    filename = input('Enter the filename of the CSV file to open: ')
    file_path = os.path.join('./data', filename)
    # Read the CSV file into a list of dictionaries
    with open(file_path, 'r') as csvfile:
        reader = csv.DictReader(csvfile)
        data = list(reader)

# Function to add a new row to the CSV data
def create_row():
    if len(data) == 0:
        highest_id = 0
    else:
        highest_id = max([int(row['id']) for row in data])
    id = highest_id + 1
    cname = input('Enter an Company Name: ')
    addr = input('Enter a Address: ')
    while True:
        cvrno = int(input('Enter a CVR No unique : '))

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        if any(row['CVR No'] == cvrno for row in data):
            print(f"ID {cvrno} already exists. Please enter a unique id.")
        else:
            break
    individualID_str = input('Enter an individual ID No (leave blank if none): ').strip()
    if individualID_str:
        individualID = int(individualID_str)
    else:
        individualID = None
    new_row = {'id': id, 'company name': cname, 'Address': addr, 'CVR No': cvrno, 'individual ID': individualID}
    data.append(new_row)
    file_path = os.path.join('./data', 'c.csv')
    with open(file_path, 'w', newline='') as csvfile:
        fieldnames = ['id', 'company name', 'Address', 'CVR No', 'individual ID']
        writer = csv.DictWriter(csvfile, fieldnames=fieldnames)
        writer.writeheader()
        writer.writerows(data)
    print(f'Data saved to {filename}')

# Function to read the CSV data
def read_data():
    file_path = os.path.join('./data', filename)
    # Read the CSV file into a list of dictionaries
    with open(file_path, 'r') as csvfile:
        reader = csv.DictReader(csvfile)
        data2 = list(reader)
    if len(data2) != 0:
        for row in data2:
            if row['individual ID'] != 0:
                print(row)
                file_path = os.path.join('./data', 'i.csv')
                with open(file_path, 'r') as csvfile1:
                    reader1 = csv.DictReader(csvfile1)
                    data1 = list(reader1)
                    for row1 in data1:
                        if row1['Individual ID'] == row['individual ID']:
                            print("\t", row1)
            else:
                print("The Csv File is Empty No Data Is available")

def search_string():
    file_path = os.path.join('./data', filename)
    # Read the CSV file into a list of dictionaries
    with open(file_path, 'r') as csvfile:
        reader1 = csv.DictReader(csvfile)
        dataSearch = list(reader1)
    sreach_string = input('Enter an search company Name: ')
    results = []
    for row in dataSearch:
        for field in row:
            if sreach_string.lower() in row['company name'].lower():
                results.append(row)
                break
    if len(results) != 0:
        print(results)
    else:
        print("result not found")

# Function to update a row in the CSV data
def update_row():
    file_path = os.path.join('./data', 'c.csv')
    # Open the CSV file in 'read' mode and store the contents in a list

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with open(file_path, mode='r') as csv_file:
    csv_reader = csv.reader(csv_file)
    datatoupcom = [row for row in csv_reader]

# Display the contents of the CSV file
print('Current data in the CSV file:')
for row in datatoupcom:
    print(row)

# Ask the user which row they want to update
row_num = int(input('Which row do you want to update? (Enter a number): '))

# Ask the user for the new data
new_data = input('Enter the new data for this row, separated by commas: ')

# Split the user's input into a list of values
new_data_list = new_data.split(',')

# Update the selected row in the 'data' list
datatoupcom[row_num] = new_data_list

# Open the CSV file in 'write' mode and write the updated data to it
file_path = os.path.join('./data', 'c.csv')
with open(file_path, mode='w', newline='') as csv_file:
    csv_writer = csv.writer(csv_file)
    csv_writer.writerows(datatoupcom)

# Display the updated contents of the CSV file
print('Updated data in the CSV file:')
for row in datatoupcom:
    print(row)

# Function to delete a row from the CSV data
def delete_row():
    index = int(input("Enter id to delete: "))
    file_path = os.path.join('./data', 'c.csv')
    # Open the CSV file in 'read' mode and store the contents in a list
    with open(file_path, mode='r') as csv_file:
        csv_reader = csv.reader(csv_file)
        dataDelete = [row for row in csv_reader]
    if index < 0 or index >= len(dataDelete):
        print("Invalid index!")
    else:
        del dataDelete[index]
        file_path = os.path.join('./data', 'c.csv')
        with open(file_path, mode='w', newline='') as csv_file:
            csv_writer = csv.writer(csv_file)
            csv_writer.writerows(dataDelete)
        print("Contact deleted successfully!")

# Function to save the CSV data to the same file

while True:
    print('Enter "1" to create a new row')
    print('Enter "2" to read the data')
    print('Enter "3" to update a row')
    print('Enter "4" to delete a row')
    print('Enter "5" to search data')
    print('Enter "6" to quit')
    choice = input('Enter your choice: ')
    if choice == '1':
        create_row()
    elif choice == '2':

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        read_data()
    elif choice == '3':
        update_row()
    elif choice == '4':
        delete_row()
    elif choice == '5':
        search_string()
    elif choice == '6':
        break
    else:
        print('Invalid choice')
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while True:
    menu()
    choice = int(input("Enter your choice: "))
    if choice == 1:
        i_book()
    elif choice == 2:
        c_book()
    elif choice == 3:
        break
    else:
        print("Invalid choice. Please try again.")
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1. Individual Book
2. Company Book
3. Exit
Enter your choice: 2
Enter the filename of the CSV file to open: c.csv
Enter "1" to create a new row
Enter "2" to read the data
Enter "3" to update a row
Enter "4" to delete a row
Enter "5" to search data
Enter "6" to quit
Enter your choice: 1
Enter an Company Name: twintop
Enter a Address: india
Enter a CVR No unique : 123456
Enter an individual ID No (leave blank if none): 1
Data saved to c.csv
Enter "1" to create a new row
Enter "2" to read the data
Enter "3" to update a row
Enter "4" to delete a row
Enter "5" to search data
Enter "6" to quit
Enter your choice: 1
Enter an Company Name: abc
Enter a Address: US
Enter a CVR No unique : 9898
Enter an individual ID No (leave blank if none):
Data saved to c.csv
Enter "1" to create a new row
Enter "2" to read the data
Enter "3" to update a row
Enter "4" to delete a row
Enter "5" to search data
Enter "6" to quit
Enter your choice: 2
{'id': '1', 'company name': 'twintop', 'Address': 'india', 'CVR No': '123456', 'individual I
d': '1'}
{'Individual Id': '1', 'First Name': 'pradeeban', 'Last Name': 'bhavani', 'Work Ph.N
o': '12345678', 'Private Ph.No': '7678985', 'Address': 'india'}
{'id': '2', 'company name': 'abc', 'Address': 'US', 'CVR No': '9898', 'individual Id': ''}
Enter "1" to create a new row
Enter "2" to read the data
Enter "3" to update a row
Enter "4" to delete a row
Enter "5" to search data
Enter "6" to quit
Enter your choice: 3
Current data in the CSV file:
['id', 'company name', 'Address', 'CVR No', 'individual Id']
['1', 'twintop', 'india', '123456', '1']
['2', 'abc', 'US', '9898', '']
Which row do you want to update? (Enter a number): 2
Enter the new data for this row, separated by commas: 2,Corp,US,6798,2
Updated data in the CSV file:
['id', 'company name', 'Address', 'CVR No', 'individual Id']
['1', 'twintop', 'india', '123456', '1']
['2', 'Corp', 'US', '6798', '2']
Enter "1" to create a new row
Enter "2" to read the data
Enter "3" to update a row
Enter "4" to delete a row
Enter "5" to search data

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Enter "6" to quit
Enter your choice: 2
{'id': '1', 'company name': 'twintop', 'Address': 'india', 'CVR No': '123456', 'individual I
d': '1'}
    {'Individual Id': '1', 'First Name': 'pradeeban', 'Last Name': 'bhavani', 'Work Ph.N
o': '12345678', 'Private Ph.No': '7678985', 'Address': 'india'}
{'id': '2', 'company name': 'Corp', 'Address': 'US', 'CVR No': '6798', 'individual Id': '2'}
    {'Individual Id': '2', 'First Name': 'kalaivendhan', 'Last Name': 'kumar', 'Work Ph.
No': '1234567890', 'Private Ph.No': '6789456', 'Address': 'US'}
Enter "1" to create a new row
Enter "2" to read the data
Enter "3" to update a row
Enter "4" to delete a row
Enter "5" to search data
Enter "6" to quit
Enter your choice: 4
Enter id to delete: 2
Contact deleted successfully!
Enter "1" to create a new row
Enter "2" to read the data
Enter "3" to update a row
Enter "4" to delete a row
Enter "5" to search data
Enter "6" to quit
Enter your choice: 2
{'id': '1', 'company name': 'twintop', 'Address': 'india', 'CVR No': '123456', 'individual I
d': '1'}
    {'Individual Id': '1', 'First Name': 'pradeeban', 'Last Name': 'bhavani', 'Work Ph.N
o': '12345678', 'Private Ph.No': '7678985', 'Address': 'india'}
Enter "1" to create a new row
Enter "2" to read the data
Enter "3" to update a row
Enter "4" to delete a row
Enter "5" to search data
Enter "6" to quit
Enter your choice: 1
Enter an Company Name: Tailwinds
Enter a Address: india
Enter a CVR No unique : 3456
Enter an individual ID No (leave blank if none): 1
Data saved to c.csv
Enter "1" to create a new row
Enter "2" to read the data
Enter "3" to update a row
Enter "4" to delete a row
Enter "5" to search data
Enter "6" to quit
Enter your choice: 2
{'id': '1', 'company name': 'twintop', 'Address': 'india', 'CVR No': '123456', 'individual I
d': '1'}
    {'Individual Id': '1', 'First Name': 'pradeeban', 'Last Name': 'bhavani', 'Work Ph.N
o': '12345678', 'Private Ph.No': '7678985', 'Address': 'india'}
{'id': '2', 'company name': 'abc', 'Address': 'US', 'CVR No': '9898', 'individual Id': ''}
{'id': '3', 'company name': 'Tailwinds', 'Address': 'india', 'CVR No': '3456', 'individual I
d': '1'}
    {'Individual Id': '1', 'First Name': 'pradeeban', 'Last Name': 'bhavani', 'Work Ph.N
o': '12345678', 'Private Ph.No': '7678985', 'Address': 'india'}
Enter "1" to create a new row
Enter "2" to read the data
Enter "3" to update a row
Enter "4" to delete a row
Enter "5" to search data
Enter "6" to quit

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Enter your choice: 5
Enter an search company Name: abc
[{'id': '2', 'company name': 'abc', 'Address': 'US', 'CVR No': '9898', 'individual Id': ''}]
Enter "1" to create a new row
Enter "2" to read the data
Enter "3" to update a row
Enter "4" to delete a row
Enter "5" to search data
Enter "6" to quit
Enter your choice: 5
Enter an search company Name: twintop
[{'id': '1', 'company name': 'twintop', 'Address': 'india', 'CVR No': '123456', 'individual I
d': '1'}]
Enter "1" to create a new row
Enter "2" to read the data
Enter "3" to update a row
Enter "4" to delete a row
Enter "5" to search data
Enter "6" to quit
Enter your choice: 6
1. Individual Book
2. Company Book
3. Exit
Enter your choice: 3
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In []: