In [1]:

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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 Emplty 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
        idividualID_str = input('Enter an individual ID No (leave blank if none): ').strip()
        if idividualID_str:
            idividualID = int(idividualID_str)
        else:
            idividualID = None
        new_row = {'id': id, 'company name': cname, 'Address': addr, 'CVR No': cvrno, 'indivi
        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 Emplty 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')


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: 1
Enter the filename of the CSV file to open: i.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 First name: pradeeban
Enter an Last name: bhavani
Enter a Work Pno: 12345678
Enter a Private Pno: 7678985
Enter a Address: india
Data saved to i.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 First name: kalai
Enter an Last name: k
Enter a Work Pno: 2344664
Enter a Private Pno: 7895444
Enter a Address: US
Data saved to i.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
{'Individual Id': '1', 'First Name': 'pradeeban', 'Last Name': 'bhavani', 'Work Ph.No': '1234
5678', 'Private Ph.No': '7678985', 'Address': 'india'}
{'Individual Id': '2', 'First Name': 'kalai', 'Last Name': 'k', 'Work Ph.No': '2344664', 'Pri
vate Ph.No': '7895444', '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: 3
Current data in the CSV file:
['Individual Id', 'First Name', 'Last Name', 'Work Ph.No', 'Private Ph.No', 'Address']
['1', 'pradeeban', 'bhavani', '12345678', '7678985', 'india']
['2', 'kalai', 'k', '2344664', '7895444', 'US']
Which row do you want to update? (Enter a number): 2
Enter the new data for this row, separated by commas: 2,kalaivendhan,kumar,1234567890,678945
6,US
writing data
Updated data in the CSV file:
['Individual Id', 'First Name', 'Last Name', 'Work Ph.No', 'Private Ph.No', 'Address']
['1', 'pradeeban', 'bhavani', '12345678', '7678985', 'india']
['2', 'kalaivendhan', 'kumar', '1234567890', '6789456', 'US']
Enter "1" to create a new row
Enter "2" to read the data
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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 First name: hari
Enter an Last name: vendhan
Enter a Work Pno: 1235475
Enter a Private Pno: 678943
Enter a Address: erode
Data saved to i.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
{'Individual Id': '1', 'First Name': 'pradeeban', 'Last Name': 'bhavani', 'Work Ph.No': '1234
5678', 'Private Ph.No': '7678985', 'Address': 'india'}
{'Individual Id': '2', 'First Name': 'kalaivendhan', 'Last Name': 'kumar', 'Work Ph.No': '123
4567890', 'Private Ph.No': '6789456', 'Address': 'US'}
{'Individual Id': '3', 'First Name': 'hari', 'Last Name': 'vendhan', 'Work Ph.No': '1235475',
'Private Ph.No': '678943', 'Address': 'erode'}
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: 3
writing data
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
{'Individual Id': '1', 'First Name': 'pradeeban', 'Last Name': 'bhavani', 'Work Ph.No': '1234
5678', 'Private Ph.No': '7678985', 'Address': 'india'}
{'Individual Id': '2', 'First Name': 'kalaivendhan', 'Last Name': 'kumar', 'Work Ph.No': '123
4567890', '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: 5
Enter an search Name: kalai
[{'Individual Id': '2', 'First Name': 'kalaivendhan', 'Last Name': 'kumar', 'Work Ph.No': '12
34567890', '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: 6
1. Individual Book
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2. Company Book
3. Exit
Enter your choice: 3
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In [ ]: