Ministry of Higher Education

Kabul University

Faculty of Information and communication Technology

Department of Science and Information System Engineering

Python Project:

Project name: Contact Address Book

Prepared by: Habibullah Madadi, Hamdullah Aslami, Jahanzib Estanigzai and Khalid Ferozi

Python Geeks

Create a Contact Book With Python

Introduction:

This program is a simple *Contact Management System* written in Python.

It stores contact information-including *name*, *phone number*, *email address and address*-in a file called *Contact.json*.

The system allows users to *add*, *edit*, *and delete* contacts though a text-based menu.

Add Contact:

The *add_contact()* function collects user input for each field of a contact.

It saves the contact as a JSON object, writing each recond on a new line in the file.

This approach keeps the data organized and easy to process when reading later.

Search Contact:

The search_contact() function reads the file line by line.

Each line is converted from JSON into a Python dictionary and chacked against the name entered by the user.

If a match is found, the full contact informarion is displayed; otherwise, the program prints “Contact not found.”

Edit Contact:

The editing pricess begins by searching for the existing contact.

Users may enter new values or leave fields blank to keep the current information.

The entire file is then rewritten, replacing only the old contact with the updated one.

Delete Contact:

The delete_contact() function also starts with a search.

If the contact exists, the program rewrites the file while *skipping* the line that matches the selected contact.

Finally, it displays a confirmation message that the contact was removed.

Main Menu:

The program runs inside an infinite loop and displays the following options:

1. Add Contact
2. Search Contact
3. Edit Contact
4. Delete Contact
5. Exit

Based on the user’s choice, the corresponding function is executed.

```
import json
def add_contact():
    name = input("Enter name: ")
    phone = input("Enter phone number: ")
    email = input("Enter email address: ")
    address = input("Enter address: ")
    contact = {"name": name, "phone": phone, "email": email, "address": address}
    with open("contacts.json", "a") as f:
        f.write(json.dumps(contact) + "\n")
    print("Contact added successfully.")
def search_contact():
    name = input("Enter name to search: ")
    with open("contacts.json", "r") as f:
        for line in f:
            contact = json.loads(line)
            if contact["name"] == name:
                print(f"Name: {contact['name']}")
                print(f"Phone: {contact['phone']}")
                print(f"Email: {contact['email']}")
                print(f"Address: {contact['address']}")
                return contact
        print("Contact not found.")
        return None
```

```
contact = search_contact()
if contact is not None:
    name = input("Enter new name (leave blank to keep current name): ")
    phone = input("Enter new phone number (leave blank to keep current phone number): ")
    email = input("Enter new email address (leave blank to keep current email address): ")
    address = input("Enter new address (leave blank to keep current address): ")
    if name:
        contact["name"] = name
    if phone:
        contact["phone"] = phone
    if email:
        contact["email"] = email
    if address:
        contact["address"] = address
    with open("contacts.json", "r") as f:
        lines = f.readlines()
    with open("contacts.json", "w") as f:
        for line in lines:
            old_contact = json.loads(line)
            if old_contact["name"] == contact["name"]:
                f.write(json.dumps(contact) + "\n")
            else:
```

```
f.write(line)
        print("Contact updated successfully.")
def delete_contact():
    contact = search_contact()
    if contact is not None:
        with open("contacts.json", "r") as f:
            lines = f.readlines()
        with open("contacts.json", "w") as f:
            for line in lines:
                old_contact = json.loads(line)
                if old_contact["name"] != contact["name"]:
                    f.write(line)
        print("Contact deleted successfully.")
while True:
    print("1. Add contact")
    print("2. Search contact")
    print("3. Edit contact")
    print("4. Delete contact")
    print("5. Exit")
    choice = input("Enter your choice: ")
    if choice == "1":
        add_contact()
    elif choice == "2":
        search_contact()
```

```
elif choice == "3":
    edit_contact()
elif choice == "4":
    delete_contact()
elif choice == "5":
    break
else:
    print("Invalid choice. Try again.")
```

Out Put:

```
C:\Users\DELL\PyCharmMiscProject\.venv\Scripts\python.exe
C:\Users\DELL\OneDrive\Desktop\PyCharmMiscProject\hi.py
1. Add contact
2. Search contact
3. Edit contact
4. Delete contact
5. Exit
Enter your choice: 1
```

Enter name: Habibullah Madadi
Enter phone number: 0093786056304
Enter email address: habibullahmadadi2025@gmail.com
Enter address: Afghanistan, Ghazni, Jaghori
Contact added successfully.
1. Add contact
2. Search contact
3. Edit contact
4. Delete contact
5. Exit
Enter your choice: 1
Enter name: Mohammad Hadi Azizi
Enter phone number: 0786056473
Enter email address: hadiazizi@gmail.com
Enter address: Afghanistan, Ghazni, Jaghori
Contact added successfully.
1. Add contact
2. Search contact
3. Edit contact
4. Delete contact
5. Exit

Enter your choice: 1
Enter name: Shamullah Haidari
Enter phone number: 0786754323
Enter email address: Afghanistan, Ghazni, Jaghori
Enter address: Afghanistan, Ghazni, Jaghori
Contact added successfully.
1. Add contact
2. Search contact
3. Edit contact
4. Delete contact
5. Exit
Enter your choice: 2
Enter name to search: Habibullah Madadi
Name: Habibullah Madadi
Phone: 0093786056304
Email: habibullahmadadi2025@gmail.com
Address: Afghanistan, Ghazni, Jaghori
1. Add contact
2. Search contact
3. Edit contact
4. Delete contact
5. Exit

Enter your choice: 3
Enter name to search: Mohammad Hadi Azizi
Name: Mohammad Hadi Azizi
Phone: 0093730533074
Email: hadiazizi053@gmail.com
Address: Afghanistan, Ghazni, Jaghori
Enter new name (leave blank to keep current name): Hadi
Enter new phone number (leave blank to keep current phone number): 0786767665
Enter new email address (leave blank to keep current email address): hadikazimi@gmail.com
Enter new address (leave blank to keep current address): Afghanistan, Ghazni, Jaghori
Contact updated successfully.
1. Add contact
2. Search contact
3. Edit contact
4. Delete contact
5. Exit
Enter your choice: 4
Enter name to search: Shamsullah Haidari
Contact not found.

1. Add contact
2. Search contact
3. Edit contact
4. Delete contact
5. Exit
Enter your choice: 4
Enter name to search: Habibullah Madadi
Name: Habibullah Madadi
Phone: 0093786056304
Email: habibullahmadadi2025@gmail.com
Address: Afghanistan, Ghazni, Jaghori
Contact deleted successfully.
1. Add contact
2. Search contact
3. Edit contact
4. Delete contact
5. Exit
Enter your choice: 5

Process finished with exit code 0

Conclusion:

This program demonstrate how to manage structured data using *Pyhthon and JSON*.

It provided clear examples of file handling, searching, updating, and deleting records, making it practical introduction to basic data management techniques.