



**Ministry of Higher Education**

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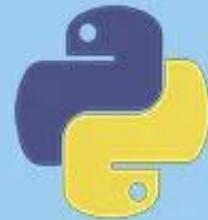


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### **Python Project:**

Project name: Contact Address Book

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# 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 record 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 checked against the name entered by the user.

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

## Edit Contact:

The editing process 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 *Pyhton and JSON*.

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