Class Exercise:

Dictionary v2

Exercise Description:

You are now challenged to create a more advanced program that simulates a contact management system using dictionaries, while and for loops, if and else operators, and functions. The program should allow users to perform various operations on a contact list, including adding, removing, updating, and searching for contacts. Additionally, the program should provide functionality to sort and display the contacts based on specific criteria.

The program should include the following features:

1. Initialize an empty contact list dictionary.
2. Add contacts to the list along with their names, phone numbers, and email addresses.
3. Remove contacts from the list.
4. Update the phone number and email address of existing contacts.
5. Display the current contact list with detailed information for each contact.
6. Search for a specific contact by name and display their information.
7. Sort and display the contact list alphabetically by name or by phone number.

To make the exercise more challenging, try to modularize your code by creating functions for each operation and utilize appropriate control structures.

def display\_contacts(contacts):

# Your code here

def search\_contact(contacts, name):

# Your code here

def sort\_contacts(contacts, sort\_criteria):

# Your code here

def add\_contact(contacts):

# Your code here

def remove\_contact(contacts, contact\_id):

# Your code here

def update\_contact(contacts, contact\_id):

# Your code here

def contact\_management():

# Your code here

contact\_management()

Menu:

1. Add contact

2. Remove contact

3. Update contact

4. Display contacts

5. Search contact

6. Sort contacts

7. Exit

Enter your choice (1-7): 1

Enter contact ID: 001

Enter name: John Doe

Enter phone number: 123456789

Enter email address: john.doe@example.com

Contact added successfully.

Menu:

1. Add contact

2. Remove contact

3. Update contact

4. Display contacts

5. Search contact

6. Sort contacts

7. Exit

Enter your choice (1-7): 1

Enter contact ID: 002

Enter name: Jane Smith

Enter phone number: 987654321

Enter email address: jane.smith@example.com

Contact added successfully.

Menu:

1. Add contact

2. Remove contact

3. Update contact

4. Display contacts

5. Search contact

6. Sort contacts

7. Exit

Enter your choice (1-7): 4

Current Contact List:

Contact ID: 001

Name: John Doe

Phone Number: 123456789

Email Address: john.doe@example.com

Contact ID: 002

Name: Jane Smith

Phone Number: 987654321

Email Address: jane.smith@example.com

Menu:

1. Add contact

2. Remove contact

3. Update contact

4. Display contacts

5. Search contact

6. Sort contacts

7. Exit

Enter your choice (1-7): 5

Enter contact name: John Doe

Contact ID: 001

Name: John Doe

Phone Number: 123456789

Email Address: john.doe@example.com

Menu:

1. Add contact

2. Remove contact

3. Update contact

4. Display contacts

5. Search contact

6. Sort contacts

7. Exit

Enter your choice (1-7): 6

Sort Options:

1. Sort by name

2. Sort by phone number

Enter sort choice (1-2): 2

Sorted Contact List:

Contact ID: 001

Name: John Doe

Phone Number: 123456789

Email Address: john.doe@example.com

Contact ID: 002

Name: Jane Smith

Phone Number: 987654321

Email Address: jane.smith@example.com

Menu:

1. Add contact

2. Remove contact

3. Update contact

4. Display contacts

5. Search contact

6. Sort contacts

7. Exit

Enter your choice (1-7): 7

Exiting...