

Rajalakshmi Engineering College

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NeoColab_REC_CS23231_DATA STRUCTURES

REC_DS using C_Week 7_COD_Question 3

Attempt : 1
Total Mark : 10
Marks Obtained : 10

Section 1 : Coding

1. Problem Statement

In a messaging application, users maintain a contact list with names and corresponding phone numbers. Develop a program to manage this contact list using a dictionary implemented with hashing.

The program allows users to add contacts, delete contacts, and check if a specific contact exists. Additionally, it provides an option to print the contact list in the order of insertion.

Input Format

The first line consists of an integer n , representing the number of contact pairs to be inserted.

Each of the next n lines consists of two strings separated by a space: the name of the contact (key) and the corresponding phone number (value).

The last line contains a string k, representing the contact to be checked or removed.

Output Format

If the given contact exists in the dictionary:

1. The first line prints "The given key is removed!" after removing it.
2. The next n - 1 lines print the updated contact list in the format: "Key: X; Value: Y" where X represents the contact's name and Y represents the phone number.

If the given contact does not exist in the dictionary:

1. The first line prints "The given key is not found!".
2. The next n lines print the original contact list in the format: "Key: X; Value: Y" where X represents the contact's name and Y represents the phone number.

Refer to the sample outputs for the formatting specifications.

Sample Test Case

Input: 3

Alice 1234567890

Bob 9876543210

Charlie 4567890123

Bob

Output: The given key is removed!

Key: Alice; Value: 1234567890

Key: Charlie; Value: 4567890123

Answer

You are using Python

from collections import OrderedDict

def manage_contacts(n, contacts, key):

 contact_dict = OrderedDict(contacts) # Maintain insertion order

```
if key in contact_dict:
    print("The given key is removed!")
    del contact_dict[key] # Remove the key if found
else:
    print("The given key is not found!")
```

```
# Print updated contact list
for name, number in contact_dict.items():
    print(f"Key: {name}; Value: {number}")
```

```
# Read input values
n = int(input())
contacts = [input().split() for _ in range(n)]
key = input().strip()
```

```
# Call the function to manage contacts
manage_contacts(n, contacts, key)
```

Status : Correct

Marks : 10/10