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Subject: **Programming Lab1**

Experiment No. 4

AIM: Write an contact application using dictionary

THEORY :

Dictionaries are used to store data values in key:value pairs. A dictionary is a collection which is ordered*, changeable and do not allow duplicates.

CODE 1:

To write a contact application using dictionary in python

```
contact_dict = {}
index = 0
def add_contact():
     global index
     name = input("Enter the Name: ")
     if name in contact_dict.values():
       print(f"{name} already exits")
       return
     verify = False
     while not verify:
       email = input("Enter the Email: ")
       if "@" not in email:
           print("email must include @")
           print("****Email must be in this format : example121@gmail.com
****")
           print("")
       if "." not in email:
```

```
            print("email must include .")
            print("****Email must be in this format : example121@gmail.com
****")
            print("")
        else:
          verify = True
      verify = False
      while not verify:
        phone = input("Enter the Mobile Number: ")
        if len(phone)!=10 or phone.isdigit() == False:
          print("Enter valid phone number")
          print("****Phone Number must be of 10 digits and must not contain
other characters****")
          print("")
        else:
          verify =True
      contact_dict[index] = {"Name":name,"Email": email, "Phone": phone}
      index = index +1
      print("Contact added successfully\n")

def edit_contact():
        idx = 0
        name = input("Enter the Name whose details are to be updated: ")
        for key,val in contact_dict.items():
          if name not in val["Name"]:
            print(f"No contact named {name} found\n")
          else:
            idx = key
            email = input("Enter the Updated Email: ")
            phone = input("Enter the Updated Mobile Number: ")
            contact_dict[idx]["Email"] = email
            contact_dict[idx]["Phone"] = phone
            print("Contact updated Successfully\n")
```

```
def delete_contact():
     idx =0
     name = input("Enter the Name whose details are to be Deleted: ")
     for key,val in contact_dict.copy().items():ma
         if name not in val["Name"]:
           print(f"No contact named {name} found\n")
         else:
           idx = key
           contact_dict.pop(idx)
           print("Contact deleted Successfully\n")


def display():
 if len(contact_dict) == 0:
     print(f"No contacts found\n")
 else:
    print("Available Details")
    for value in contact_dict.values():
       print(f"Name : {value['Name']}")
       print(f"Mail Id : {value['Email']}")
       print(f"Phone Number : {value['Phone']}")
       print()

while True:
 print("1. Add New Contact")
 print("2. Edit a Contact")
 print("3. Delete a Contact")
 print("4. Display Contacts")
 print("5:Exit")
 choice = int(input("Enter your choice: "))
```

```
match choice:
  case 1:
    add_contact()

  case 2:
    edit_contact()

  case 3:
    delete_contact()
  case 4:
    display()
  case 5:
    break
```

Output:

```
1. Add New Contact
2. Edit a Contact
3. Delete a Contact
4. Display Contacts
5:Exit
Enter your choice: 1
Enter the Name: manav
Enter the Email: mshah@gmail.com
Enter the Mobile Number: 1234567890
Contact added successfully

1. Add New Contact
2. Edit a Contact
3. Delete a Contact
4. Display Contacts
5:Exit
Enter your choice: 4
Available Details
Name : manav
Mail Id : mshah@gmail.com
Phone Number : 1234567890

1. Add New Contact
2. Edit a Contact
3. Delete a Contact
4. Display Contacts
5:Exit
Enter your choice: 2
Enter the Name whose details are to be updated: manav
Enter the Updated Email: hello@world.com
Enter the Updated Mobile Number: 9876543210
Contact updated Successfully
```

```
Enter the Updated Email: [illegible]
Enter the Updated Mobile Number: 9876543210
Contact updated Successfully

1. Add New Contact
2. Edit a Contact
3. Delete a Contact
4. Display Contacts
5:Exit
Enter your choice: 3
Enter the Name whose details are to be Deleted: manav
Contact deleted Successfully

1. Add New Contact
2. Edit a Contact
3. Delete a Contact
4. Display Contacts
5:Exit
Enter your choice: 5
```

CONCLUSION : In this experiment, we learnt about dictionaries in python. We created a contact application in python using dictionaries wherein a user can enter contact details,edit them as well as update them. We also provided functions to display all the contact details.We also provided validations to mobile number and email id.