

```

/*
Write a menu driven program that will create a data file containing the list of
telephone
numbers in the following form :
john
23456
ahmed 9876...
.....
Use a class object to store each set of data, access the file created and
implement the following
tasks :
I. Determine the telephone number of specified person
II. Determine the name if telephone number is known
III. Update the telephone number, whenever there is a change.
*/
#include<iostream>
#include<string.h>
#include<fstream>
using namespace std;
class tele_dir
{
    private:char phn[20];
            char name[20];
    public:
        void accept()
        {
            cout<<"\nEnter the name: ";
            cin>>name;
            cout<<"Enter the contact number: ";
            cin>>phn;
        }
        void display()
        {
            cout<<name<<"\t\t\t";
            cout<<phn<<"\t\t\t"<<endl;
        }
        inline char* ct_name()
        {
            return name;
        }
        inline char* ct_contact()
        {
            return phn;
        }
};
int main()
{
    ifstream fr;
    ofstream fw;
    fstream file;
    tele_dir z;
    char con,con2,op3;
    int op,flag;
    do
    {
        cout<<"\nEnter";
        cout<<"\n1 :Add contact";
        cout<<"\n2 :Display contact";
        cout<<"\n3 :Search contact by name";
        cout<<"\n4 :Search contact by contact";
        cout<<"\n5 :Update contact details by searching name";
        cout<<"\n6 :Update contact details by searching contact number";
        cout<<"\n7 :Exit";
        cout<<"\nEnter choice: ";
        cin>>op;
        switch(op)

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{
    case 1: fw.open("contact.txt", ios::app | ios::binary);
        {
            do
            {
                z.accept();
                fw.write((char *)&z, sizeof(z));
                cout<<"\nDo you want to add another contact (Y/N) ";
                cin>>con2;
            } while (con2=='y' || con2=='Y');
        }
        fw.close(); break;

    case 2: fr.open("contact.txt", ios::in | ios::binary);
        cout<<"Name\t\t\t\t\tContact No.\t\t\n";
        cout<<"*****\n";
        while (!fr.eof())
        {
            fr.read((char *)&z, sizeof(z));
            if (fr)
                z.display();
        }
        fr.close(); break;

    case 3: cout<<"\nSearch by name\n";
        char names[20];
        fr.open("contact.txt", ios::in | ios::binary);
        cout<<"\nEnter the name to search: ";
        cin>>names;
        {
            while (!fr.eof())
            {
                fr.read((char *)&z, sizeof(z));
                if (strcmp(names, z.ct_name()) == 0)
                {
                    flag=1;
                    cout<<"Name\t\t\t\t\tContact No.\t\t\n";
                    cout<<"*****\n";
                    z.display();
                }
            }
            if (flag != 1)
                cout<<"\nRecord not found!!";
        }
        fr.close();
        break;

    case 4: cout<<"\nSearch by contact\n";
        char phns[20];
        fr.open("contact.txt", ios::in | ios::binary);
        cout<<"\nEnter the contact to search: ";
        cin>>phns;
        {
            int j;
            while (!fr.eof())
            {
                fr.read((char *)&z, sizeof(z));
                j = strcmp(phns, z.ct_contact());
                if (j == 0)
                {
                    flag=1;
                    cout<<"Name\t\t\t\t\tContact No.\t\t\n";
                    cout<<"*****\n";
                    z.display();
                }
            }
            if (flag != 1)
                cout<<"\nRecord not found!!";
        }
        fr.close();

```

```

        break;
    case 5: cout<<"\nUpdate details by name\n";
        char names1[20];
        file.open("contact.txt",ios::in|ios::out|ios::binary);
        cout<<"\nEnter the name to update the details: ";
        cin>>names1;
        int j;
        {
            while(!file.eof())
            {
                file.read((char *)&z,sizeof(z));

                j=strcmp(names1,z.ct_name());
                if(j==0)
                {
                    flag=1;
                    file.seekp(-sizeof(z),ios::cur);
                    z.accept();
                    file.write((char *)&z,sizeof(z));
                    cout<<"\nRecord updated successfully"<<endl;
                }
            }
            if(flag!=1)
            {
                cout<<"\nRecord not found";
            }

            }file.close();
            break;

    case 6: cout<<"\nUpdate details by contact\n";
        char phns1[20];
        file.open("contact.txt",ios::in|ios::out|ios::binary);
        cout<<"\nEnter the contact to update the details: ";
        cin>>phns1;
        {
            int j;
            while(!file.eof())
            {
                file.read((char *)&z,sizeof(z));
                j=strcmp(phns1,z.ct_contact());
                if(j==0)
                {
                    flag=1;
                    file.seekp(-sizeof(z),ios::cur);
                    z.accept();
                    file.write((char *)&z,sizeof(z));
                    cout<<"Record Updated successfully!!";
                }
            }
            if(flag!=1)
                cout<<"\nRecord not found";
            }file.close();
            break;
    case 7: break;
    default: cout<<"\nInvalid case";break;
}

}while(op!=7);

return 0;
}

/*
OUTPUT
dell@ghe1de-saurabh16-12-99:~$ g++ ass9oops.cpp
dell@ghe1de-saurabh16-12-99:~$ ./a.out
Enter
1 :Add contact
2 :Display contact

```

```
3 :Search contact by name
4 :Search contact by contact
5 :Update contact details by searching name
6 :Update contact details by searching contact number
7 :Exit
Enter choice: 1
```

```
Enter the name: saurabh
Enter the contact number: 9146445104
```

```
Do you want to add another contact (Y/N) y
```

```
Enter the name: akash
Enter the contact number: 7559462520
```

```
Do you want to add another contact (Y/N) y
```

```
Enter the name: mayuresh
Enter the contact number: 9658624853
```

```
Do you want to add another contact (Y/N) y
```

```
Enter the name: suraj
Enter the contact number: 8308882710
```

```
Do you want to add another contact (Y/N) y
```

```
Enter the name: baba
Enter the contact number: 9921717955
```

```
Do you want to add another contact (Y/N) n
```

```
Enter
1 :Add contact
2 :Display contact
3 :Search contact by name
4 :Search contact by contact
5 :Update contact details by searching name
6 :Update contact details by searching contact number
7 :Exit
```

```
Enter choice: 2
```

```
Name          Contact No.
```

```
*****
```

```
saurabh       9146445104
```

```
akash         7559462520
```

```
mayuresh      9658624853
```

```
suraj         8308882710
```

```
baba         9921717955
```

```
Enter
1 :Add contact
2 :Display contact
3 :Search contact by name
4 :Search contact by contact
5 :Update contact details by searching name
6 :Update contact details by searching contact number
7 :Exit
```

```
Enter choice: 3
```

```
Search by name
```

```
Enter the name to search: shubham
```

```
Record not found!!
```

```
Enter
```

```
1 :Add contact
```

```
2 :Display contact
3 :Search contact by name
4 :Search contact by contact
5 :Update contact details by searching name
6 :Update contact details by searching contact number
7 :Exit
Enter choice: 3
```

Search by name

Enter the name to search: suraj

Name	Contact No.
------	-------------

suraj	8308882710
-------	------------

Enter

```
1 :Add contact
2 :Display contact
3 :Search contact by name
4 :Search contact by contact
5 :Update contact details by searching name
6 :Update contact details by searching contact number
7 :Exit
Enter choice: 4
```

Search by contact

Enter the contact to search: 123456789

Record not found!!

Enter

```
1 :Add contact
2 :Display contact
3 :Search contact by name
4 :Search contact by contact
5 :Update contact details by searching name
6 :Update contact details by searching contact number
7 :Exit
Enter choice: 4
```

Search by contact

Enter the contact to search: 9146445104

Name	Contact No.
------	-------------

saurabh	9146445104
---------	------------

Enter

```
1 :Add contact
2 :Display contact
3 :Search contact by name
4 :Search contact by contact
5 :Update contact details by searching name
6 :Update contact details by searching contact number
7 :Exit
Enter choice: 5
```

Update details by name

Enter the name to update the details: shubham

Record not found!!

Enter

```
1 :Add contact
2 :Display contact
3 :Search contact by name
```

```
4 :Search contact by contact
5 :Update contact details by searching name
6 :Update contact details by searching contact number
7 :Exit
Enter choice: 5
```

Update details by name

Enter the name to update the details: saurabh

Enter the name: airtel

Enter the contact number: 7387276676

Record updated successfully

Enter

```
1 :Add contact
2 :Display contact
3 :Search contact by name
4 :Search contact by contact
5 :Update contact details by searching name
6 :Update contact details by searching contact number
7 :Exit
Enter choice: 2
```

Name	Contact No.
airtel	7387276676
akash	7559462520
mayuresh	9658624853
suraj	8308882710
baba	9921717955

Enter

```
1 :Add contact
2 :Display contact
3 :Search contact by name
4 :Search contact by contact
5 :Update contact details by searching name
6 :Update contact details by searching contact number
7 :Exit
Enter choice: 6
```

Update details by contact

Enter the contact to update the details: 123456789

Record not found!!

Enter

```
1 :Add contact
2 :Display contact
3 :Search contact by name
4 :Search contact by contact
5 :Update contact details by searching name
6 :Update contact details by searching contact number
7 :Exit
Enter choice: 6
```

Update details by contact

Enter the contact to update the details: 7387276676

Enter the name: saurabh

Enter the contact number: 9146445104

Record Updated successfully!!

Enter

```
1 :Add contact
```

```
2 :Display contact
3 :Search contact by name
4 :Search contact by contact
5 :Update contact details by searching name
6 :Update contact details by searching contact number
7 :Exit
Enter choice: 2
Name      Contact No.
*****
saurabh    9146445104
akash      7559462520
mayuresh   9658624853
suraj      8308882710
baba       9921717955

Enter
1 :Add contact
2 :Display contact
3 :Search contact by name
4 :Search contact by contact
5 :Update contact details by searching name
6 :Update contact details by searching contact number
7 :Exit
Enter choice: 7
*/
```