PROGRAM : 01

#include <bits/stdc++.h>

using namespace std;

struct data

{

char name[30];

long teleno;

};

class Hash1

{

public:

int n, sum, x, c, I, j;

char na[30];

long no;

struct data d[];

Hash1()

{

for (int i = 0; i < 10; i++)

{

d[i].teleno = 0;

}

}

void insert()

{

cout << "\n enter no.of clients";

cin >> n; // d[x].name

for (j = 0; j < n; j++)

{

cout << "\n enter name of client";

cin >> na;

cout << "\n enter telephone no.of client";

cin >> no;

sum = 0;

for (int i = 0; i < strlen(na); i++)

{

sum = sum + na[i];

}

x = (sum / strlen(na)) % 10;

cout << x;

c = x;

while (1)

{

if (d[x].teleno == 0)

{

strcpy(d[x].name, na);

d[x].teleno = no;

break;

}

x = (x + 1) % 10;

if (c == x)

{

cout << "\n hash table is full";

break;

}

}

}

void search()

{

cout << "\n enter name to be searched";

cin >> na;

sum = 0;

for (int i = 0; i < strlen(na); i++)

{

sum = sum + (int)na[i];

}

x = (sum / strlen(na)) % 10;

c = x;

while (1)

{

if (!strcmp(d[x].name, na))

{

cout << "\n data found : TELEPHONE NO :" << d[x].teleno;

break;

}

x = (x + 1) % 10;

if (c == x)

{

cout << "\n data not found";

break;

}

}

}

void display()

{

for (int i = 0; i < 10; i++)

{

if (d[i].teleno != 0)

{

cout << endl

<< d[i].name << " " << d[i].teleno;

}

}

}

};

int main()

{

Hash1 h;

h.insert();

h.search();

h.display();

return 0;

}

OUTPUT:

enter no.of clients 2

enter name of client suraj

enter telephone no.of client 696969

9

enter name of client sudarshan

enter telephone no.of client 969696

7

enter name to be searched suraj

data found : TELEPHONE NO :696969

sudarshan 969696

suraj 696969