#define \_CRT\_SECURE\_NO\_WARNINGS

#include <stdio.h>

#include <math.h>

struct man {

char fam[20], im[20],och[20],ad[20];

int fon, god;

};

struct man m[100];

int strcmp(char\* s1, char\* s2);

int strcmp(char\* s1, char\* s2)

{

int i=0,sr=0;

while (s1[i] == s2[i] && s1[i] != '\0' && s2[i] != '\0')

i++;

if (s1[i] < s2[i]) {

sr = -1;

}

else if (s1[i] == s2[i]) {

sr = 0;

}

else {

sr = 1;

}

return sr;

}

int search(char\* s1, char\* s2);

int search(char\* s1, char\* s2)

{

int i = 0;

while (s1[i] == s2[i] && s1[i] != '\0' && s2[i] != '\0')

i++;

if (s1[i] == '\0') {

return 1;

}

else {

return 0;

}

}

void main() {

int menu = 0, i = 0, n = 0, j = 0, con = 0, sr = 0,ser[20],sn=0,dupl=0;

char string[20];

while (1) {

printf("Enter 1 to enter new data\nEnter 2 to sort array\nEnter 3 to serch in array\nEnter 4 to change array\nEnter 5 to delete element of array\nEnter 6 to inspect array\nEnter 7 to exit\n");

scanf("%d", &menu);

switch (menu) {

case 1:

printf("Enter surname, name, patronumic, adres, phone number and year of birth\n");

scanf("%s%s%s%s%d%d",&m[n+1].fam, &m[n + 1].im, &m[n + 1].och, &m[n + 1].ad, &m[n + 1].fon, &m[n + 1].god);

n++;

break;

case 2:

printf("Enter 1 to sort by full name\nEnter 2 to sort by adress\nEnter 3 to sort by phone number\nEnter 4 to sort by year of birth\n");

scanf("%d", &i);

switch (i) {

case 1:

for (int i = 1; i <= n; i++) {

for (int j = n - 1; j > i; j--) {

sr = strcmp(m[j - 1].fam, m[j].fam) \* 4;

sr += strcmp(m[j - 1].im, m[j].im) \* 2;

sr += strcmp(m[j - 1].och, m[j].och);

if (sr < 0) {

m[0] = m[j - 1];

m[j - 1] = m[j];

m[j] = m[0];

}

}

}

break;

case 2:

for (int i = 1; i <= n; i++) {

for (int j = n - 1; j > i; j--) {

sr = strcmp(m[j - 1].ad, m[j].ad);

if (sr < 0) {

m[0] = m[j - 1];

m[j - 1] = m[j];

m[j] = m[0];

}

}

}

case 3:

for (int i = 1; i <= n; i++) {

for (int j = n - 1; j > i; j--) {

if (m[j-1].fon>m[j].fon) {

m[0] = m[j - 1];

m[j - 1] = m[j];

m[j] = m[0];

}

}

}

case 4:

for (int i = 1; i <= n; i++) {

for (int j = n - 1; j > i; j--) {

if (m[j - 1].god > m[j].god) {

m[0] = m[j - 1];

m[j - 1] = m[j];

m[j] = m[0];

}

}

}

}

printf("Sort complite\n");

scanf("%d", &con);

break;

case 3:

printf("Enter part of name, surname, patronumic or adress");

scanf("%s", string);

sn = 0;

for(int i=1;i<=n;i++){

if (search(string, m[i].fam)) {

for (int j = 1; j <= sn; j++) {

if (ser[j] == i) {

dupl = 1;

}

}

if (dupl == 0) {

sn++;

ser[sn] = i;

}

dupl = 0;

}

if (search(string, m[i].im)) {

for (int j = 1; j <= sn; j++) {

if (ser[j] == i) {

dupl = 1;

}

}

if (dupl == 0) {

sn++;

ser[sn] = i;

}

dupl = 0;

}

if (search(string, m[i].och)) {

for (int j = 1; j <= sn; j++) {

if (ser[j] == i) {

dupl = 1;

}

}

if (dupl == 0) {

sn++;

ser[sn] = i;

}

dupl = 0;

}

if (search(string, m[i].ad)) {

for (int j = 1; j <= sn; j++) {

if (ser[j] == i) {

dupl = 1;

}

}

if (dupl == 0) {

sn++;

ser[sn] = i;

}

dupl = 0;

}

}

printf("Search complite:\n");

for (int i = 1; i <= sn; i++) {

printf("%3d %10s %10s %10s %10s %10d %10d\n", ser[i], m[ser[i]].fam, m[ser[i]].im, m[ser[i]].och, m[ser[i]].ad, m[ser[i]].fon, m[ser[i]].god);

}

printf("Enter any number to continue");

scanf("%d", &con);

break;

case 4:

printf("enter number of element, what your will change\n");

scanf("%d", &i);

if (i > n) {

printf("wrong number\nEnter any number to continue\n");

scanf("%d", &con);

break;

}

printf("Enter 1 to change surname\nEnter 2 to change name\nEnter 3 to change patronumic\nEnter 4 to change adres\nEnter 5 to change phone number\nEnter 6 to change year of birth\n");

scanf("%d", &j);

printf("Enter new data for chosen field\n");

switch (j) {

case 1:

scanf("%s",&m[i].fam);

break;

case 2:

scanf("%s", &m[i].im);

break;

case 3:

scanf("%s", &m[i].och);

break;

case 4:

scanf("%s", &m[i].ad);

break;

case 5:

scanf("%d", &m[i].fon);

break;

case 6:

scanf("%d", &m[i].god);

break;

default:

printf("Wrong number");

}

printf("Enter any number to continue");

scanf("%d",&con);

break;

case 5:

printf("Enter number of element for delete\n");

scanf("%d", &i);

for (i; i < n; i++) {

m[i] = m[i+1];

}

n--;

break;

case 6:

printf("Your array:\n");

for (int i = 1; i <= n; i++) {

printf("%3d %10s %10s %10s %10s %10d %10d\n",i,m[i].fam, m[i].im, m[i].och, m[i].ad, m[i].fon, m[i].god);

}

printf("Enter any number to continue");

scanf("%d", &con);

break;

case 7:

exit(0);

default:

printf("Wrong number\n");

printf("Enter any number to continue");

scanf("%d", &con);

}

menu = 0;

printf("\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n");

}

}