201533661 이승수’s lab7

<lab8-1>

#pragma warning(disable.4996)

#include <stdio.h>

#include <stdlib.h>

#include <string.h>

#ifdef \_MSC\_VER

#define \_CRT\_SECURE\_NO\_WARNINGS

#endif

#define SIZE 100 //number of person.txt line

struct Person

{

char name[5];

int age;

char hobby[10];

};

struct IndexN

{

char name[5];

struct Person \*ptr;

}arrayN[SIZE];

struct IndexA

{

int age;

struct Person \*ptr;

}arrayA[SIZE];

void SortbyName(struct Person people[], struct IndexN arrayN[], int count)

{

struct IndexN temp;

int i, j;

for (i = 0; i < count - 1; i++)

{

strcpy\_s(inF,arrayN[i].name, people[i].name);

arrayN[i].ptr = &people[i].name;

}

for (j = (count - 2); j > 0; j--)

{

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

{

if (strcmp(arrayN[i].name, arrayN[i + 1].name)>0)

{

temp = arrayN[i];

arrayN[i] = arrayN[i + 1];

arrayN[i + 1] = temp;

}

}

}//sorting

for (j = 0; j < count - 1; j++){

printf("%s\n", arrayN[j].name);

}

}

void SortbyAge(struct Person people[], struct IndexA arrayA[], int count)

{

struct IndexA temp;

int i, j;

for (i = 0; i < count; i++)

{

arrayA[i].age = people[i].age;

arrayA[i].ptr = &people[i].age;

}

for (j = (count - 1); j > 0; j--)

{

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

{

if (arrayA[i].age<arrayA[i + 1].age)

{

temp = arrayA[i];

arrayA[i] = arrayA[i + 1];

arrayA[i + 1] = temp;

}

}

}//sorting

for (j = 0; j < count - 1; j++){

printf("%d\n", arrayA[j].age);

}

}

void main()

{

FILE \*inF, \*outF;

struct Person people[SIZE];

int i = 0;

inF = fopen("personal.txt", "r");

while (!feof(inF))

{

fscanf(inF, "%s %d %s", people[i].name, &people[i].age, people[i].hobby);

i++;

}

fclose(inF);

SortbyName(people, arrayN, i);

SortbyAge(people, arrayA, i);

getchar();

}

