#include<stdio.h>

#include<stdlib.h>

#include<windows.h>

struct student

{

int rollno;

char name[30];

float mark;

}stud,a;

// FUNCTION TO INSERT RECORDS TO THE FILE

void insert()

{

system("cls");

FILE \*fp;

int ch=1;;

start :

while(ch)

{

fp = fopen("Record.txt", "a");

gotoxy(20,0);

printf("STUDENT RECORDS MANAGEMENT SYSTEM");

gotoxy(20,1);

printf("Enter the Roll no of the Student :");

scanf("%d", &stud.rollno);

FILE \*fp12;

fp12 = fopen("Record.txt", "r");

while (fread(&a, sizeof(a), 1, fp12))

{if(stud.rollno== a.rollno)

{gotoxy(20,2);

printf("The roll number is already entered try with other roll number \n");

getch();

system("cls");

gotoxy(20,0);

printf("STUDENT RECORDS MANAGEMENT SYSTEM");

goto start;

fclose(fp12);

}}

fclose(fp12);

gotoxy(20,2);

printf("Enter the Name :");

scanf("%s", &stud.name);

start11 :

gotoxy(20,3);

printf("Enter total marks obtained by student in the Semester out of 800 :");

scanf("%f", &stud.mark);

{if(stud.mark>800||stud.mark<0)

{gotoxy(20,4);

printf("The marks entered is wrong please re-enter \n");

getch();

system("cls");

gotoxy(20,0);

printf("STUDENT RECORDS MANAGEMENT SYSTEM");

goto start11;

fclose(fp12);

}}

fwrite(&stud, sizeof(stud), 1, fp);

fclose(fp);

gotoxy(20,5);

printf("PRESS 1 TO CONTINUE ENTERING RECORDS OF ANOTHER STUDENT");

gotoxy(20,6);

printf("PRESS 0 TO STOP ");

scanf("%d",&ch);

system("cls");

}

}

// FUNCTION TO DISPLAY RECORDS

void disp()

{

system("cls");

FILE \*fp1;

fp1 = fopen("Record.txt", "r");

gotoxy(32,0);

printf("STUDENT RECORDS MANAGEMENT SYSTEM");

printf("\n\n\t\tDISPLAYING RECORDS OF STUDENTS");

printf("\n\t\tRoll Number\tName\tMark\n\n");

while (fread(&stud, sizeof(stud), 1, fp1))

printf(" \t\t%d\t\t%s\t%.2f\n", stud.rollno, stud.name, stud.mark);

getch();

system("cls");

fclose(fp1);

}

// FUNCTION TO SEARCH THE GIVEN RECORD

void search()

{system("cls");

FILE \*fp2;

int r, s, avl;

begin :

gotoxy(20,0);

printf("STUDENT RECORDS MANAGEMENT SYSTEM");

gotoxy(20,2);

printf("Enter the Roll no you want to search :");

scanf("%d", &r);

avl = avlrollno(r);

if (avl == 0)

{ gotoxy(20,3);

printf("Roll No %d NOT AVAILABLE PLEASE TRY WITH ANOTHER ROLL NUMBER\n",r);

getch();

system("cls");

goto begin;

}

else

{

fp2 = fopen("Record.txt", "r");

while (fread(&stud, sizeof(stud), 1, fp2))

{

s = stud.rollno;

if (s == r)

{ gotoxy(20,5);

printf("\Roll no = %d", stud.rollno);

gotoxy(20,6);

printf("Name = %s", stud.name);

gotoxy(20,7);

printf("Mark = %.2f\n", stud.mark);

getch();

system("cls");

}

}

fclose(fp2);

}

}

// FUNCTION TO DELETE A RECORD

void deletefile()

{

system("cls");

FILE \*fpo;

FILE \*fpt;

int r, s;

begin1 :

gotoxy(20,0);

printf("STUDENT RECORDS MANAGEMENT SYSTEM");

gotoxy(20,2);

printf("Enter the Roll no you want to delete :");

scanf("%d", &r);

if (avlrollno(r) == 0)

{ gotoxy(20,3);

printf("Roll no %d NOT AVAILABLE PLEASE TRY WITH ANOTHER ROLL NUMBER\n", r);

getch();

system("cls");

goto begin1;

}

else

{

fpo = fopen("Record.txt", "r");

fpt = fopen("TempFile.txt", "w");

while (fread(&stud, sizeof(stud), 1, fpo))

{

s = stud.rollno;

if (s != r)

fwrite(&stud, sizeof(stud), 1, fpt);

}

fclose(fpo);

fclose(fpt);

fpo = fopen("Record.txt", "w");

fpt = fopen("TempFile.txt", "r");

while (fread(&stud, sizeof(stud), 1, fpt))

fwrite(&stud, sizeof(stud), 1, fpo);

gotoxy(20,3);

printf("RECORD DELETED\n");

fclose(fpo);

fclose(fpt);

getch();

system("cls");

}

}

// FUNCTION TO UPDATE THE RECORD

void update()

{system("cls");

int avl;

FILE \*fpt;

FILE \*fpo;

int s, r, ch;

begin2 :

gotoxy(20,0);

printf("STUDENT RECORDS MANAGEMENT SYSTEM");

gotoxy(20,2);

printf("Enter roll number to update:");

scanf("%d", &r);

avl = avlrollno(r);

if (avl == 0)

{ gotoxy(20,3);

printf("Roll number %d NOT AVAILABLE PLEASE TRY WITH ANOTHER ROLL NUMBER ", r);

getch();

system("cls");

goto begin2;

}

else

{

fpo = fopen("Record.txt", "r");

fpt = fopen("TempFile.txt", "w");

while (fread(&stud, sizeof(stud), 1, fpo))

{

s = stud.rollno;

if (s != r)

fwrite(&stud, sizeof(stud), 1, fpt);

else

end :

{gotoxy(20,4);

printf("1. Update Name of Roll Number %d", r);

gotoxy(20,5);

printf("2. Update Mark of Roll Number %d", r);

gotoxy(20,6);

printf("3. Update both Name and Mark of Roll Number %d", r);

gotoxy(20,7);

printf("Enter your choice:");

scanf("%d", &ch);

switch (ch)

{

case 1:

gotoxy(20,9);

printf("Enter Name:");

gotoxy(20,10);

scanf("%s", &stud.name);

break;

case 2:

gotoxy(20,9);

start11 :

gotoxy(20,0);

printf("STUDENT RECORDS MANAGEMENT SYSTEM");

gotoxy(20,10);

printf("Enter total marks obtained by student in the Semester out of 800 :");

scanf("%f", &stud.mark);

if(stud.mark>800||stud.mark<0)

{gotoxy(20,11);

printf("The marks entered is wrong please re-enter \n");

getch();

system("cls");

goto start11;

}

break;

break;

case 3:

gotoxy(20,9);

printf("Enter Name:");

scanf("%s", &stud.name);

gotoxy(20,11);

start112 :

gotoxy(20,0);

printf("STUDENT RECORDS MANAGEMENT SYSTEM");

gotoxy(20,11);

printf("Enter total marks obtained by student in the Semester out of 800 :");

scanf("%f", &stud.mark);

if(stud.mark>800||stud.mark<0)

{gotoxy(20,12);

printf("The marks entered is wrong please re-enter \n");

getch();

system("cls");

goto start112;

}

break;

default:

gotoxy(20,9);

printf("INVALID SELECTION PLEASE TRY WITH ANOTHER CHOICE ");

getch();

system("cls");

goto end;

break;

}

fwrite(&stud, sizeof(stud), 1, fpt);

}

}

fclose(fpo);

fclose(fpt);

fpo = fopen("Record.txt", "w");

fpt = fopen("TempFile.txt", "r");

while (fread(&stud, sizeof(stud), 1, fpt))

{

fwrite(&stud, sizeof(stud), 1, fpo);

}

fclose(fpo);

fclose(fpt);

gotoxy(20,14);

printf("RECORD UPDATED");

getch();

system("cls");

}

}

/\* FUNCTION TO SORT THE RECORD \*/

void sort()

{ system("cls");

int a[20], count = 0, i, j, t, c;

FILE \*fpo;

fpo = fopen("Record.txt", "r");

while (fread(&stud, sizeof(stud), 1, fpo))

{

a[count] = stud.rollno;

count++;

}

c = count;

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

{

for (j = i + 1; j<count; j++)

{

if (a[i]>a[j])

{

t = a[i];

a[i] = a[j];

a[j] = t;

}

}

}

gotoxy(20,0);

printf("STUDENT RECORDS MANAGEMENT SYSTEM");

gotoxy(16,2);

printf("Roll No.\tName\t\tMark\n\n");

count = c;

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

{

rewind(fpo);

while (fread(&stud, sizeof(stud), 1, fpo))

{

if (a[i] == stud.rollno)

printf("\n\t\t%d\t\t %s\t\t %2f",stud.rollno, stud.name, stud.mark);

}

}

getch();

system("cls");

}

void gotoxy(int x,int y)

{

COORD c;

c.X=x;

c.Y=y;

SetConsoleCursorPosition(GetStdHandle(STD\_OUTPUT\_HANDLE),c);

}

// FUNCTION TO CHECK GIVEN ROLL NO IS AVAILABLE //

int avlrollno(int rno)

{

FILE \*fp;

int c = 0;

fp = fopen("Record.txt", "r");

while (!feof(fp))

{

fread(&stud, sizeof(stud), 1, fp);

if (rno == stud.rollno)

{

fclose(fp);

return 1;

}

}

fclose(fp);

return 0;

}

//FUNCTION TO CHECK THE FILE IS EMPTY OR NOT

int empty()

{

int c = 0;

FILE \*fp;

fp = fopen("Record.txt", "r");

while (fread(&stud, sizeof(stud), 1, fp))

c = 1;

fclose(fp);

return c;

}

// MAIN PROGRAM

void main()

{

system("cls");

int c, emp;

while(1)

{

printf("\n\n\n\t\t\t\t\t WELCOME TO THE STUDENT RECORDS MANAGEMENT SYSTEM");

printf("\n\n\n\n\n\t\t\t\t\t---------- Select your choice ---------\n");

printf("\n\t\t\t\t\t1. INSERT RECORDS OF STUDENT \n\t\t\t\t\t2. DISPLAY RECORDS OF STUDENT\n\t\t\t\t\t3. SEARCH RECORD OF STUDENT USING ROLL NUMBER");

printf("\n\t\t\t\t\t4. DELETE RECORD OF STUDENT\n\t\t\t\t\t5. UPDATE RECORD OF STUDENT\n\t\t\t\t\t6. SORT RECORDS ON THE ON BASIS OF MARKS");

printf("\n\t\t\t\t\t7. EXIT");

printf("\n\n\t\t\t\t\t------------------------------------------\n");

printf("\n\t\t\t\t\tEnter your choice:\t\t");

scanf("%d", &c);

printf("\n");

switch (c)

{

case 1:

insert();

break;

case 2:

emp = empty();

if (emp == 0)

{ gotoxy(20,0);

printf("STUDENT RECORDS MANAGEMENT SYSTEM");

system("cls");

gotoxy(20,2);

printf("THE FILE IS EMPTY PLEASE ENTER NEW RECORDS");;

getch();

system("cls");

}

else

disp();

break;

case 3:

search();

break;

case 4:

deletefile();

break;

case 5:

update();

break;

case 6:

emp = empty();

if (emp == 0)

printf("\n The file is EMPTY\n");

else

sort();

break;

case 7:

system("cls");

gotoxy(40,0);

printf("STUDENT RECORDS MANAGEMENT SYSTEM");

gotoxy(40,3);

printf("EXITED FROM PROGRAM");

gotoxy(40,4);

printf("THANK YOU!!!!!");

getch();

exit(0);

break;

default:

system("cls");

gotoxy(42,2);

printf("YOUR CHOICE IS WRONG");

gotoxy(42,3);

printf("PLEASE TRY AGAIN...");

break;

}

}

}