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BCSE-II

Q1.

CODE:

//working with files in c

#include<stdlib.h>

#include<stdio.h>

int i;

struct student {

int roll;

char name[31];

int score[5];

}stu;

void insert(){

FILE \*ptr1;

ptr1 = fopen("students.txt","a");

printf("Enter Roll no:\n");

scanf("%d", &stu.roll);

printf("Enter the Name:\n");

scanf("%s", stu.name);

printf("Enter score in 5 subjects:\n");

for(i=0;i<5;i++)

scanf("%d",&stu.score[i]);

fwrite(&stu, sizeof(stu), 1, ptr1);

fclose(ptr1);

}

void display(){

FILE \*ptr2;

ptr2 = fopen("students.txt","r");

printf("\nROLL NO.\tNAME\tSCORE IN 5 SUBS\n\n");

while(fread(&stu,sizeof(stu),1,ptr2)){

printf(" %d\t\t%s\t",stu.roll,stu.name);

for (i=0; i<5; i++)

printf("%d ",stu.score[i]);

printf("\n");

}

printf("\n\n");

fclose(ptr2);

}

int isavailable(int r){

FILE \*ptr3;

ptr3 = fopen("students.txt","r");

while(!feof(ptr3)){

fread(&stu, sizeof(stu), 1, ptr3);

if(r==stu.roll){

fclose(ptr3);

return 1;

}

}

fclose(ptr3);

return 0;

}

void search(){

FILE \*ptr4;

int r;

printf("\nENTER ROLL NO. TO BE SEARCHED:\n");

scanf("%d",&r);

int avl=isavailable(r);

if(avl==0){

printf("ROLL NO. %d IS NOT AVAILABLE IN THE FILE\n\n",r);

}

else{

ptr4=fopen("students.txt","r");

while(fread(&stu,sizeof(stu),1,ptr4)){

if(stu.roll == r){

printf("\nRoll No.: %d\nName: %s\n",stu.roll,stu.name);

printf("Marks in 5 subs: ");

for (i=0; i<5; i++)

printf("%d ",stu.score[i]);

}

}

printf("\n\n");

fclose(ptr4);

}

}

void modify(){

FILE \*fpo; //for original file

FILE \*fpt; //for temporary file

int r;

printf("\nENTER ROLL NO. TO BE SEARCHED:\n");

scanf("%d",&r);

if(isavailable(r)==0){

printf("ROLL NO. %d IS NOT AVAILABLE IN THE FILE\n",r);

}

else{

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

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

while(fread(&stu,sizeof(stu),1,fpo)){

if(stu.roll!=r)

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

else{

int ch;

printf("\n1. Update Name of Roll Number %d", r);

printf("\n2. Update Mark of Roll Number %d", r);

printf("\n3. Update both Name and Mark of Roll Number %d", r);

printf("\nEnter your choice:");

scanf("%d", &ch);

switch (ch){

case 1:

printf("ENTER NEW NAME: ");

scanf("%s",stu.name);

break;

case 2:

printf("ENTER NEW MARKS OF 5 SUBS: ");

for (i=0; i<5; i++)

scanf("%d ",&stu.score[i]);

break;

case 3:

printf("ENTER NEW NAME: ");

scanf("%s",stu.name);

printf("ENTER NEW MARKS OF 5 SUBS: ");

for (i=0; i<5; i++)

scanf("%d ",&stu.score[i]);

break;

default:

printf("INVALID CHOICE!!!\n");

}

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

}

}

fclose(fpo);

fclose(fpt);

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

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

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

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

fclose(fpo);

fclose(fpt);

printf("STUDENT MODIFIED!\n");

}

}

void deldata(){

FILE \*fpo; //for original file

FILE \*fpt; //for temporary file

int r;

printf("\nENTER ROLL NO. TO BE SEARCHED:\n");

scanf("%d",&r);

if(isavailable(r)==0){

printf("ROLL NO. %d IS NOT AVAILABLE IN THE FILE\n",r);

}

else{

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

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

while(fread(&stu,sizeof(stu),1,fpo)){

if(stu.roll!=r)

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

}

fclose(fpo);

fclose(fpt);

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

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

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

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

fclose(fpo);

fclose(fpt);

printf("STUDENT DELETED!\n\n");

}

}

int main(){

int ch;

do{

printf("\*\*\*STUDENT DATABASE\*\*\*\*\n\n");

printf("1.ADD DATA\n");

printf("2.DISPLAY DATA\n");

printf("3.SEARCH DATA\n");

printf("4.MODIFY DATA\n");

printf("5.DELETE DATA\n");

printf("6.EXIT\n");

printf("\nENTER YOUR CHOICE (1/2/3/4/5/6):");

scanf("%d",&ch);

switch(ch){

case 1:

insert();

break;

case 2:

display();

break;

case 3:

search();

break;

case 4:

modify();

break;

case 5:

deldata();

break;

case 6:

exit(1);

break;

default:

printf("INVALID CHOICE!!!\n");

}

}while(ch!=6);

return 0;

}

OUTPUT:



