**ASSIGNMENT NO. 11**

**CODE:**

#include<iostream>

#include<fstream>

using namespace std;

class student{

public:

char name[10];

int roll;

void getdata(){

cout<<"\nEnter the roll no and name: ";

cin>>roll>>name;

}

void putdata(){

cout<<"\nThe roll no and name: ";

cout<<roll<<" "<<name;

}

};

class file{

fstream fp;

public:

void create(){

char ans;

student s;

fp.open("stu.dat",ios::out);

if(!fp){

cout<<"\nError opening file for writing."<<endl;

return;

}

do{

s.getdata();

fp.write((char\*)&s,sizeof(s));

cout<<"\nMore? (Y/y to continue): ";

cin>>ans;

}while(ans=='Y' || ans=='y');

fp.close();

}

void append(){

char ans;

student s;

fp.open("stu.dat",ios::app);

if(!fp){

cout<<"\nError opening file for appending."<<endl;

return;

}

do{

s.getdata();

fp.write((char\*)&s,sizeof(s));

cout<<"\nMore? (Y/y to continue): ";

cin>>ans;

}while(ans=='Y' || ans=='y');

fp.close();

}

void display(){

student s;

fp.open("stu.dat",ios::in);

if(!fp){

cout<<"\nError opening file for reading."<<endl;

return;

}

while(fp.read((char\*)&s,sizeof(s))){

s.putdata();

}

fp.close();

}

void search(){

student s;

int flag=0;

int r;

cout<<"\nEnter roll to be searched: ";

cin>>r;

fp.open("stu.dat",ios::in);

if(!fp){

cout<<"\nError opening file for searching."<<endl;

return;

}

while(fp.read((char\*)&s,sizeof(s))){

if(s.roll==r){

flag=1;

s.putdata();

break;

}

}

if(flag==0){

cout<<"\nNot found!"<<endl;

}

fp.close();

}

void update(){

int r;

student s;

int flag=0;

cout<<"\nEnter roll to be updated: ";

cin>>r;

fp.open("stu.dat",ios::in|ios::out);

if(!fp){

cout<<"\nError opening file for updating."<<endl;

return;

}

while(fp.read((char\*)&s,sizeof(s))){

if(s.roll==r){

flag=1;

cout<<"\nEnter new data: ";

s.getdata();

fp.seekp(-1\*sizeof(s),ios::cur);

fp.write((char\*)&s,sizeof(s));

break;

}

}

if(flag==0){

cout<<"\nNot found!"<<endl;

}

fp.close();

}

void delete1(){

student s;

int flag=0;

fstream fp1;

int r;

cout<<"\nEnter roll to be deleted: ";

cin>>r;

fp.open("stu.dat",ios::in);

fp1.open("temp.dat",ios::out);

if(!fp || !fp1){

cout<<"\nError opening files."<<endl;

return;

}

while(fp.read((char\*)&s,sizeof(s))){

if(s.roll!=r){

fp1.write((char\*)&s,sizeof(s));

}else{

flag=1;

}

}

if(flag==0){

cout<<"\nNot found!"<<endl;

}else{

remove("stu.dat");

rename("temp.dat","stu.dat");

cout<<"\nRecord deleted successfully."<<endl;

}

fp.close();

fp1.close();

}

};

int main(){

file f;

int choice;

do{

cout<<"\n1. Create \n2. Display \n3. Search \n4. Append";

cout<<"\n5. Update \n6. Delete";

cout<<"\nEnter choice (0 to exit): ";

cin>>choice;

switch(choice){

case 1:

f.create();

break;

case 2:

f.display();

break;

case 3:

f.search();

break;

case 4:

f.append();

break;

case 5:

f.update();

break;

case 6:

f.delete1();

break;

case 0:

cout<<"\nExiting program."<<endl;

break;

default:

cout<<"\nInvalid choice!"<<endl;

}

}while(choice!=0);

return 0;

}