**Aim:**

To write a program to create an object of class Student which stores the name of the student, marks & assign Grade. Store all the records in file “stu1.txt” and perform various function like modification, deletion and insertion in the saved file according to user choice.

**Source Code:**

#include<fstream.h>

#include<conio.h>

#include<stdio.h>

#include<string.h>

#include<process.h>

class student

{

private:

float marks;

int rno;

char name[50];

char grade;

public:

void calgrade()

{

if(marks>90)

{

grade='A';

}

else if(marks>80)

{

grade='B';

}

else if(marks>70)

{

grade='C';

}

else if(marks>80)

{

grade='D';

}

else

{

grade='E';

}

}

void getdata()

{

cout<<"Enter The Roll no : ";

cin>>rno;

cout<<"Enter Name Of the Student ";

cin>>name;

cout<<"Enter the Marks of the Student : ";

cin>>marks;

}

int getrno()

{

return(rno);

}

void putdata()

{

cout<<"\nRoll no of the Student : "<<rno;

cout<<"\nName of the Student :"<<name;

cout<<"\nMarks of the Student :"<<marks;

cout<<"\nGrade of the Student :"<<grade;

}

char\* getname()

{

return(name);

}

void modify()

{

char newname[50];

float marks\_;

cout<<"Enter new name(. to retain old name) ";

gets(newname);

cout<<"Enter new marks(-1 to retain old marks) ";

cin>>marks\_;

if(strcmp(newname,".")!=0)

{

strcpy(name,newname);

}

if(marks\_!=-1)

{

marks=marks\_;

}

}

};

void main()

{

student s1;

int ch,rnum;

char ch1;

do

{

clrscr();

cout<<"\n1. Enter Record ";

cout<<"\n2. Display all Records ";

cout<<"\n3. Search by roll no ";

cout<<"\n4. Search by Name ";

cout<<"\n5. Modify a Record ";

cout<<"\n6. Delete an record ";

cout<<"\nEnter choice : ";

cin>>ch;

switch(ch)

{

case 1:

{

clrscr();

ofstream fout("stu1.txt",ios::binary|ios::app);

char ans='y';

if(!fout)

{

cout<<"\n File Not Found";

exit(1);

}

while(ans=='y')

{

s1.getdata();

s1.calgrade();

fout.write((char\*)&s1,sizeof(s1));

cout<<"Enter more record (y/n) :";

cin>>ans;

}

fout.close();

break;

}

case 2:

{

clrscr();

ifstream finc2("stu1.txt",ios::binary);

if(!finc2)

{

cout<<"\n File Not Found :";

exit(1);

}

while(finc2)

{

finc2.read((char\*)&s1,sizeof(s1));

if(finc2.eof())

{

break;

}

s1.putdata();

}

finc2.close();

break;

}

case 3:

{

clrscr();

ifstream finc3("stu1.txt",ios::binary);

cout<<"Enter roll no of the Student :";

cin>>rnum;

if(!finc3)

{

cout<<"\n File Not Found ";

exit(1);

}

while(finc3)

{

finc3.read((char\*)&s1,sizeof(s1));

if(s1.getrno()==rnum)

{

s1.putdata();

}

}

finc3.close();

break;

}

case 4:

{

char test[30];

char check='n';

clrscr();

cout<<"Enter Name of the Student : ";

gets(test);

ifstream finc4("stu1.txt",ios::binary);

if(!finc4)

{

cout<<"\n File Not Found :";

exit(1);

}

while(finc4)

{

finc4.read((char\*)&s1,sizeof(s1));

if(strcmp(test,s1.getname())==0)

{

s1.putdata();

check='y';

break;

}

}

if(check=='n')

{

cout<<"\n No Such Record Found : ";

}

finc4.close();

break;

}

case 5:

{

clrscr();

int pos;

char check='n';

fstream finc5("stu1.txt",ios::in|ios::out|ios::binary);

cout<<"Enter roll no of the Student :";

cin>>rnum;

if(!finc5)

{

cout<<"\n File Not Found ";

exit(1);

}

while(finc5)

{

finc5.read((char\*)&s1,sizeof(s1));

pos=finc5.tellg();

if(s1.getrno()==rnum)

{

s1.modify();

s1.calgrade();

cout<<"\n Press Any Key to Save Changes : ";

getch();

finc5.seekg(pos);

finc5.write((char\*)&s1,sizeof(s1));

check='y';

cout<<"\n Displaying the Modified Data : \n\n";

s1.putdata();

break;

}

}

if(check=='n')

{

cout<<"\n Record Not Found ";

}

finc5.close();

break;

}

case 6:

{

clrscr();

char check='n';

char del='n';

fstream finc6("stu1.txt",ios::in|ios::out|ios::binary);

fstream finc7("temp.txt",ios::in|ios::out|ios::binary);

cout<<"Enter roll no of the Student Whose Record You Want to Delete :";

cin>>rnum;

if(!finc6)

{

cout<<"\n File Not Found ";

exit(1);

}

while(!finc6.eof())

{

//int pos=fio.tellg();

finc6.read((char\*)&s1,sizeof(s1));

if(s1.getrno()==rnum)

{

s1.putdata();

cout<<"\n Are You Sure You Want to Delete Data (y/n) : ";

cin>>del;

if(del=='n')

{

finc7.write((char\*)&s1,sizeof(s1));

}

check='y';

if(del=='y')

{

cout<<"\n Record Sucessfully Deleted : ";

}

}

else

{

finc7.write((char\*)&s1,sizeof(s1));

}

}

if(check=='n')

{

cout<<"\n Record Not Found ";

}

finc6.close();

finc7.close();

remove("stu1.txt");

rename("temp.txt","stu1.txt");

break;

}

}

cout<<"\nReturn to menu (y/n) :";

cin>>ch1;

}while(ch1=='y');

exit(0);

getch();

}

**Output :**





