**COMPUTER**

**SCIENCE**

**PROJECT**

****

**Made By: Talal Mahdy**

**Class: 12th B**

**Year: 2013-2014**

**ACKNOWLEDGEMENT**

I, Talal Mahdy, student of Jabriya Indian School, would like to extend my thanks and deepest gratitude to my computer science teacher, **Mr. Binoy** for his guidance, advice and time rendered. I would also like to thank him for providing me with all the necessary tools and knowledge.

**DECLARATION**

I, Talal Mahdy, declare that this project has been done by me in the computer science lab of Jabriya Indian School and that this is the work of none other individuals but me and those are in my group.

**Introduction**

This project is about student report card system.

This C++ mini project on student report card has student class with data members like roll-no, name, marks and grade. Member functions in this class are used to accept/display details of students and a function to calculate grade based on marks obtained by student. Student record are stored in binary file.

This project is done in C++ (Borland/turbo) using functions, class, structures and data file handling.

This project has three different menus namely,

1. Entry/Edit menu
2. Result menu
3. Exit
4. The entry/Edit menu allows the user to create, display, search, modify and delete student records by entering the roll-no, name and marks for different subjects.
5. The result menu will display the class result and student report card as per the choice of the user.
6. The exit menu will exit from the program.

**PROGRAM**

**SEGMENT**

#include<fstream.h>

#include<iomanip.h>

#include<stdio.h>

#include<conio.h>

// CLASS USED

class student

{ int rollno;

char grade;

char name[50];

int p\_marks, c\_marks, m\_marks, e\_marks, cs\_marks;

float per;

public:

void calculate(); //function to calculate grade public:

void getdata(); //function to accept data from user

int retrollno();

void showdata(); //function to show data on screen

void show\_tabular();

};

void student::calculate()

{

per=(p\_marks+c\_marks+m\_marks+e\_marks+cs\_marks)/5; if(per>=60)

grade='A';

else if(per>=50)

grade='B';

else if(per>=33)

grade='C';

else

grade='F';

}

void student::getdata()

{

cout<<"\n Enter The roll number of student "; cin>>rollno;

cout<<"\n\n Enter The Name of student ";

gets(name);

cout<<"\n Enter The marks in physics out of 100 : "; cin>>p\_marks;

cout<<"\n Enter The marks in chemistry out of 100: "; cin>>c\_marks;

cout<<"\n Enter The marks in math out of 100 : "; cin>>m\_marks;

cout<<"\n Enter The marks in english out of 100: "; cin>>e\_marks;

cout<<"\n Enter The marks in computer out of 100: ";

cin>>cs\_marks;

calculate();

}

void student::showdata()

{ cout<<"\n Roll number of student : "<<rollno;

cout<<"\n Name of student : "<<name;

cout<<"\n Marks in Physics : "<<p\_marks;

cout<<"\n Marks in Chemistry : "<<c\_marks;

cout<<"\n Marks in Maths : "<<m\_marks;

cout<<"\n Marks in English : "<<e\_marks;

cout<<"\n Marks in Computer Science :"<<cs\_marks; cout<<"\nPercentage of student is :"<<per;

cout<<"\n Grade of student is :"<<grade; }

void student::show\_tabular()

{

cout<<rollno<<setw(4)<<" "<<name<<setw(6)<<p\_marks<<setw(5)<<c\_marks<<setw(5)<<m\_marks<<setw(5)<<e\_marks<<setw(5)<<cs\_marks<<setw(8)<<per<<setw(4)<<" "<<grade<<endl; }

int student::retrollno() { return rollno; } //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* // function

void write\_student(); //write the record in binary file void display\_all(); //read all records from binary file void display\_sp(int); //accept rollno and read record from binary file

void modify\_student(int); //accept rollno and update record of binary file

void delete\_student(int); //accept rollno and delete selected records from binary file

void class\_result(); //display all records in tabular format from binary file

void result(); //display result menu

void intro(); //display welcome screen

void entry\_menu(); //display entry menu on screen

//THE MAIN FUNCTION OF PROGRAM

int main()

{ char ch;

cout.setf(ios::fixed|ios::showpoint);

cout<<setprecision(2); // program outputs decimal number to two decimal places

clrscr();

intro();

do

{ clrscr();

cout<<"\n\n\n\tMAIN MENU";

cout<<"\n\n\t01. RESULT MENU"; cout<<"\n\n\t02. ENTRY/EDIT MENU"; cout<<"\n\n\t03. EXIT"; cout<<"\n\n\tPlease Select Your Option (1-3) "; cin>>ch;

clrscr();

switch(ch)

{

case '1': result();

break;

case '2': entry\_menu();

break;

case '3':

break;

default :cout<<"\a";

}

}

while(ch!='3');

return 0;

}

// function to write in file

void write\_student()

{ student st;

ofstream outFile;

outFile.open("student.dat",ios::binary|ios::app);

st.getdata();

outFile.write((char \*) &st, sizeof(student)); outFile.close();

cout<<"\n\nStudent record Has Been Created "; cin.ignore();

getch();

}

//function to read all records from file

void display\_all()

{ student st;

ifstream inFile; inFile.open("student.dat",ios::binary);

if(!inFile)

{

cout<<"File could not be open. Press any Key.";

getch();

return; }

cout<<"\n\n\n\t\tDISPLAY ALL RECORD !!!\n\n";

while(inFile.read((char \*) &st, sizeof(student)))

{ st.showdata();

cout<<"\n\n=================\n";

}

inFile.close();

getch();

} // to read specific record from file

void display\_sp(int n)

{ student st;

ifstream

inFile;

inFile.open("student.dat",ios::binary);

if(!inFile)

{

cout<<"File could not be open !! Press any Key..."; getch();

return; }

int flag=0;

while(inFile.read((char \*) &st, sizeof(student)))

{

if(st.retrollno()==n)

{

st.showdata();

flag=1;

}

} inFile.close();

if(flag==0)

cout<<"\n\n record not exist";

getch();

}

//function to modify record of file

void modify\_student(int n)

{

int found=0;

student st;

fstream File;

File.open("student.dat",ios::binary|ios::in|ios::out);

if(!File)

{

cout<<"File could not be open.Press any Key...";

getch();

return;

}

while(File.read((char \*) &st, sizeof(student)) && found==0) {

if(st.retrollno()==n)

{

st.showdata();

cout<<"\n\n Please Enter The New Details of student"<<endl;

st.getdata();

int pos=(-1)\*sizeof(st); File.seekp(pos,ios::cur); File.write((char \*) &st, sizeof(student)); cout<<"\n\n\t Record Updated"; found=1;

}

}

File.close();

if(found==0)

cout<<"\n\n Record Not Found ";

getch();

}

// to delete record of file

void delete\_student(int n)

{

student st;

ifstream inFile; inFile.open("student.dat",ios::binary);

if(!inFile)

{

cout<<"File could not be open. Press any Key."; getch();

return;

}

ofstream outFile;

outFile.open("Temp.dat",ios::out); inFile.seekg(0,ios::beg);

while(inFile.read((char \*) &st, sizeof(student)))

{

if(st.retrollno()!=n)

{

outFile.write((char \*) &st,sizeof(student));

}

}

outFile.close();

inFile.close();

remove("student.dat"); rename("Temp.dat","student.dat"); cout<<"\n\n\tRecord Deleted ..";

getch();

} //function to display all students grade report

void class\_result()

{ student st;

ifstream inFile; inFile.open("student.dat",ios::binary);

if(!inFile)

{

cout<<"File could not be open !! Press any Key...";

getch();

return; }

cout<<"\n\n\t\tALL STUDENTS RESULT \n\n"; cout<<"================================================================================\n";

cout<<"R.No Name Phy Chem Mat Eng CS %avg Grade "<<endl;

cout<<"================================================================================\n";

while(inFile.read((char \*) &st, sizeof(student)))

{

st.show\_tabular();

}

getch();

inFile.close(); }

// function to display result menu

void result()

{

char ch;

int rno;

cout<<"\n\n\n\tRESULT MENU";

cout<<"\n\n\n\t1. Class Result";

cout<<"\n\n\t2. Student Report Card";

cout<<"\n\n\t3. Back to Main Menu";

cout<<"\n\n\n\tEnter Choice (1/2/3)? ";

cin>>ch;

clrscr();

switch(ch)

{

case '1' :class\_result();

break;

case '2' :cout<<"\n\n\tEnter Roll Number Of Student : ";

cin>>rno;

display\_sp(rno);

break;

case '3' :break;

default :cout<<"\a";

}

} //INTRODUCTION FUNCTION

void intro()

{

cout<<"\n\n\n\t\t STUDENT";

cout<<"\n\n\t\tREPORT CARD";

cout<<"\n\n\t\t PROJECT";

cout<<"\n\n\n\tMADE BY : Melisa Mascarenhas "; cout<<"\n\tSCHOOL : JABRIYA INDIAN SCHOOL";

getch();

} //ENTRY / EDIT MENU FUNCTION

void entry\_menu()

{ char ch;

int num;

clrscr();

cout<<"\n\n\n\tENTRY MENU";

cout<<"\n\n\t1.CREATE STUDENT RECORD";

cout<<"\n\n\t2.DISPLAY ALL STUDENTS RECORDS"; cout<<"\n\n\t3.SEARCH STUDENT RECORD ";

cout<<"\n\n\t4.MODIFY STUDENT RECORD";

cout<<"\n\n\t5.DELETE STUDENT RECORD";

cout<<"\n\n\t6.BACK TO MAIN MENU";

cout<<"\n\n\tPlease Enter Your Choice (1-6) ";

cin>>ch;

clrscr();

switch(ch)

{

case '1': write\_student(); break;

case '2': display\_all(); break;

case '3': cout<<"\n\n\tPlease Enter The roll number ";

cin>>num;

display\_sp(num); break;

case '4': cout<<"\n\n\tPlease Enter The roll number ";

cin>>num;

modify\_student(num);break;

case '5': cout<<"\n\n\tPlease Enter The roll number ";

cin>>num; delete\_student(num);break;

case '6': break;

default: cout<<"\a"; entry\_menu();

}} //END OF PROJECT

OUTPUT

STUDENT

REPORT CARD

PROJECT

MADE BY: Talal Mahdy

SCHOOL: JABRIYA INDIAN SCHOOL

MAIN MENU

1. RESULT MENU
2. ENTRY/EDIT MENU
3. EXIT

Please Select Your Option <1-3> \_ 2

ENTRY MENU

1. CREATE STUDENT RECORD
2. DISPLAY ALL STUDENTS RECORDS
3. SEARCH STUDENT RECORD
4. MODIFY STUDENT RECORD
5. DELETE STUDENT RECORD
6. BACK TO MAIN MENU

Please Enter Your Choice <1-6> \_ 1

Enter The roll number of student 10

Enter The Name of student Melisa Mascarenhas

Enter The marks in physics out of 100: 90

Enter The marks in chemistry out of 100: 91

Enter The marks in math out of 100: 95

Enter The marks in english out of 100:94

Enter The marks in computer out of 100: 93

Student record Has Been Created

MAIN MENU

1. RESULT MENU
2. ENTRY/EDIT MENU
3. EXIT

Please Select Your Option <1-3> \_ 2

ENTRY MENU

1. CREATE STUDENT RECORD

2. DISPLAY ALL STUDENTS RECORDS

3. SEARCH STUDENT RECORD

4. MODIFY STUDENT RECORD

5. DELETE STUDENT RECORD

6. TO MAIN MENU

Please Enter Your Choice <1-6> \_ 2

DISPLAY ALL RECORD !!!

Roll number of student: 10

Name of student: Melisa Mascarenhas

Marks in Physics: 90

Marks in Chemistry: 91

Marks in Math: 95

Marks in English: 94

Marks in Computer Science: 93

Percentage of student is: 92:00

Grade of student is: A

= = = = = = = = = = = = = = = = = = =

ENTRY MENU

1. CREATE STUDENT RECORD

2. DISPLAY ALL STUDENTS RECORDS

3. SEARCH STUDENT RECORD

4. MODIFY STUDENT RECORD

5. DELETE STUDENT RECORD

6. TO MAIN MENU

Please Enter Your Choice <1-6> \_ 3

Please Enter The roll number 10

Roll number of student: 10

Name of student: Melisa Mascarenhas

Marks in Physics: 90

Marks in Chemistry: 91

Marks in Math: 95

Marks in English: 94

Marks in Computer Science: 93

Percentage of student is: 92:00

Grade of student is: A

MAIN MENU

1. RESULT MENU
2. ENTRY/EDIT MENU
3. EXIT

Please Select Your Option <1-3> \_ 2

ENTRY MENU

1. CREATE STUDENT RECORD

2. DISPLAY ALL STUDENTS RECORDS

3. SEARCH STUDENT RECORD

4. MODIFY STUDENT RECORD

5. DELETE STUDENT RECORD

6. TO MAIN MENU

Please Enter Your Choice <1-6> \_ 4

Please Enter The roll number 10

Roll number of student: 10

Name of student: Melisa Mascarenhas

Marks in Physics: 90

Marks in Chemistry: 91

Marks in Math: 95

Marks in English: 94

Marks in Computer Science: 93

Percentage of student is: 92:00

Grade of student is: A

Please Enter The New Details of students

Enter The roll number of student 11

Enter The Name of student Melisa M

Enter The marks in physics out of 100: 91

Enter The marks in chemistry out of 100: 93

Enter The marks in math out of 100: 95

Enter The marks in englishout of 100:95

Enter Themarks in computer out of 100: 94

Record Updated

MAIN MENU

1. RESULT MENU
2. ENTRY/EDIT MENU
3. EXIT

Please Select Your Option <1-3> \_ 2

ENTRY MENU

1. CREATE STUDENT RECORD

2. DISPLAY ALL STUDENTS RECORDS

3. SEARCH STUDENT RECORD

4. MODIFY STUDENT RECORD

5. DELETE STUDENT RECORD

6. TO MAIN MENU

Please Enter Your Choice <1-6> \_ 5

Record Deleted . .

Please Enter The roll number 10

MAIN MENU

1. RESULT MENU
2. ENTRY/EDIT MENU
3. EXIT

Please Select Your Option <1-3> \_ 2

ENTRY MENU

1. CREATE STUDENT RECORD

2. DISPLAY ALL STUDENTS RECORDS

3. SEARCH STUDENT RECORD

4. MODIFY STUDENT RECORD

5. DELETE STUDENT RECORD

6. TO MAIN MENU

Please Enter Your Choice <1-6> \_ 6

MAIN MENU

1. RESULT MENU
2. ENTRY/EDIT MENU
3. EXIT

Please Select Your Option <1-3>

MAIN MENU

1. RESULT MENU
2. ENTRY/EDIT MENU
3. EXIT

Please Select Your Option <1-3>1

RESULT MENU

1. Class Result
2. Student Report Card
3. Back to Main Menu

Enter Choice <1/2/3>? 1

ALL STUDENTS RESULT

= = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = =

R.No Name PhyChem Mat Eng CS %avg Grade

= = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = = =

11 Melisa M 91 93 95 95 94 93.00 A

MAIN MENU

1. RESULT MENU
2. ENTRY/EDIT MENU
3. EXIT

Please Select Your Option <1-3> 1

RESULT MENU

1. Class Result
2. Student Report Card
3. Back to Main Menu

Enter Choice <1/2/3>? 2

Enter Roll Number Of Student: 11

Roll number of student: 11

Name of student: Melisa M

Marks in Physics: 91

Marks in Chemistry: 93

Marks in Math: 95

Marks in English: 95

Marks in Computer Science: 94

Percentage of student is: 93:00

Grade of student is: A

MAIN MENU

01.RESULT MENU

02. ENTRY/EDIT MENU

03. EXIT

Please Select Your Option <1-3> 1

RESULT MENU

1.Class Result

2. Student Report Card

3. Back to Main Menu

Enter Choice <1/2/3>? 3

MAIN MENU

1. RESULT MENU
2. ENTRY/EDIT MENU
3. EXIT

Please Select Your Option <1-3>