



Ahsanullah University Of Science And Technology

(Project-14)

Project Name: Grading Management System for EEE Department

Presented by: -

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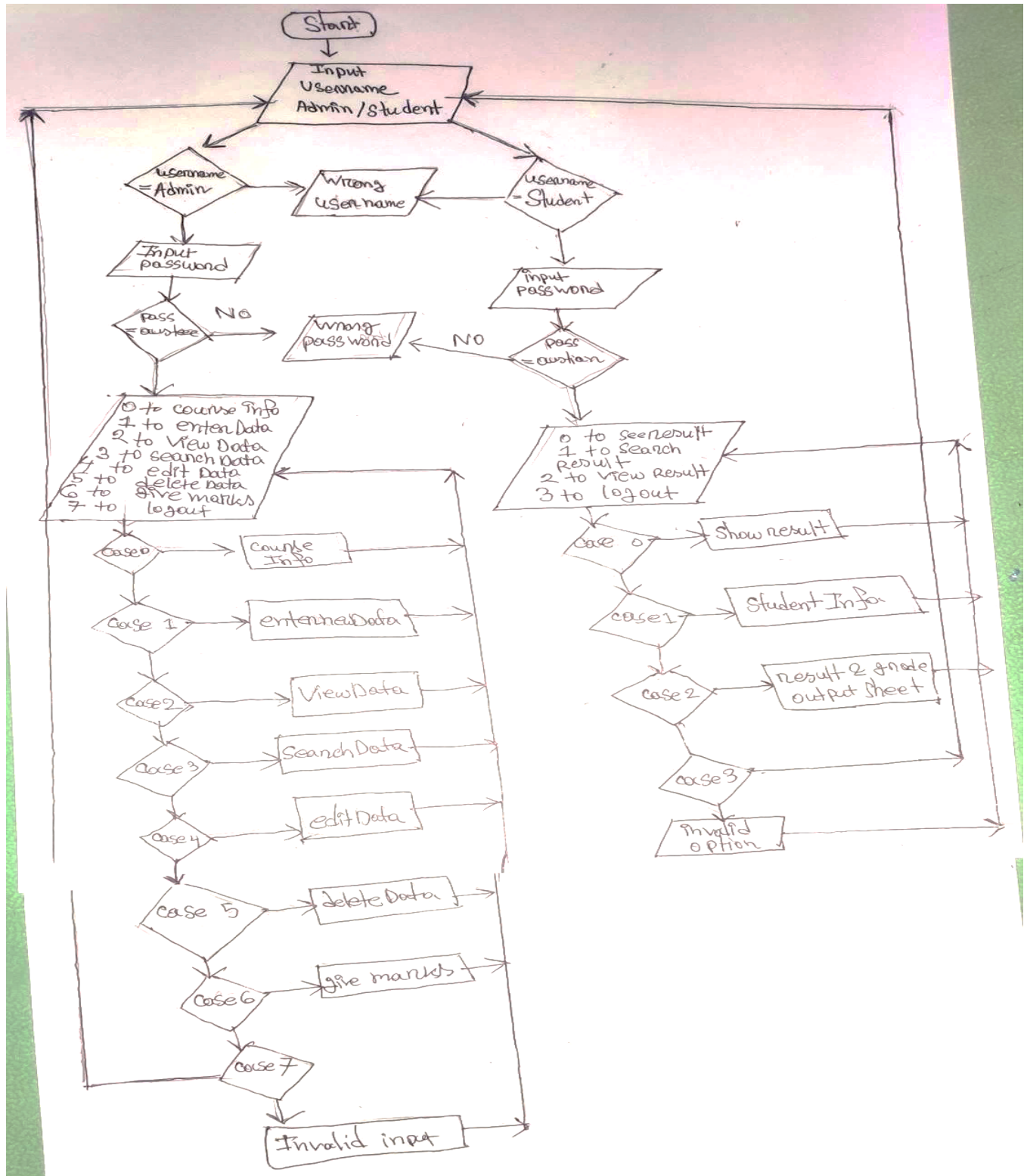
ID:190205088

Section: B

Group:B1

Introduction: A project named “Grading Management System for EEE Department” is done using C++ programming language. This project is developed for 2 types of users, Admin and Student where an admin can see course information, put data, view data, search data, delete data, update data and give marks to the students. On the other hand a student can only see his/her information and result.

Flow chart:



Here is the full code of the project:

```
#include<iostream>
#include<fstream>

////NOTE:The Password for student is "austian"...

using namespace std;

string arr1[20],arr2[20],arr3[20],arr4[20],arr5[20],arr6[20]; //6 arrays for 6 types of data

int total=0;      //counts numb of student

class global{

public:

void menu();

//gives information about the course (name and title) of 8 semesters of EEE

class course

{

private:

    int year1,semester1; public:

    void cou(string title,string cno,int year,int semester){ cout<<endl;
year1=year;
semester1=semester;
```

```
cout<<"course title : "<<title<<endl; cout<<"course no  
:"<<cno<<endl;
```

```
}
```

```
}m1;
```

```
//shows the gpa automatically when admin gives marks
```

```
//also counts result for student(students can know result by puting their id only)
```

```
class result{
```

```
private:
```

```
float p,q,r,k,t,u,v,w,myid; public:
```

```
void grade(float &marks)
```

```
{
```

```
if (marks>=80){cout<<"(A+)";marks=4.00;}
```

```
else if(marks>=75 && marks<=79) {cout<<"(A)";marks=3.75;} else if(marks>=70
```

```
&& marks<=74) {cout<<"(A-)";marks=3.5;} else if(marks>=65 && marks<=69)
```

```
{cout<<"(B+)";marks=3.25;}
```

```
else if(marks>=60 && marks<=64) {cout<<"(B)";marks=3.00;}
```

```
else if(marks>=55 && marks<=59) {cout<<"(C)";marks=2.75;} else if(marks>=50
```

```
&& marks<=54) {cout<<"(C+)";marks=2.5;}
```

```
}m1;
```

```
//shows the gpa automatically when admin gives marks
```

```
//also counts result for student(students can know result by puting their id only)
```

```

class result{
private:
float p,q,r,k,t,u,v,w,myid; public:

void grade(float &marks)

{
if (marks>=80){cout<<"(A+)";marks=4.00;}

else if(marks>=75 && marks<=79) {cout<<"(A)";marks=3.75;} else if(marks>=70
&& marks<=74) {cout<<"(A-)";marks=3.5;} else if(marks>=65 && marks<=69)
{cout<<"(B+)";marks=3.25;}

else if(marks>=60 && marks<=64) {cout<<"(B)";marks=3.00;}

else if(marks>=55 && marks<=59) {cout<<"(B-)";marks=2.75;} else if(marks>=50
&& marks<=54) {cout<<"(C+)";marks=2.5;}

else if(marks>=45 && marks<=49) {cout<<"(C)";marks=2.25;} else
if(marks>=40 && marks<=44) {cout<<"(D)";marks=2.00;} else if (marks<40){
cout<<"(F)";marks=0.0;}

}

void calculateResult()

{

int y,s,id;

cout<<"Enter year of the Student(1/2/3/4) : "<<endl; cin>>y;

cout<<"Enter semester of the student(1/2) : "<<endl; cin>>s;

cout<<"Enter student ID(no dots.) : "<<endl; cin>>id;

float a,b,c,d,e,f,g,h;

//shows course name and title when admin wants to give marks
//1(1st year)

```

```

if (y == 1)
{
    if (s == 1) {

cout<<"Enter marks of ID :"<<id<<" for year "<<y<<" sem "<<s<<"[1- 100] :"<<endl;
cout<<endl;

        cout<<"Physic-PHY1105 :";cin>>a; grade(a);cout<<endl;
        cout<<"Electrical-circuitsI-EEE1101 :";cin>>b; grade(b);cout<<endl;
        cout<<"Electrical-circuits LAB I - EEE1102 :";cin>>c; grade(c);cout<<endl;
        cout<<"Mathmatics I - MATH1101 :";cin>>d; grade(d);cout<<endl;
        cout<<"mechanical - ME1101 :";cin>>e; grade(e);cout<<endl;
        cout<<"mechanical lab - ME1102 :";cin>>f; grade(f);cout<<endl;
        cout<<"physics lab - PHY1106 :";cin>>g;

```

```

if (y == 1)
{
    if (s == 1) {

cout<<"Enter marks of ID :"<<id<<" for year "<<y<<" sem "<<s<<"[1- 100] :"<<endl;
cout<<endl;

        cout<<"Physic-PHY1105 :";cin>>a; grade(a);cout<<endl;
        cout<<"Electrical-circuitsI-EEE1101 :";cin>>b; grade(b);cout<<endl;
        cout<<"Electrical-circuits LAB I - EEE1102 :";cin>>c; grade(c);cout<<endl;
        cout<<"Mathmatics I - MATH1101 :";cin>>d; grade(d);cout<<endl;
        cout<<"mechanical - ME1101 :";cin>>e; grade(e);cout<<endl;
        cout<<"mechanical lab - ME1102 :";cin>>f; grade(f);cout<<endl;
        cout<<"physics lab - PHY1106 :";cin>>

```

```

        grade(g);cout<<endl;

        cout<< "chemistry - CHEM1101 :";cin>>h; grade(h);cout<<endl;

        }

//1.2(1st year second semester)

        else if(s==2) {

        cout<<"Enter marks of ID :"<<id<<" for year "<<y<< "sem "<<s<<endl; cout<<endl;

                cout<<"Electrical circuits II - EEE1203 :";cin>>a; grade(a);cout<<endl;

        cout<< "Electrical-circuits II lab - EEE1202 :";cin>>b; grade(b);cout<<endl;

        cout<< "simulation lab - EEE1210 :";cin>>c; grade(c);cout<<endl;

        cout<< "physics II - PHY1205 :";cin>>d; grade(d);cout<<endl;

        cout<< "Mathmatics II - Math203 :";cin>>e; grade(e);cout<<endl;


        cout<< "Mathmatics III - MATH1213 :";cin>>f; grade(f);cout<<endl;

        cout<< "Civil - CE 1213 :";cin>>g;

        grade(g);cout<<endl;

        cout<<"Civil drawing lab - CE 1202 :";cin>>h; grade(h);cout<<endl;

        }

        }

//2

        else if(y == 2) {

        if (s == 1)

        {

        cout<<"Enter marks of ID :"<<id<<" for year "<<y<< ",sem "<<s<<endl; cout<<endl;

```



```

        cout<<"Electronics - EEE2103 :";cin>>a; grade(a);cout<<endl;
cout<< "Mechine Theory - EEE2105 :";cin>>b; grade(b);cout<<endl;

cout<< "Mechine Lab - EEE2106 :";cin>>c;

grade(c);cout<<endl;

cout<< "Programming language - EEE2109 :";cin>>d; grade(d);cout<<endl;
cout<< "Mathmatics III - MATH2103 :";cin>>e; grade(e);cout<<endl;
cout<< "Programming lab - EEE2110 :";cin>>f; grade(f);cout<<endl;
cout<< " English lab - HUM2101 :";cin>>g; grade(g);cout<<endl;
cout<< "ELECTRONICS LAB - EEE2104 :";cin>>h;

grade(h);cout<<endl;

    }

//2.2

    else if(s==2) {
cout<<"Enter marks of ID : "<<id<<" for year "<<y<< "sem "<<s<<endl; cout<<endl;

        cout<<"Electronics II - EEE2201 :";cin>>a; grade(a);cout<<endl;
cout<<"Electronics II LAB - EEE2202 :";cin>>b; grade(b);cout<<endl;

        cout<<"ENERGY CONVERSION II - EEE2203 :";cin>>c;

grade(c);cout<<endl;

        cout<<"ENERGY CONVERSION II LAB - EEE2204 :";cin>>d;

grade(d);cout<<endl;

        cout<<"simulation - EEE2205 :";cin>>e; grade(e);cout<<endl;
        cout<<"measurement - EEE2206 :";cin>>f; grade(f);cout<<endl;
cout<< "measurement lab - EEE2207 :";cin>>g; grade(g);cout<<endl;
cout<< "Mathmatics V - MATH 2203 :";cin>>h; grade(h);cout<<endl;

    }

```

```
}
```

```
//3
```

```
else if(y == 3){
```

```
if (s == 1) {
```

```
cout<<"Enter marks of ID : "<<id<<" for year "<<y<<"sem "<<s<<endl; cout<<endl;
```

```
cout<<"Digital Electronics-EEE3103 :";cin>>a;
```

```
grade(a);cout<<endl;
```

```
cout<<"Digital Electronics II- EEE3104 :";cin>>b; grade(b);cout<<endl;
```

```
cout<<"Signal system - EEE3105 : " ;cin>>c;
```

```
grade(c);cout<<endl; cout<<"Electromagnets - EEE3106
```

```
: ";cin>>d; grade(d);cout<<endl;
```

```
cout<<"Electrical propertyies- EEE3107 :";cin>>e; grade(e);cout<<endl;
```

```
cout<<"service design - EEE3108 : " ;cin>>f; grade(f);cout<<endl;
```

```
cout<<"numarical technique lab - EEE3109 :";cin>>g; grade(g);cout<<endl;
```

```
cout<<"Industrial manage3201 - HUM3109 :";cin>>h; grade(h);cout<<endl;
```

```
}
```

```
//3.2
```

```
else if(s==2) {
```

```
cout<<"Enter marks of ID : "<<id<<" for year "<<y<<"sem "<<s<<endl; cout<<endl;
```

```
cout<<"solid device - EEE3201 :";cin>>a; grade(a);cout<<endl;
```

```
cout<<"power - EEE3202 :";cin>>b; grade(b);cout<<endl;
```

```
cout<<"comunication theory - EEE3203 :";cin>>c; grade(c);cout<<endl;
```

```

        cout<<"comunication theory lab - EEE3204 :";cin>>d; grade(d);cout<<endl;

        cout<<"micro processor - EEE3205 :";cin>>e;

        grade(e);cout<<endl;

        cout<<"signal lab - EEE3206 :";cin>>f; grade(f);cout<<endl;
        cout<<"signal processing - EEE3207 :";cin>>g; grade(g);cout<<endl;
        cout<<"micro processor2101 - EEE3208 :";cin>>h; grade(h);cout<<endl;
    }

//4

else if (y == 4) {

    if (s == 1) {

        cout<<"Enter marks of ID :"<<id<<" for year "<<y<<"sem "<<s<<endl; cout<<endl;

            cout<<"Elective I - EEE4103 :";cin>>a; grade(a);cout<<endl;

            cout<<"Elective II - EEE4102 :";cin>>b; grade(b);cout<<endl;

            cout<<"Elective III - EEE4105 :";cin>>c; grade(c);cout<<endl;


            cout<<"Elective I-lab - EEE4106 :";cin>>d; grade(d);cout<<endl;
            cout<<"Elective II-lab - EEE4109 :";cin>>e; grade(e);cout<<endl;
            cout<<"Elective IV - EEE4104 :";cin>>f; grade(f);cout<<endl;
            cout<<"Control system 1 - EEE4119 :";cin>>g; grade(g);cout<<endl;
            cout<<"Control system 2 - EEE4119 :";cin>>h; grade(h);cout<<endl;

        }

//4.2

        else if(s==2) {

            cout<<"Enter marks of ID :"<<id<<" for year "<<y<<"sem "<<s<<endl; cout<<endl;

            cout<<" Project and thesis - EEE4200 :";cin>>a; grade(a);cout<<endl;

```

```

cout<<"Elective V - EEE4204 :";cin>>b;

grade(b);cout<<endl;

    cout<<"Elective VI - EEE4239 :";cin>>c;

grade(c);cout<<endl;

    cout<<"Elective VII - EEE4206 :";cin>>d; grade(d);cout<<endl;
    cout<<"Elective VIII - EEE4209 :";cin>>e; grade(e);cout<<endl;
cout<<"Elective VI Lab - EEE4203 :";cin>>f; grade(f);cout<<endl;
cout<<"Elective VII Lab - EEE4201 :";cin>>g; grade(g);cout<<endl;
cout<<"Society & ethics - HUM4129 :";cin>>h; grade(h);cout<<endl;

        }

    }

}

p=a;q=b;r=c;k=d;t=e;u=f;v=g;w=h;myid=id;

}

//function for calculating result of student void
viewResult(int st)

{

    if(st==myid){ float
    result; int n;
    cout<<endl;
    cout<<"Enter the number of courses(Generally 8) : "<<endl; cin>>n;

    result=(p+q+r+k+t+u+v+w)/n;

    cout<<"GPA result of ID : "<<myid<<"is <<<< " <<result; cout<<endl;

```

```
}
```

```
}  
//class ends
```

```
}x1;
```

```
{
```

```
total=ch+total; for(int
```

```
i=0;i<ch;i++)
```

```
{
```

```
cout<<"\nEnter the Data of student
```

```
//class for studentInformation
```

```
class studentInfo{
```

```
public:
```

```
void newData()
```

```
{
```

```
int ch=0;
```

```
cout<<"How many students do u want to  
enter??"<<endl;
```

```
cin>>ch;
```

```
if(total==0)
```

```

        cout<<"Enter name :"; cin>>arr1[i]; //arr1 for
        name cout<<"Enter Student ID :";
        cin>>arr2[i];           //arr2 for id or roll
        cout<<"Enter Section :";
        cin>>arr3[i];           //arr3 for section
        cout<<"Year :";
        cin>>arr4[i];           //arr4 for year
        cout<<"Enter Semester :";
        cin>>arr5[i];           //arr5 for semester
        cout<<"Enter department :";
        cin>>arr6[i];           //arr6 for dept
    }

}

else           // total is not equal zero

{

```

```

        for(int i=total;i<ch+total;i++)

        {

                cout<<"\nEnter the Data of student

"<<i+1<<endl<<endl;

                cout<<"Enter name :";
                cin>>arr1[i];
                cout<<"Enter Student ID :"; cin>>arr2[i];
                cout<<"Enter Section :";
                cin>>arr3[i]; cout<<"Year :";
                cin>>arr4[i];
                cout<<"Enter Semester :"; cin>>arr5[i];
                cout<<"Enter department :";

                cin>>arr6[i];

        }

        total=ch+total;                //total value updated

    }

void viewData()

{

        if(total==0)                //jodi value enter() na kore tahole total zero hobe..show
        hobe na

        {

```



```

        {
            cout<<"Name : "<<arr1[i]<<endl;
            cout<<"Student ID : "<<arr2[i]<<endl; cout<<"Section
            : "<<arr3[i]<<endl; cout<<"Year : "<<arr4[i]<<endl;
            cout<<"Semester : "<<arr5[i]<<endl;
            cout<<"Department : "<<arr6[i]<<endl;
        }
    }
}

```

//function to edit data

void editData()

```

{
    if(total==0)
    {
        cout<<"No data is entered"<<endl;
    }
}

```

```

    }

    else{

        string rollno;

        cout<<"Enter the ID no(NO DOTS) of student which you want
to update"<<endl;

        cin>>rollno;

        for(int i=0;i<total;i++)

        {

            if(rollno==arr2[i])

            {

                cout<<"\nPrevious
data"<<endl<<endl;

                cout<<"Name : "<<arr1[i]<<endl;
                cout<<"Student ID : "<<arr2[i]<<endl; cout<<"Section
: "<<arr3[i]<<endl; cout<<"Year : "<<arr4[i]<<endl;
                cout<<"Semester : "<<arr5[i]<<endl;
                cout<<"Department : "<<arr6[i]<<endl;

```

```
//new data
```

```
cout<<endl;
```

```
cout<<endl;
```

```
cout<<"\nEnter new data          : "<<endl<<endl;
```

```
cout<<"Enter name :";
```

```
cin>>arr1[i]; cout<<"Enter ID no
```

```
:"; cin>>arr2[i];
```

```
cout<<"Enter Section :"; cin>>arr3[i];
```

```
cout<<"Enter year :";
```

```
cin>>arr4[i];
```

```
cout<<"Enter semester :"; cin>>arr5[i];
```

```
cout<<"Enter department :";
```

```
cin>>arr6[i];
```

$$\}$$
$$\}$$
$$\}$$
$$\}$$

```
//function to delete data void
```

```
deleteData()
```

```
{
```

```
    if(total==0)
```

```
    {
```

```
        cout<<"No data is entered"<<endl;
```

```
    }
```

```
    else{
```

```
        int a;
```

```
        cout<<"Press 1 to delete all record"<<endl;
```

```
            cout<<"Press 2 to delete specific record"<<endl; cin>>a;
```

```
            if(a==1)
```

```
{  
  
    total=0;    //student numb=0  
  
    cout<<"All record is deleted..!!"<<endl;  
  
}  
  
else if(a==2)  
  
{  
  
    string rollno;  
    cout<<"Enter the roll no of student which you wanted to  
delete"<<endl;  
  
    cin>>rollno;  
    for(int i=0;i<total;i++)  
    {  
  
        if(rollno==arr2[i])
```

```

        {

            for(int j=i;j<total;j++)

            {

                arr1[j]=arr1[j+1]; arr2[j]=arr2[j+1];
                arr3[j]=arr3[j+1]; arr4[j]=arr4[j+1];
                arr5[j]=arr5[j+1]; arr6[j]=arr6[j+1];

            }

            total--;

            cout<<"Your desired student record is
deleted"<<endl;

        }

    }

else

{

```

```

        cout<<"Invalid input";

    }

}

}

//end of student info class

}x,y;

class student
{
public:
    void searchInfoAndResult()
    {
        ifstream inputFile("C:/Users/sizan/Desktop/grading.txt"); char c;
        while(inputFile)
        {
            inputFile.get(c);
            cout<<c;
        }
    }
}

```

```
}
```

```
//student class(data and result sheet)
```

```
}info;
```

```
//global class ends
```

```
}glob;
```

```
//=====
```

```
//=====
```

```
//MAIN FUNCTION
```



```
int main()
```

```
{
```

```
cout<<endl;
```

```
cout<<endl;
```

```
glob.menu();
```

```
}
```

```
//=====
```

```
=====
```

```
//=====
```

```
=====
```

```
//menu function defination void
```

```
global::menu(){
```

```
string ad,pas1,pas2;

cout<<"Enter Username(Admin/Student) : "<<endl; cin>>ad;

if (ad=="Admin")

{

    cout<<"Enter User Password : "<<endl; cin>>pas1;

    while(pas1!="austee")

    {

        cout<<"Error!..Wrong password.Try Again : "<<endl; cin>>pas1;

    }

}
```

```
int value;
```

```
    while(true)
```

```

{

cout<<endl;
cout<<endl;
cout<<endl;
cout<<"===== "<<endl; cout<<"----
-----WELCOME ----- " <<endl;

cout<<"===== "<<endl;

cout<<endl;

cout<<"Enter your options"<<endl; cout<<endl;
cout<<"(I)    Press 0 to    <<  view course information : "<<endl; cout<<"(II)
                Press 1 to    <<  enter new data"<<endl; cout<<"(III)
                Press 2 to    <<  view data"<<endl; cout<<"(IV)    Press 3 to
                <<          search data"<<endl; cout<<"(V)
                Press 4 to    <<  edit data"<<endl; cout<<"(VI)
                Press 5 to    <<  delete data"<<endl;
cout<<"(VII) Press 6 to    <<  give marks"<<endl;
                cout<<"(VIII) Press 7 to    <<  exit/logout"<<endl;

```

```
cout<<endl;
```

```
cout<<endl;
```

```
cout<<endl;
```

```
cin>>value;
```

```
switch(value)
```

```
{
```

```
case 0:
```

```
int year,semester;
```

```
cout<<"Enter year(1/2/3/4) : "<<endl; cin>>year;
```

```
cout<<"Enter semester(1/2) : "<<endl; cin>>semester;
```

```
///code for course information
```

```
if (year == 1) {
```

```
    if (semester == 1) {
```

```
        cout<<"Information of 1 year 1 semester"<<endl; cout<<endl;
```

```
        ///here m1 is the object of course class
```

```
        //cou() is a member function of course class that helps to give course informations
```

```
            m1.cou("Physics", "PHY1105", 1, 1);
```

```
            m1.cou("Electrical-circuitsI", "EEE1101", 1, 1);
```

```
            m1.cou("Electrical-circuits LAB I", "EEE1102", 1, 1); m1.cou("Mathmatics
```

```
            I", "MATH1101", 1, 1); m1.cou("mechanical", "ME1101", 1, 1);
```

```
            m1.cou("mechanical lab", "ME1102", 1, 1); m1.cou("physics
```

```
            lab", "PHY1106", 1, 1);
```

```

        m1.cou("chemistry","CHEM1101",1,1); m1.cou("chemistry
lab","CHEM1102",1,1);

        }

        else if(semester==2) {

cout<<"Information of 1 year 2 semester"<<endl; cout<<endl;

        // add courses for year 1 semester 2

        m1.cou("Electrical circuits II","EEE1203",1,2);
m1.cou("Electrical-circuits II lab","EEE1202",1,2); m1.cou("simulation
lab","EEE1210",1,2);
m1.cou("physics II","PHY1205",1,2);
m1.cou("Mathematics II","Math203",1,2);
m1.cou("Mathematics III","MATH1213",1,2);
m1.cou("Civil","CE 1213",1,1);
m1.cou("Civil drawing lab","CE 1202",1,2);

```

```

    }
}
//////////year 2
else if(year == 2) {

    if (semester == 1)

    {
cout<<"Information of 2 year 1 semester"<<endl; cout<<endl;


                                m1.cou("Electronics","EEE2103",2,1); m1.cou("Mechine
Theory","EEE2105",2,1);
m1.cou("Mechine Lab","EEE2106",2,1); m1.cou("Programming
language","EEE2109",2,1); m1.cou("Mathmatics
III","MATH2103",2,1); m1.cou("sociology and
Emglish","HUM2109",2,1); m1.cou("Programming
lab","EEE2110",2,1); m1.cou(" English lab","HUM2101",2,1);
m1.cou("ELECTRONICS LAB","EEE2104",2,2);

        }

        else if(semester==2) {

cout<<"Information of 2 year 2 semester"<<endl; cout<<endl;


                                // add courses for year 1 semester 2 m1.cou("Electronics
II","EEE2201",2,2);

m1.cou("Electronics II LAB","EEE2202",2,2); m1.cou("ENERGY
CONVERSION II","EEE2203",2,2); m1.cou("ENERGY CONVERSION II
LAB","EEE2204",2,2);

m1.cou("simulation","EEE2205",2,2);

m1.cou("measurement","EEE2206",2,2);
```

```
m1.cou("measurement lab","EEE2207",2,2);  
m1.cou("Mathmatics V","MATH 2203",2,2);  
m1.cou("Acounting","HUM 2209",2,2);
```

```
    }  
    // repeat
```

```
}
```

```
//////////year 3
```

```
else if(year == 3){
```

```
    if (semester == 1) {
```

```
cout<<"Information of 3 year 1 semester"<<endl; cout<<endl;
```



```

        m1.cou("Digital Electronics","EEE3103",3,1);
m1.cou("Digital Electronics II","EEE3104",3,1);
m1.cou("Signal system","EEE3105",3,1);
m1.cou("Electromagnets","EEE3106",3,1); m1.cou("Electrical
propertyies","EEE3107",3,1); m1.cou("service
design","EEE3108",3,1); m1.cou("numarical technique
lab","EEE3109",3,1); m1.cou("Industrial
manage3201","HUM3109",3,1);
    }
    else if(semester==2) {

cout<<"Information of 3 year 2 semester"<<endl; cout<<endl;

        // add courses for year 3 semester 2 m1.cou("solid device
        ", "EEE3201",3,2);
m1.cou("power","EEE3202",3,2); m1.cou("comunication
theory","EEE3203",3,2);

```

```
m1.cou("comunication theory lab","EEE3204",3,2); m1.cou("micro  
processor","EEE3205",3,2); m1.cou("signal lab","EEE3206",3,2);  
m1.cou("signal processing","EEE3207",3,2); m1.cou("micro  
processor2101","EEE3208",3,2);
```

```
    }  
    // repeat  
}
```

```
//////////year 4 else if (year  
== 4) {
```

```
    if (semester == 1) {  
cout<<"Information of 4 year 1 semester"<<endl;
```

```
cout<<endl;
```

```
    m1.cou("Elective I","EEE4103",4,1);
```

```
    m1.cou("Elective II","EEE4102",4,1);
```

```
    m1.cou("Elective III","EEE4105",4,1);
```

```
    m1.cou("Elective I-lab","EEE4106",4,1);
```

```
    m1.cou("Elective II-lab","EEE4109",4,1);
```

```
    m1.cou("Elective IV","EEE4104",4,1); m1.cou("Control system  
1","EEE4119",4,1); m1.cou("Control system 2","EEE4119",4,1);
```

```
    }
```

```
    else if(semester==2) {
```

```
cout<<"Information of 4 year 2 semester"<<endl; cout<<endl;
```

```
        // add courses for year 1 semester 2 m1.cou(" Project
```

```
        and thesis","EEE4200",4,2);
```

```
        m1.cou("Elective V","EEE4204",4,2);
```

```
        m1.cou("Elective VI","EEE4239",4,2);  
        m1.cou("Elective VII","EEE4206",4,2);  
        m1.cou("Elective VIII","EEE4209",4,2);  
        m1.cou("Elective VI Lab","EEE4203",4,2);  
        m1.cou("Elective VII Lab","EEE4201",4,2);  
        m1.cou("Society & ethics","HUM4129",4,2);  
    }  
}  
  
break;
```

case 1:

```
    x.newData(); break;
```

case 2:

```
    x.viewData();
```

```
    break;
```

```

        case 3:
            x.searchData();
            break;
        case 4:
            x.editData();
            break;

        case 5:

            x.deleteData();

            break;
    case 6: x1.calculateResult();

    break;

        case 7:
        cout<<endl;
        cout<<endl;

            glob.menu();
        default:
            cout<<"Invalid input"<<endl;

            break;
    }

}
}

//when student is logged in----

```

```

else if(ad=="Student")
{
    cout<<"Enter Student password : "<<endl; cin>>pas2;

    while(pas2!="austian")

    {
        cout<<"Error!..Wrong password.Try Again : "<<endl; cin>>pas2;

    }

while(true)

{

    int value1; cout<<endl;

    cout<<endl;

    cout<<"===== "<<endl; cout<<"----
-----WELCOME ----- " <<endl;

    cout<<"===== "<<endl;

    cout<<endl;

    cout<<"Enter your options : "<<endl; cout<<"(I)  PRESS 0
TO VIEW_RESULT"<<endl;

```

```

cout<<"(II)    PRESS 1 TO SEARCH_DATA"<<endl;

cout<<"(III) PRESS 2 TO SEE DATA AND RESULT SHEET"<<endl;

cout<<"(III) PRESS 3 TO Exit(login)"<<endl;

cin>>value1;

cout<<endl; switch(value1)

{

case 0:

int roll1;

cout<<"Enter your roll no : "<<endl; cin>>roll1;

x1.viewResult(roll1); break;


case 1: cout<<endl;

x.searchData();

cout<<endl; break;

case 2:

cout<<endl; info.searchInfoAndResult();

    cout<<endl;

    cout<<endl;

    break;

case 3:

cout<<endl; cout<<endl;

    glob.menu();


default:

        cout<<"Invalid input"<<endl;

break;

}

```

```

}

}
//if username is incorrect else

{

while(ad!="Admin"&&ad!="Student")

{

cout<<"Error!!..Wrong Username,tryagain"<<endl; cin>>ad;

}}}
```

Screenshots of the solution (console output) of the problem:

1) Logged in as an admin and pressed 0 to see course info

```

C:\Users\sizer\Desktop\190205080(project14).exe

Enter Username(Admin/Student) :
Admin
Enter User Password :
austee

-----WELCOME-----
=====
Enter your options

(I) Press 0 to << view course information :
(II) Press 1 to << enter new data
(III) Press 2 to << view data
(IV) Press 3 to << search data
(V) Press 4 to << edit data
(VI) Press 5 to << delete data
(VII) Press 6 to << give marks
(VIII) Press 7 to << exit(loginout)

0
Enter year(1/2/3/4) :
2
Enter semester(1/2) :
1
Information of 2 year 1 semester

course title :Electronics
course no :EEE2103

course title :Machine Theory
course no :EEE2105

course title :Machine Lab
course no :EEE2106

course title :Programming language
```



```
C:\Users\sizen\Desktop\190205080(project14).exe

course title :Programming language
course no :ttt2109

course title :Mathmatics III
course no :MATH2103

course title :zoology and English
course no :HUM2109

course title :Programming lab
course no :EEE2110

course title : English lab
course no :HUM2101

course title :ELETRONICS LAB
course no :FFF2104

=====
-----WELCOME-----
=====

Enter your options

(I)   Press 0 to <<  view course information :
(II)  Press 1 to <<  enter new data
(III) Press 2 to <<  view data
(IV)  Press 3 to <<  search data
(V)   Press 4 to <<  edit data
(VI)  Press 5 to <<  delete data
(VII) Press 6 to <<  give marks
(VIII) Press 7 to <<  exit(logout)
```

2) Pressed 1 to enter data(2) by admin

```
C:\Users\sizen\Desktop\190205080(project14).exe

=====
-----WELCOME-----
=====

Enter your options

(I)   Press 0 to <<  view course information :
(II)  Press 1 to <<  enter new data
(III) Press 2 to <<  view data
(IV)  Press 3 to <<  search data
(V)   Press 4 to <<  edit data
(VI)  Press 5 to <<  delete data
(VII) Press 6 to <<  give marks
(VIII) Press 7 to <<  exit(logout)

1
How many students do u want to enter??
2

Enter the Data of student 1

Enter name :MD_Khorsheduzzaman_Sizen
Enter Student ID :190205088
Enter Section :B
Year :2
Enter Semester :1
Enter department :FFF

Enter the Data of student 2

Enter name :Rakibul Hasan
Enter Student ID :190204067
Enter Section :A
Year :3
Enter Semester :2
Enter department :CSE_
```

3)Pressed 2 to view data

```
C:\Users\sizan\Desktop\190205080(project14).exe
Enter Semester :2
Enter department :CSC

=====
-----WELCOME-----
=====

Enter your options
(I) Press 0 to << view course information :
(II) Press 1 to << enter new data
(III) Press 2 to << view data
(IV) Press 3 to << search data
(V) Press 4 to << edit data
(VI) Press 5 to << delete data
(VII) Press 6 to << give marks
(VIII) Press 7 to << exit(loginout)

2

Data of Student 1
Name :MD_Khorsheduzzaman_Sizan
Student ID :190205088
Section :B
Year :2
Semester :1
Department :FFF

Data of Student 2
Name :Rakibul Hasan
Student ID :190204067
Section :A
Year :3
Semester :2
Department :CSE
```

4)pressed 3 to search a specific data given by admin

```
C:\Users\sizan\Desktop\190205080(project14).exe
=====
-----WELCOME-----
=====

Enter your options
(I) Press 0 to << view course information :
(II) Press 1 to << enter new data
(III) Press 2 to << view data
(IV) Press 3 to << search data
(V) Press 4 to << edit data
(VI) Press 5 to << delete data
(VII) Press 6 to << give marks
(VIII) Press 7 to << exit(loginout)

3
Enter the ID no of student(No dots.)
190205088
Name :MD_Khorsheduzzaman_Sizan
Student ID :190205088
Section :B
Year :2
Semester :1
Department :EEE

=====
-----WELCOME-----
=====

Enter your options
(I) Press 0 to << view course information :
(II) Press 1 to << enter new data
(III) Press 2 to << view data
(IV) Press 3 to << search data
(V) Press 4 to << edit data
(VI) Press 5 to << delete data
(VII) Press 6 to << give marks
(VIII) Press 7 to << exit(loginout)
```

5) Pressed 4 to update a data of student given by admin

```
C:\Users\sizan\Desktop\190205080(project14).exe
-----WELCOME-----
-----

Enter your options
(I) Press 0 to << view course information :
(II) Press 1 to << enter new data
(III) Press 2 to << view data
(IV) Press 3 to << search data
(V) Press 4 to << edit data
(VI) Press 5 to << delete data
(VII) Press 6 to << give marks
(VIII) Press 7 to << exit(logout)

4
Enter the ID no(NO DOTS) of student which you want to update
190204067

Previous data
Name :Rakibul_Hasan
Student ID :190204067
Section :A
Year :3
Semester :2
Department :CSE

Enter new data :
Enter name :Antor Roy
Enter ID no :190205093
Enter Section :B
Enter year :2
Enter semester :1
Enter department :EEE
```

6) Pressed 2 to view again

```
C:\Users\sizan\Desktop\190205080(project14).exe
-----WELCOME-----
-----

Enter your options
(I) Press 0 to << view course information :
(II) Press 1 to << enter new data
(III) Press 2 to << view data
(IV) Press 3 to << search data
(V) Press 4 to << edit data
(VI) Press 5 to << delete data
(VII) Press 6 to << give marks
(VIII) Press 7 to << exit(logout)

2

Data of Student 1
Name :MD_KhorshaduZzaman_Sizan
Student ID :190205080
Section :B
Year :2
Semester :1
Department :EEE

Data of Student 2
Name :Antor_Roy
Student ID :190205093
Section :B
Year :2
Semester :1
Department :FFF

=====
-----WELCOME-----
=====

Enter your options
(I) Press 0 to << view course information :
(II) Press 1 to << enter new data
(III) Press 2 to << view data
```

7) Pressed 5 to delete a specific data

```
C:\Users\sizan\Desktop\190205088(project14).cxc
-----WELCOME-----
Enter your options

(I) Press 0 to << view course information :
(II) Press 1 to << enter new data
(III) Press 2 to << view data
(IV) Press 3 to << search data
(V) Press 4 to << edit data
(VI) Press 5 to << delete data
(VII) Press 6 to << give marks
(VIII) Press 7 to << exit(logout)

5
Press 1 to delete all record
Press 2 to delete specific record
2
Enter the roll no of student which you wanted to delete
190205093
Your desired student record is deleted

=====
-----WELCOME-----
Enter your options

(I) Press 0 to << view course information :
(II) Press 1 to << enter new data
(III) Press 2 to << view data
(IV) Press 3 to << search data
(V) Press 4 to << edit data
(VI) Press 5 to << delete data
(VII) Press 6 to << give marks
(VIII) Press 7 to << exit(logout)
```

8) Pressed 2 to view again

```
C:\Users\sizan\Desktop\190205088(project14).cxc
-----WELCOME-----
Enter your options

(I) Press 0 to << view course information :
(II) Press 1 to << enter new data
(III) Press 2 to << view data
(IV) Press 3 to << search data
(V) Press 4 to << edit data
(VI) Press 5 to << delete data
(VII) Press 6 to << give marks
(VIII) Press 7 to << exit(logout)

2

Data of Student 1
Name :MD_Khorsheduzzaman_Sizan
Student ID :190205088
Section :B
Year :2
Semester :1
Department :EEE

=====
-----WELCOME-----
Enter your options

(I) Press 0 to << view course information :
(II) Press 1 to << enter new data
(III) Press 2 to << view data
(IV) Press 3 to << search data
(V) Press 4 to << edit data
(VI) Press 5 to << delete data
(VII) Press 6 to << give marks
(VIII) Press 7 to << exit(logout)
```

9) Pressed 6 to give marks to a specific student in his/her sem courses

```
C:\Users\sice\\Desktop\190205080(project14).exe
-----WELCOME-----
-----
Enter your options
(I) Press 0 to << view course information :
(II) Press 1 to << enter new data
(III) Press 2 to << view data
(IV) Press 3 to << search data
(V) Press 4 to << edit data
(VI) Press 5 to << delete data
(VII) Press 6 to << give marks
(VIII) Press 7 to << exit(logout)

6
Enter year of the Student(1/2/3/4) :
2
Enter semester of the student(1/2) :
1
Enter student ID(no dots.) :
190205088
Enter marks of ID :190205088 for year 2,sem 1

Electronics - EEE2103 :78
(A)
Mechine Theory - EEE2105 :78
(A)
Mechine Lab - EEE2106 :78
(A)
Programming language - FFF2109 :78
(A)
Mathematics III - MAH2103 :78
(A)
Programming lab - EEE2110 :78
(A)
English lab - HUM2101 :78
(A)
ELECTRONICS LAB - EEE2104 :78
(A)
```

```
C:\Users\sizan\Desktop\190205080(project14).exe
(VTTT) Press 7 to << exit(logout)

7

Enter Username(Admin/Student) :
Student
Enter student password :
austian

=====
-----WELCOME-----
=====

Enter your options :
(I) PRESS 0 TO VIEW_RESULT
(II) PRESS 1 TO SEARCH_DATA
(III) PRESS 2 TO SEE DATA AND RESULT SHEET
(III) PRESS 3 TO Exit(logout)
0

Enter your roll no :
190205088

Enter the number of courses(Genarally 8) :
8
GPA result of ID :1.90205080is <<<< 3.75

=====
-----WELCOME-----
=====

Enter your options :
(I) PRESS 0 TO VIEW_RESULT
(II) PRESS 1 TO SEARCH_DATA
(III) PRESS 2 TO SEE DATA AND RESULT SHEET
(III) PRESS 3 TO Exit(logout)
```

10) Admin logged out and student logged in ,pressed 0 to see his result,

11) 1 to see student info,

```
C:\Users\sizan\Desktop\190205088(project14).exe

=====
-----WELCOME-----
=====

Enter your options :
(I) PRESS 0 TO VIEW_RESULT
(II) PRESS 1 TO SEARCH_DATA
(III) PRESS 2 TO SEE DATA AND RESULT SHEET
(III) PRESS 3 TO Exit(logout)
1

Enter the ID no of student(Mo dots.)
190205088
Name :MD_Khorsheduzzaman_Sizan
Student ID :190205088
Section :B
Year :2
Semester :1
Department :EEE

=====
-----WELCOME-----
=====

Enter your options :
(I) PRESS 0 TO VIEW_RESULT
(II) PRESS 1 TO SEARCH_DATA
(III) PRESS 2 TO SEE DATA AND RESULT SHEET
(III) PRESS 3 TO Exit(logout)
```

12) Pressed 2 to see grading.text file which include.

Information and results and finally pressed 3 to logout

```
C:\Users\siten\\Desktop\190205080(project14).exe

-----WELCOME-----
=====

Enter your options :
(I)  PRESS 0 TO VIEW_RESULT
(II) PRESS 1 TO SEARCH_DATA
(III) PRESS 2 TO SEE DATA AND RESULT SHEET
(III) PRESS 3 TO Exit(logout)
2

170501333      A~if      EEE2109 1996      Fall      A
170501333      A~if      FFF2110 1996      Fall      A
170501333      A~if      CCC2111 1996      Fall      A
170501333      A~if      tte2112 1996      Fall      B
170501337      Zahid      FFF2111 2000      Spring    A
170501338      Jaheer    CCC2114 2001      Spring    A
170501339      Asif      EEE2115 2002      Spring    C

-----WELCOME-----
=====

Enter your options :
(I)  PRESS 0 TO VIEW_RESULT
(II) PRESS 1 TO SEARCH_DATA
(III) PRESS 2 TO SEE DATA AND RESULT SHEET
(III) PRESS 3 TO Exit(logout)
3

Enter Username(Admin/Student) :
_
```

Discussion: C++ language was been used in this project. A number of classes (courses, student, result global) were used for better formatting and operation. A global class was used and all the other elements were included in that class. Besides many functions loops, arrays, switch statement, if else statement etc. were used for different purposes. Here 6 arrays were used for 6 different type of data. Switch statements were used to take options from users. A text file named grading.txt is used to show the data & result sheet from that file by file handling. The main function of this program is kept so simple, containing a function named menu which is the member of global class. Finally, this project is programmed keeping in mind that, it is programmer-friendly as well as user-friendly.