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TITLE: STUDENT MARKS PORTAL

ITE2005 ADVANCED JAVA PROGRAMMING
SLOT A2+TA2
DIGITAL ASSIGNMENT-1

CODE

```
/*
 * To change this license header, choose License Headers in Project
Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
import static java.lang.Math.round;
import java.sql.*;
import javafx.application.Application;
import javafx.event.*;
import javafx.geometry.Pos;
import javafx.scene.*;
import javafx.scene.control.*;
import javafx.scene.layout.VBox;
import javafx.stage.Stage;
/**
 *
```

```java
 * @author bhaum
 */
public class JavaFXApplication5 extends Application {
 Connection con=null;
 Statement st=null;
 String query;
 Stage p;
 Scene in,mi,up,ii,upi,ij,ijin;
 String gr(double u)
 {
if(u>=85)
return "HD";
if(u>=75)
return "DI";
if(u>=65)
return "CR";
if(u>=50)
return "PS";
return "FL";
 }
 double cal(int a,int b,int c,int d)
 {
return round((a*0.05+b*0.15+c*0.2+d*0.6)*100)/100.0;
 }
 void ij()
 {
Label l= new Label("ENTER THE ID TO BE UPDATED");
Label ls= new Label("SELECT FIELD TO BE UPDATED");
Label lp= new Label();
VBox v= new VBox();
ComboBox comboBox = new ComboBox();
comboBox.getItems().add("ID");
comboBox.getItems().add("NAME");
comboBox.getItems().add("QUIZ");
comboBox.getItems().add("A1");
comboBox.getItems().add("A2");
comboBox.getItems().add("EXAM");
TextField ti=new TextField();
Button bu= new Button("UPDATE");
Button bunt= new Button("Go Back");
v.getChildren().addAll(l,ti,lp,ls,comboBox,bu,bunt);
v.setAlignment(Pos.CENTER);
bunt.setOnAction(f->{
p.setScene(mi);
```

```java
});
bu.setOnAction(e->{
try
{
ResultSet rs=st.executeQuery("select * from student where id='"+ti.getText()+"'");
rs.next();
String uid=rs.getString(1);
}
catch(Exception nm)
{
lp.setText("Record does not exsists");
return;
}
String a=""+comboBox.getValue();
VBox vin= new VBox();
TextField tin=new TextField();
Button buntin= new Button("Go Back");
Button buin= new Button("UPDATE");
buntin.setOnAction(ekjdfd->{p.setScene(ij);});
Label linp= new Label();
Label lin=new Label();
switch(a)
{
case "NAME":
case "ID":
lin.setText("ENTER THE NEW "+a);
break;
case "QUIZ":
case "A1":
case "A2":
case "EXAM":
lin.setText("ENTER THE NEW MARKS");
linp.setText("NOTE: CumulativeMark and grade will be updated automatically");
break;
}

vin.getChildren().addAll(lin,tin,linp,buin,buntin);
vin.setAlignment(Pos.CENTER);
ijin=new Scene(vin,340,150);
p.setScene(ijin);
buin.setOnAction(ekfd->
{
query="update student set "+a+"='"+tin.getText()+"' where id='"+ti.getText()+"'";
try
```

```java
{
st.executeUpdate(query);
linp.setText("UPDATED");
String s=ti.getText();
if(a=="ID")
s=tin.getText();
ResultSet rs=st.executeQuery("select *from student where id='"+s+"'");
rs.next();
double jk=cal(Integer.parseInt(rs.getString(3)),Integer.parseInt(rs.getString(4))
,Integer.parseInt(rs.getString(5)),Integer.parseInt(rs.getString(6)));
st.executeUpdate("update student set Cumulative_Mark"
+"="+jk+" where id='"+s+"'");
st.executeUpdate("update student set grade"
+"='"+gr(jk)+"' where id='"+s+"'");
linp.setText("UPDATED");
}
catch(Exception elk)
{
linp.setText("Record Not valid");
}
});
});
ij= new Scene(v,170,190);
}
void iu()
{
Label l= new Label("ENTER THE ID TO BE SEARCHED");
Label lp= new Label();
VBox v= new VBox();
TextField ti=new TextField();
Button bu= new Button("SEARCH");
Button bunt= new Button("Go Back");
v.getChildren().addAll(l,ti,lp,bu,bunt);
v.setAlignment(Pos.CENTER);
bunt.setOnAction(f->{
p.setScene(mi);
});
bu.setOnAction(e->{
try
{
VBox vi= new VBox();
Button but= new Button("Go Back");
but.setOnAction(mbn->{
p.setScene(upi);
```

```java
});
ResultSet rs=st.executeQuery("select * from student where id='"+ti.getText()+"'");
rs.next();
Label lu= new Label(
"ID: "+rs.getString(1)+
"\nNAME: "+rs.getString(2)+
"\nQUIZ MARKS: "+rs.getInt(3)+
"\nA1 MARKS: "+rs.getInt(4)+
"\nA2 MARKS: "+rs.getInt(5)+
"\nEXAM MARKS: "+rs.getInt(6)+
"\nCUMULATIVE MARKS: "+rs.getDouble(7)+
"\nGRADE: "+rs.getString(8)+"\n\n");
vi.getChildren().addAll(lu,but);
vi.setAlignment(Pos.CENTER);
up=new Scene(vi,170,180);
p.setScene(up);
}
catch(Exception nm)
{
lp.setText("Record does not exsists");
}});
upi= new Scene(v,170,150);
}
void ii()
{
Label l= new Label("ENTER THE DATA");
Label lp= new Label();
VBox v= new VBox();
Button bu= new Button("Submit");
Label li= new Label("\nENTER THE ID");
TextField ti=new TextField();
Label ln= new Label("ENTER THE NAME");
TextField tn=new TextField();
Label lq= new Label("ENTER THE QUIZ MARKS");
TextField tq=new TextField();
Label l1= new Label("ENTER THE A1 MARKS");
TextField t1=new TextField();
Label l2= new Label("ENTER THE A2 MARKS");
TextField t2=new TextField();
Label le= new Label("ENTER THE EXAM MARKS");
TextField te=new TextField();
Button bunt= new Button("Go Back");
bunt.setOnAction(f->{
p.setScene(mi);
```

```java
});

v.getChildren().addAll(l,li,ti,ln,tn,lq,tq,l1,t1,l2,t2,le,te,lp,bu,bunt);
v.setAlignment(Pos.CENTER);
ii= new Scene(v,300,370);
bu.setOnAction(e ->{
try
{
double
m=cal(Integer.parseInt(tq.getText()),Integer.parseInt(t1.getText())
,Integer.parseInt(t2.getText()),Integer.parseInt
(te.getText()));
String g=gr(m);
query="insert into student values"
+"('"+ti.getText()+"','"+tn.getText()
+"',"+Integer.parseInt(tq.getText())
+","+Integer.parseInt(t1.getText())
+","+Integer.parseInt(t2.getText())
+","+Integer.parseInt(te.getText())+","+m+",'"+g+"')";
lp.setText("CumulativeMark: "+m+"\nGrade: "+g);
st.execute(query);
}
catch(Exception p)
{
lp.setText("Invalid input");
}});
}
void mii()
{
Label l= new Label("Which operation do you want to perform");
Label lp= new Label();
VBox v= new VBox();
Button bu= new Button("Submit");
RadioButton u,s,i;
u=new RadioButton("Insert Record");
s= new RadioButton("Update Record");
i= new RadioButton("Search Record");
ToggleGroup q= new ToggleGroup();
u.setToggleGroup(q);
s.setToggleGroup(q);
i.setToggleGroup(q);
bu.setOnAction(e ->
{
if (u.isSelected())
```

```java
{
p.setScene(ii);
}
else if (s.isSelected())
{
p.setScene(ij);
}
else if (i.isSelected())
{
p.setScene(upi);
}
});
v.getChildren().addAll(l,u,s,i,bu,lp);
v.setAlignment(Pos.CENTER);
mi= new Scene(v, 250, 180);
p.setScene(mi);
}
void ct() throws SQLException
{
st=con.createStatement();
query = "CREATE TABLE student("
+ "id varchar(8) PRIMARY KEY,"
+ "name varchar(20),"
+ "quiz int,"
+ "a1 int,"
+ "a2 int,"
+ "exam int,"
+ "cumulative_mark float,"
+"grade varchar(2),"
+ "check(length(id)=8 and "
+ "a1>=0 and a1<=100 and a2>=0 and a2<=100 and "
+ "exam>=0 and exam<=100))";
st.execute(query);
query="insert into student values"
+"('11111111','X',100,85,100,88,90.55,'HD')";
st.execute(query);
query="insert into student values"
+"('22222222','Y',100,60,80,75,75.00,'DI')";
st.execute(query);
}
@Override
public void start(Stage primaryStage) {
primaryStage.setTitle("19BIT0292");
p=primaryStage;
```

```java
Label l=new Label("Login Id");
TextField t1=new TextField();
Label l1=new Label("Password");
PasswordField t2= new PasswordField();
Button b1=new Button("Submit");
Label lp=new Label();
VBox r=new VBox();
r.getChildren().add(l);
r.getChildren().add(t1);
r.getChildren().add(l1);
r.getChildren().add(t2);
r.getChildren().add(b1);
r.getChildren().add(lp);
r.setAlignment(Pos.CENTER);
b1.setOnAction(e->{

try{

con= DriverManager.getConnection("jdbc:mysql://localhost:3306/bhaumik", t1.getText(),
t2.getText());
ct();
ii();
iu();
ij();
mii();
}
catch(Exception ek)
{
lp.setText("Wrong ID or Password");
}
}
);

in=new Scene(r,150,120);
p.setScene(in);
p.show();
}
/**
 * @param args the command line arguments
 */
public static void main(String[] args) {
launch(args);
}
```

}

OUTPUT

Opening MySQL

LOGIN CREDENTIALS

```
w TextField();
bel("Password");
2=
utt
bel
();
.ad
.ad
.ad
.ad
.ad
.ad
Pos.CENTER);
```

Login Id

Password

Submit
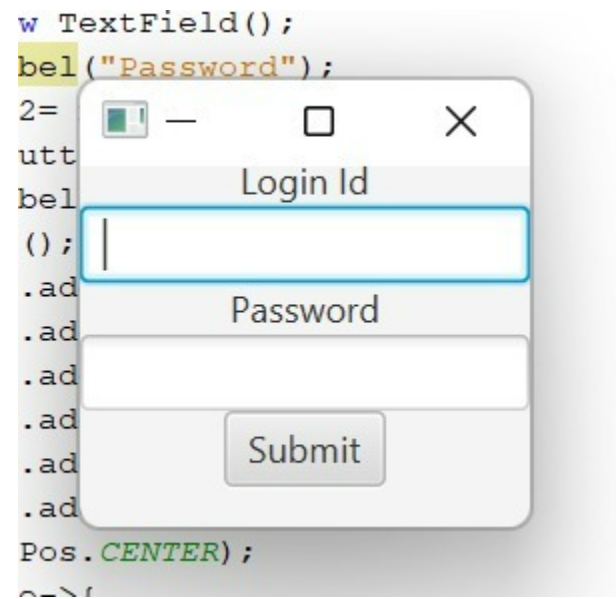
ENTERING WRONG CREDENTIALS

```
 TextField();
 ("Password");
```

Login Id

fsdef

Password

●●●●●●

Submit

Wrong ID or Password

```
s.CENTER);
```

ENTERING THE RIGHT CREDENTIALS

```
 ("Password");
```

Login Id

root

Password

●●●●

Submit
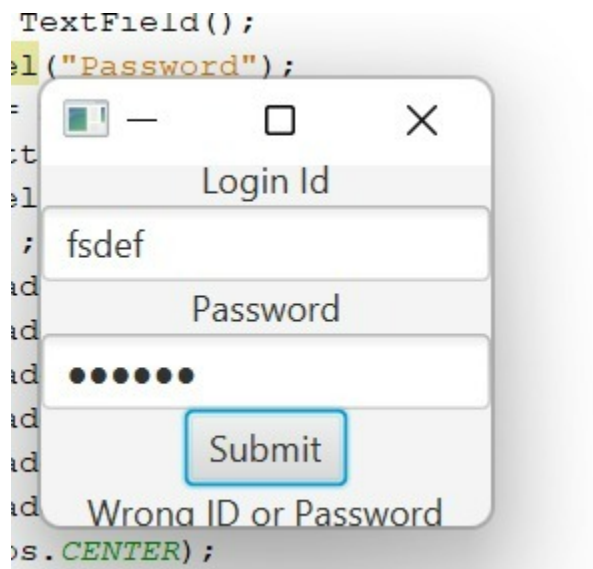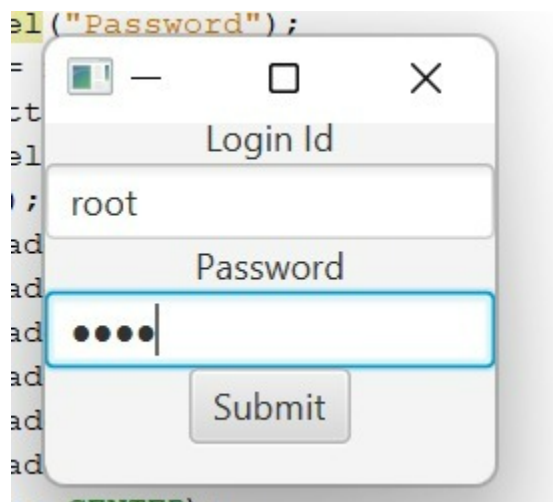
DATABASE OPENS AFTER ENTERING THE RIGHT CREDENTIALS

```
mysql> select * from student;
+----------+------+------+-----+-----+------+-----------------+-------+
| id       | name | quiz | a1  | a2  | exam | cumulative_mark | grade |
+----------+------+------+-----+-----+------+-----------------+-------+
| 11111111 | X    | 100  | 85  | 100 | 88   |           90.55 | HD    |
| 22222222 | Y    | 100  | 60  | 80  | 75   |              75 | DI    |
+----------+------+------+-----+-----+------+-----------------+-------+
2 rows in set (0.00 sec)
```

INSERTION OF STUDENT DATA INTO THE DATABASE

ENTERING INVALID DETAILS FOR INSERTION

19BIT0292

ENTER THE DATA

ENTER THE ID

12438983

ENTER THE NAME

Bhaumik

ENTER THE QUIZ MARKS

32

ENTER THE A1 MARKS

101

ENTER THE A2 MARKS

43

ENTER THE EXAM MARKS

23

Invalid input

Submit

Go Back

ENTERING VALID STUDENT DETAILS FOR INSERTION

```
TextField();
l("Password");
```

19BIT0292 — □ ✕

ENTER THE DATA

ENTER THE ID

12438983

ENTER THE NAME

Bhaumik

ENTER THE QUIZ MARKS

32

ENTER THE A1 MARKS

100

ENTER THE A2 MARKS

43

ENTER THE EXAM MARKS

23

CumulativeMark: 39.0
Grade: FL

Submit

Go Back

DATABASE AFTER INSERTION

```
mysql> select * from student;
+----------+---------+------+------+------+------+-----------------+-------+
| id       | name    | quiz | a1   | a2   | exam | cumulative_mark | grade |
+----------+---------+------+------+------+------+-----------------+-------+
| 11111111 | X       |  100 |   85 |  100 |   88 |           90.55 | HD    |
| 12438983 | Bhaumik |   32 |  100 |   43 |   23 |              39 | FL    |
| 22222222 | Y       |  100 |   60 |   80 |   75 |              75 | DI    |
+----------+---------+------+------+------+------+-----------------+-------+
3 rows in set (0.00 sec)
```

UPDATE STUDENT DETAILS
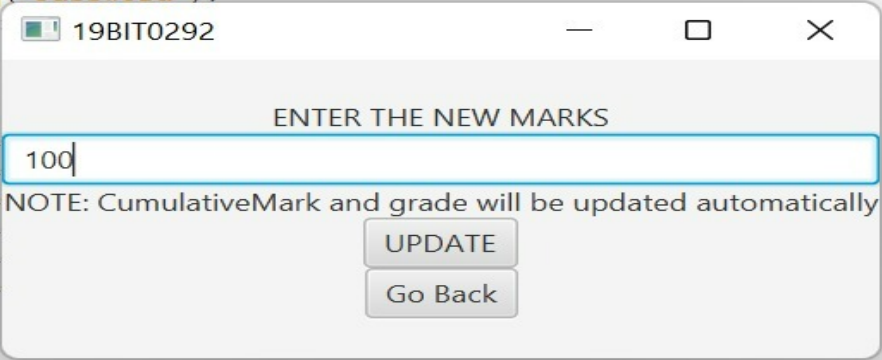
ENTER MARKS TO UPDATE
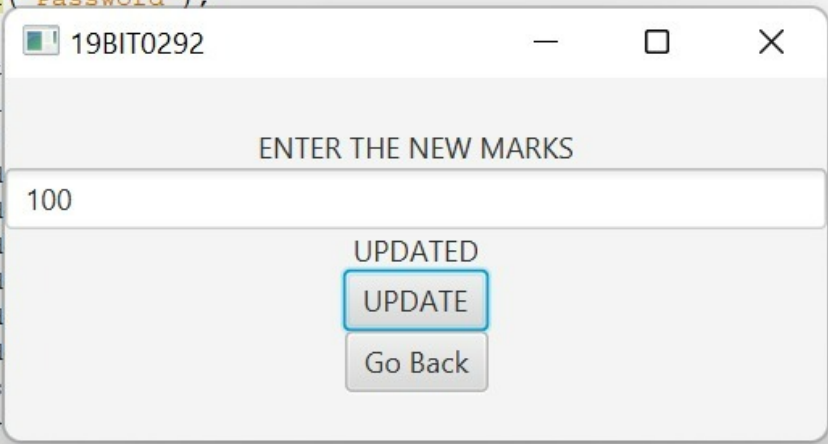
UPDATED MARKS

CHANGES IN THE DATABASE

```
mysql> select * from student where id=11111111;
+----------+------+------+------+------+------+-----------------+-------+
| id       | name | quiz | a1   | a2   | exam | cumulative_mark | grade |
+----------+------+------+------+------+------+-----------------+-------+
| 11111111 | X    |  100 |  100 |  100 |   88 |           90.55 | HD    |
+----------+------+------+------+------+------+-----------------+-------+
1 row in set (0.01 sec)
```

ENTERING THE INVALID DETAILS
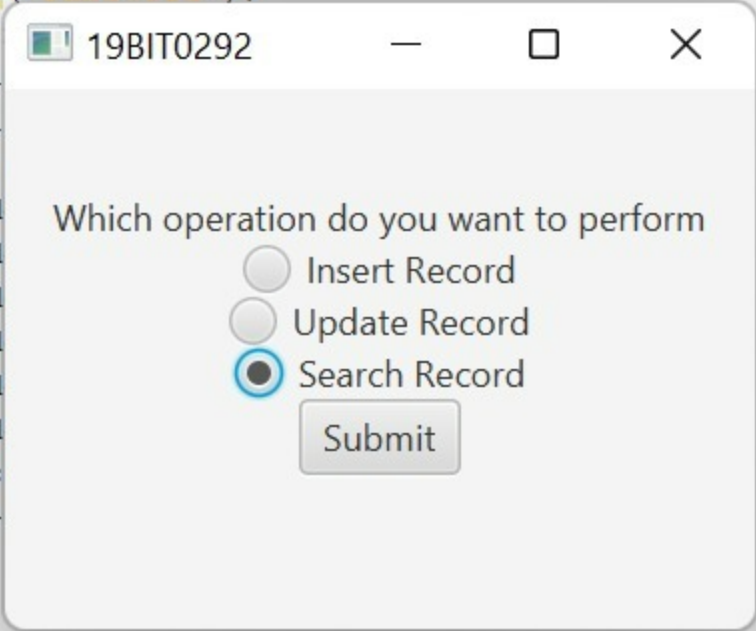
SEARCHING STUDENT RECORDS

19BIT0292   —   □   ✕

Which operation do you want to perform
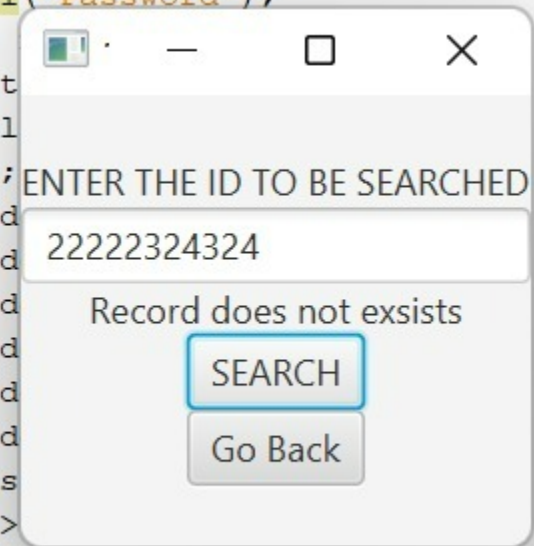
    ◯ Insert Record
    ◯ Update Record
    ◉ Search Record

      Submit

ENTER STUDENT ID TO BE SEARCHED

▣ ·   —   □   ✕

ENTER THE ID TO BE SEARCHED

22222324324

Record does not exsists

SEARCH

Go Back

RESULTS

ID: 22222222
NAME: Y
QUIZ MARKS: 100
A1 MARKS: 60
A2 MARKS: 80
EXAM MARKS: 75
CUMULATIVE MARKS: 75.0
GRADE: DI

Go Back