



19BIT0292
BHAUMIK TANDAN
Digital Assignment –3
JAVA PROGRAMMING

1.University grading system maintains a database called “GradeProcessing” that contains number of tables to store, retrieve and manipulate student marks. ‘Java2’ is one of the tables which contains following attributes for all the students enrolled in “Java2”: “ID”, “Name”, “Quiz”, “A1”, “A2”, “Exam”, “CumulativeMark” and “Grade”. A sample of the table may look like as follows:

ID	Name	Quiz	A1	A2	Exam	CumulativeMark	Grade
11111111	X	100	85	100	88	90.55	HD
22222222	Y	100	60	80	75	75.00	DI

Write a JAVA Graphical User Interface (GUI) program that would perform following tasks:

- 🕒 Create Table: Create a table that is capable to store above information.
- 🕒 Insert Record: If the user of your program wants to insert a record, your program should ask for all the fields of the record and insert them in the table.
- 🕒 Search: The user of your program should be able to search a particular record by ID or any other field.

⌚ Update: The user of your program should be able to update any field/s of a particular record. The record for update operation will be selected by ID.

⌚ Calculate Results: The Cumulative Mark of a student would be calculated using the following formula: $\text{CumulativeMark} = (\text{Quiz} * 0.05) + (\text{A1} * 0.15) + (\text{A2} * 0.2) + (\text{Exam} * 0.6)$

⌚ Calculate Grade:

HD: $\text{CumulativeMark} \geq 85$

DI: $75 \leq \text{CumulativeMark} < 85$

CR: $65 \leq \text{CumulativeMark} < 75$ PS: $50 \leq \text{CumulativeMark} < 65$

FL: $\text{CumulativeMark} < 50$

Note that, ID must be 8-digit number, A1, A2, and Exam marks must be between 0 and 100 (inclusive), and CumulativeMark must be floating-point numbers with two decimal places.

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.  
*/  
  
package javafxapplication5;  
  
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;

/**
 *
 * @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);
});
    bu.setOnAction(e->{
        try
        {
            ResultSet rs=st.executeQuery("select * from
Java2 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(ekjdfe->{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 Java2 set
"+a+"='"+tin.getText()+"' where id='"+ti.getText()+"'";
    try
    {
        st.executeUpdate(query);
        linp.setText("UPDATED");
        String s=ti.getText();
        if(a=="ID")
        s=tin.getText();
        ResultSet rs=st.executeQuery("select *

```

```

from Java2 where id='"+s+"'");

        rs.next();

        double
jk=cal(Integer.parseInt(rs.getString(3)),Integer.parseInt(rs.getStri
ng(4))

        ,Integer.parseInt(rs.getString(5)),I
neger.parseInt(rs.getString(6)));

        st.executeUpdate("update Java2 set
Cumulative_Mark"

        +"="+jk+" where id='"+s+"'");

        st.executeUpdate("update Java2 set
grade"

        +"='"+gr(jk)+"' where id='"+s+"'");

    }

    catch(Exception elk)

    {

        linp.setText("INVALID INPUT");

    }

    });

    });

    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();

```



```

        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);

});

```

```

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 java2 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())
            {
                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 Java2("
+ "id varchar(8) PRIMARY KEY,"
+ "name varchar2(20),"
+ "quiz int,"
+ "a1 int,"
+ "a2 int,"
+ "exam int,"
+ "cumulative_mark number(5,2),"
+ "grade varchar2(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 java2 values"

    + "('11111111','X',100,85,100,88,90.55,'HD')";

st.execute(query);

query="insert into java2 values"

    + "('22222222','Y',100,60,80,75,75.00,'DI')";

st.execute(query);

    }

    @Override

public void start(Stage primaryStage) {

    primaryStage.setTitle("19BIT0292");

    p=primaryStage;

    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:oracle:thin:@localhost:1525:bh  
aumik",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) {

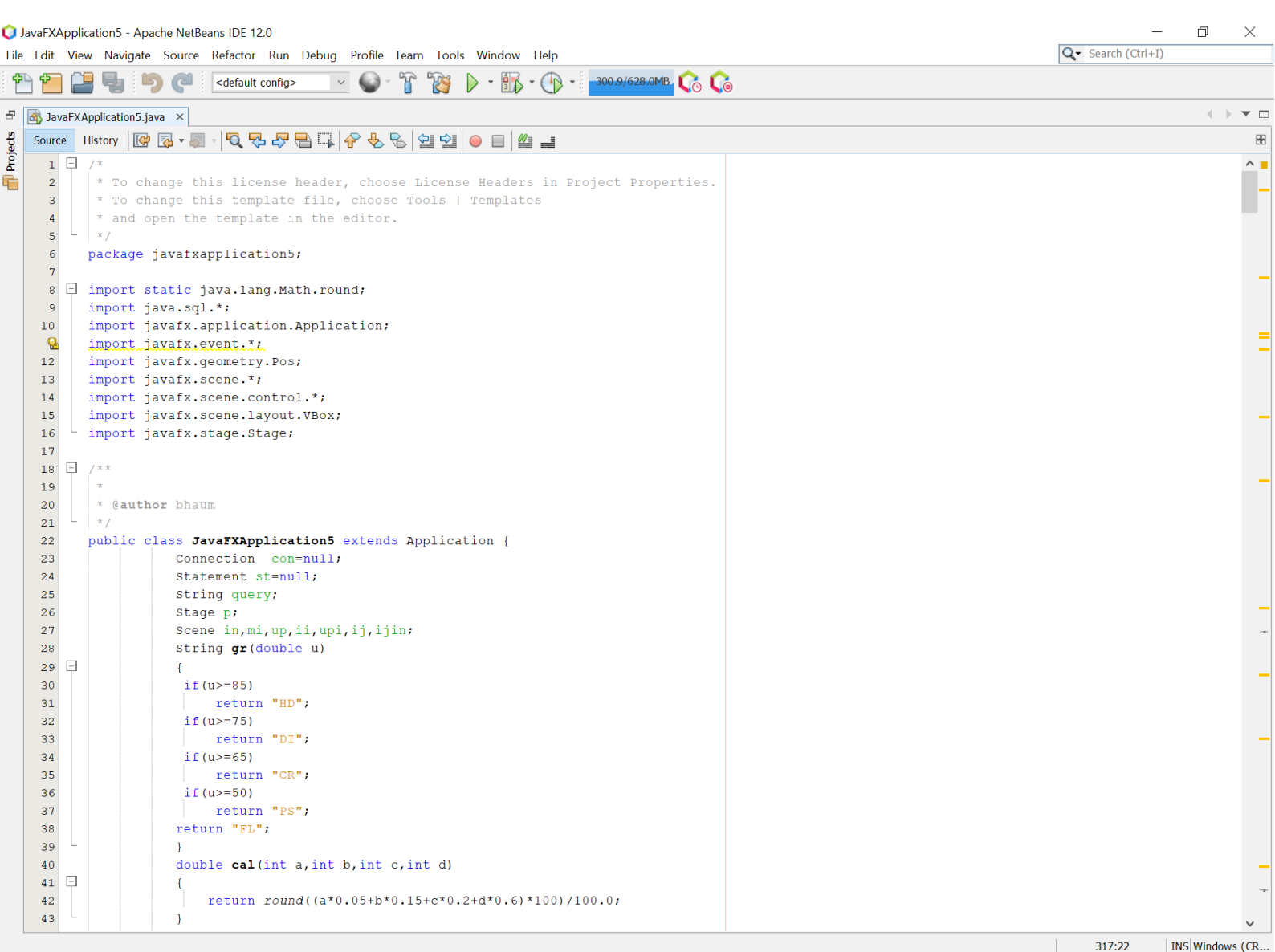
        launch(args);

    }

}

```

SCREENSHOT OF CODE



```

44 void ij()
45 {
46     Label l= new Label("ENTER THE ID TO BE UPDATED");
47     Label ls= new Label("SELECT FIELD TO BE UPDATED");
48     Label lp= new Label();
49     VBox v= new VBox();
50     ComboBox comboBox = new ComboBox();
51     comboBox.getItems().add("ID");
52     comboBox.getItems().add("NAME");
53     comboBox.getItems().add("QUIZ");
54     comboBox.getItems().add("A1");
55     comboBox.getItems().add("A2");
56     comboBox.getItems().add("EXAM");
57     TextField ti=new TextField();
58     Button bu= new Button("UPDATE");
59     Button bunt= new Button("Go Back");
60     v.getChildren().addAll(l,ti,lp,ls,comboBox,bu,bunt);
61     v.setAlignment(Pos.CENTER);
62     bunt.setOnAction(f->{
63 p.setScene(mi);
64 });
65     bu.setOnAction(e->{
66         try
67         {
68             ResultSet rs=st.executeQuery("select * from Java2 where id='"+ti.getText()+"'");
69             rs.next();
70             String uid=rs.getString(1);
71         }
72         catch(Exception nm)
73         {
74             lp.setText("Record does not exists");
75             return;
76         }
77         String a=""+""+comboBox.getValue();
78         VBox vin= new VBox();
79         TextField tin=new TextField();
80         Button buntin= new Button("Go Back");
81         Button buin= new Button("UPDATE");
82         buntin.setOnAction(ekjdfd->{p.setScene(ij)});
83         Label linp= new Label();
84         Label lin=new Label();
85         switch(a)
86         {
87             case "NAME":
88             case "ID":
89                 lin.setText("ENTER THE NEW "+a);
90                 break;
91             case "QUIZ":
92             case "A1":
93             case "A2":
94             case "EXAM":
95                 lin.setText("ENTER THE NEW MARKS");
96                 linp.setText("NOTE: CumulativeMark and grade will be updated automatically");
97                 break;
98         }
99         vin.getChildren().addAll(lin,tin,linp,buin,buntin);
100         vin.setAlignment(Pos.CENTER);
101         ijin=new Scene(vin,340,150);
102         p.setScene(ijin);
103         buin.setOnAction(ekfd->
104         {
105             query="update Java2 set "+a+"='"+tin.getText()+"' where id='"+ti.getText()+"'";
106             try
107             {
108                 st.executeUpdate(query);
109                 linp.setText("UPDATED");
110                 String s=ti.getText();
111                 if(a=="ID")
112                     s=tin.getText();
113                 ResultSet rs=st.executeQuery("select * from Java2 where id='"+s+"'");
114                 rs.next();
115                 double jk=cal(Integer.parseInt(rs.getString(3)),Integer.parseInt(rs.getString(4))
116                     ,Integer.parseInt(rs.getString(5)),Integer.parseInt(rs.getString(6)));
117                 st.executeUpdate("update Java2 set Cumulative_Mark"
118                     +"="+jk+" where id='"+s+"'");
119                 st.executeUpdate("update Java2 set grade"
120                     +"="+gr(jk)+" where id='"+s+"'");
121             }
122             catch(Exception elk)
123             {
124                 linp.setText("INVALID INPUT");
125             }
126         });
127     });
128     ij= new Scene(v,170,190);
129 }
130 void iu()
131 {
132     Label l= new Label("ENTER THE ID TO BE SEARCHED");
133     Label lp= new Label();
134     VBox v= new VBox();
135     TextField ti=new TextField();
136     Button bu= new Button("SEARCH");
137     Button bunt= new Button("Go Back");

```



```

138 v.getChildren().addAll(l,ti,lp,bu,bunt);
139 v.setAlignment(Pos.CENTER);
140 bunt.setOnAction(f->{
141 p.setScene(mi);
142 });
143 bu.setOnAction(g->{
144 try
145 {
146 VBox vi= new VBox();
147 Button but= new Button("Go Back");
148 but.setOnAction(mbn->{
149 p.setScene(upi);
150 });
151 ResultSet rs=st.executeQuery("select * from Java2 where id='"+ti.getText()+"'");
152 rs.next();
153 Label lu= new Label(
154 "ID: "+rs.getString(1)+
155 "\nNAME: "+rs.getString(2)+
156 "\nQUIZ MARKS: "+rs.getInt(3)+
157 "\nA1 MARKS: "+rs.getInt(4)+
158 "\nA2 MARKS: "+rs.getInt(5)+
159 "\nEXAM MARKS: "+rs.getInt(6)+
160 "\nCUMULATIVE MARKS: "+rs.getDouble(7)+
161 "\nGRADE: "+rs.getString(8)+"\n\n");
162 vi.getChildren().addAll(lu,but);
163 vi.setAlignment(Pos.CENTER);
164 up=new Scene(vi,170,180);
165 p.setScene(up);
166 }

```

```

167 catch(Exception nm)
168 {
169 lp.setText("Record does not exists");
170 });
171 upi= new Scene(v,170,150);
172 }
173 void ii()
174 {
175 Label l= new Label("ENTER THE DATA");
176 Label lp= new Label();
177 VBox v= new VBox();
178 Button bu= new Button("Submit");
179 Label li= new Label("\nENTER THE ID");
180 TextField ti=new TextField();
181 Label ln= new Label("ENTER THE NAME");
182 TextField tn=new TextField();
183 Label lq= new Label("ENTER THE QUIZ MARKS");
184 TextField tq=new TextField();
185 Label l1= new Label("ENTER THE A1 MARKS");
186 TextField t1=new TextField();
187 Label l2= new Label("ENTER THE A2 MARKS");
188 TextField t2=new TextField();
189 Label le= new Label("ENTER THE EXAM MARKS");
190 TextField te=new TextField();
191 Button bunt= new Button("Go Back");
192 bunt.setOnAction(f->{
193 p.setScene(mi);
194 });

```

```

195 v.getChildren().addAll(l,li,ti,ln,tn,lq,tq,l1,t1,l2,t2,le,te,lp,bu,bunt);
196 v.setAlignment(Pos.CENTER);
197 ii= new Scene(v,300,370);
198 bu.setOnAction(g ->{
199 try
200 {
201 double m=cal(Integer.parseInt(tq.getText()),Integer.parseInt(t1.getText())
202 ,Integer.parseInt(t2.getText()),Integer.parseInt(te.getText()));
203 String g=gr(m);
204 query="insert into java2 values"
205 +"('"+ti.getText()+"','"+tn.getText()+"','"+Integer.parseInt(tq.getText())
206 +"','"+Integer.parseInt(t1.getText())+"','"+Integer.parseInt(t2.getText())
207 +"','"+Integer.parseInt(te.getText())+"','"+m+"','"+g+"')";
208 lp.setText("CumulativeMark: "+m+"\nGrade: "+g);
209 st.execute(query);
210 }
211 catch(Exception p)
212 {
213 lp.setText("Invalid input");
214 });

```

```

215 }
216 void mii()
217 {
218 Label l= new Label("Which operation do you want to perform");
219 Label lp= new Label();
220 VBox v= new VBox();
221 Button bu= new Button("Submit");
222 RadioButton u,s,i;
223 u=new RadioButton("Insert Record");
224 s= new RadioButton("Update Record");
225 i= new RadioButton("Search Record");
226 ToggleGroup q= new ToggleGroup();
227 u.setToggleGroup(q);
228 s.setToggleGroup(q);
229 i.setToggleGroup(q);

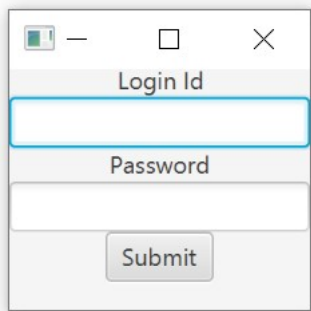
```

```

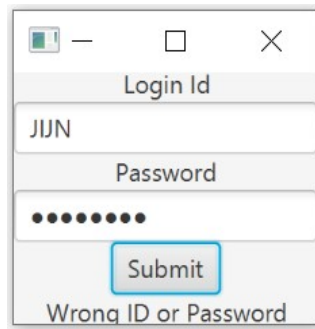
230         bu.setOnAction(e ->
231         {
232             if (u.isSelected())
233             {
234                 p.setScene(ii);
235             }
236             else if (s.isSelected())
237             {
238                 p.setScene(ij);
239             }
240             else if (i.isSelected())
241             {
242                 p.setScene(upi);
243             }
244         });
245         v.getChildren().addAll(l,u,s,i,bu,lp);
246         v.setAlignment(Pos.CENTER);
247         mi= new Scene(v, 250, 180);
248         p.setScene(mi);
249     }
250     void ct() throws SQLException
251     {
252         st=con.createStatement();
253         query = "CREATE TABLE Java2("
254         + "id varchar(8) PRIMARY KEY,"
255         + "name varchar(20),"
256         + "quiz int,"
257         + "a1 int,"
258         + "a2 int,"
259         + "exam int,"
260         + "cumulative_mark number(5,2),"
261         + "grade varchar(2),"
262         + "check(length(id)=8 and "
263         + "a1>=0 and a1<=100 and a2>=0 and a2<=100 and "
264         + "exam>=0 and exam<=100))";
265         st.execute(query);
266         query="insert into java2 values
267         + "('11111111','X',100,85,100,88,90.55,'HD')";
268         st.execute(query);
269         query="insert into java2 values
270         + "('22222222','Y',100,60,80,75,75.00,'DI')";
271         st.execute(query);
272     }
273     @Override
274     public void start(Stage primaryStage) {
275         primaryStage.setTitle("19BIT0292");
276         p=primaryStage;
277         Label l=new Label("Login Id");
278         TextField t1=new TextField();
279         Label l1=new Label("Password");
280         PasswordField t2= new PasswordField();
281         Button b1=new Button("Submit");
282         Label lp=new Label();
283         VBox r=new VBox();
284         r.getChildren().add(l);
285         r.getChildren().add(t1);
286         r.getChildren().add(l1);
287         r.getChildren().add(t2);
288         r.getChildren().add(b1);
289         r.getChildren().add(lp);
290         r.setAlignment(Pos.CENTER);
291         b1.setOnAction(e->{
292
293         try{
294             con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1525:bhaumik",t1.getText(),t2.getText());
295             ct();
296             ii();
297             iu();
298             ij();
299             mii();
300         }
301         catch(Exception ek)
302         {
303             lp.setText("Wrong ID or Password");
304         }
305     });
306
307     in=new Scene(r,150,120);
308     p.setScene(in);
309     p.show();
310 }
311
312 /**
313  * @param args the command line arguments
314  */
315 public static void main(String[] args) {
316     launch(args);
317 }
318
319
320

```

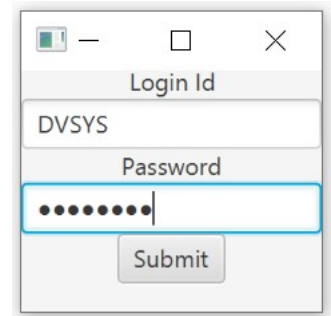
OUTPUT



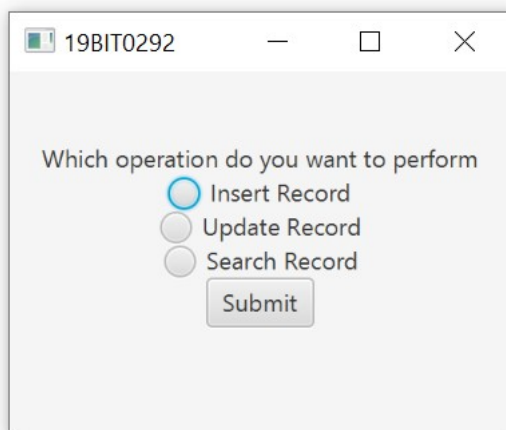
Window titled "Login Id". It contains two input fields: "Login Id" and "Password". Below the fields is a "Submit" button.



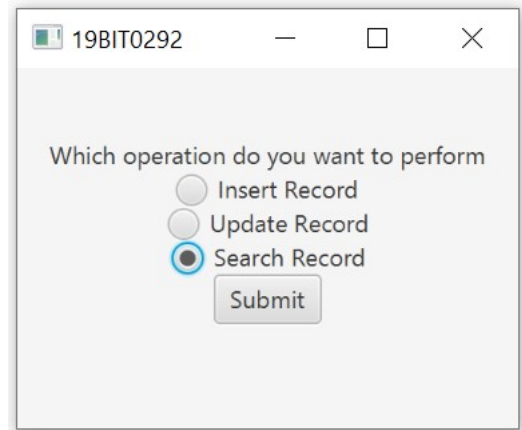
Window titled "Login Id". The "Login Id" field contains "JIJN" and the "Password" field contains masked characters. The "Submit" button is highlighted. Below the button, the text "Wrong ID or Password" is displayed.



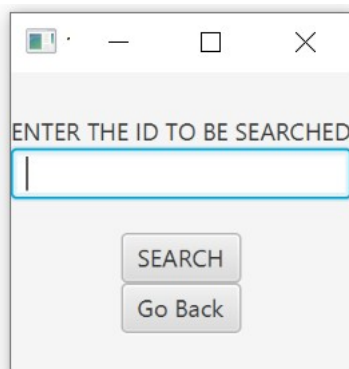
Window titled "Login Id". The "Login Id" field contains "DVSYS" and the "Password" field contains masked characters. The "Submit" button is highlighted.



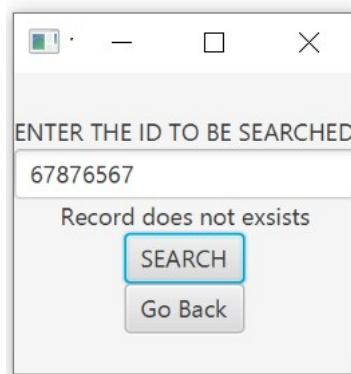
Window titled "19BIT0292". It displays the text "Which operation do you want to perform" followed by three radio button options: "Insert Record" (selected), "Update Record", and "Search Record". A "Submit" button is at the bottom.



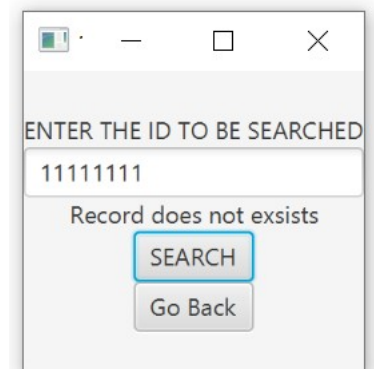
Window titled "19BIT0292". It displays the text "Which operation do you want to perform" followed by three radio button options: "Insert Record", "Update Record", and "Search Record" (selected). A "Submit" button is at the bottom.



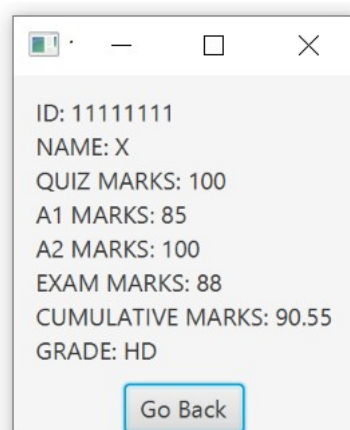
Window titled "ENTER THE ID TO BE SEARCHED". It contains an input field with a cursor. Below the field are two buttons: "SEARCH" and "Go Back".



Window titled "ENTER THE ID TO BE SEARCHED". The input field contains "67876567". Below the field, the text "Record does not exists" is displayed. The "SEARCH" button is highlighted.



Window titled "ENTER THE ID TO BE SEARCHED". The input field contains "11111111". Below the field, the text "Record does not exists" is displayed. The "SEARCH" button is highlighted.



Window displaying the following record details:

- ID: 11111111
- NAME: X
- QUIZ MARKS: 100
- A1 MARKS: 85
- A2 MARKS: 100
- EXAM MARKS: 88
- CUMULATIVE MARKS: 90.55
- GRADE: HD

A "Go Back" button is at the bottom.

19BIT0292

Which operation do you want to perform

☒ Insert Record

☐ Update Record

☐ Search Record

Submit

19BIT0292

ENTER THE DATA

ENTER THE ID

ENTER THE NAME

ENTER THE QUIZ MARKS

ENTER THE A1 MARKS

ENTER THE A2 MARKS

ENTER THE EXAM MARKS

Submit

Go Back

19BIT0292

ENTER THE DATA

ENTER THE ID

89765456

ENTER THE NAME

Bhaumik

ENTER THE QUIZ MARKS

100

ENTER THE A1 MARKS

140

ENTER THE A2 MARKS

70

ENTER THE EXAM MARKS

90

Invalid input

Submit

Go Back

19BIT0292

ENTER THE DATA

ENTER THE ID

89765456

ENTER THE NAME

Bhaumik

ENTER THE QUIZ MARKS

100

ENTER THE A1 MARKS

95

ENTER THE A2 MARKS

70

ENTER THE EXAM MARKS

90

CumulativeMark: 87.25

Grade: HD

Submit

Go Back

19BIT0292

Which operation do you want to perform

☐ Insert Record

☒ Update Record

☐ Search Record

Submit

ENTER THE ID TO BE UPDATED

SELECT FIELD TO BE UPDATED

UPDATE

Go Back

ENTER THE ID TO BE UPDATED

89876567

Record does not exists

SELECT FIELD TO BE UPDATED

QUIZ

UPDATE

Go Back

ENTER THE ID TO BE UPDATED

89765456

Record does not exists

SELECT FIELD TO BE UPDATED

QUIZ

UPDATE

Go Back

19BIT0292

ENTER THE NEW MARKS

NOTE: CumulativeMark and grade will be updated automatically

UPDATE

Go Back

19BIT0292

ENTER THE NEW MARKS

20

UPDATED

UPDATE

Go Back

19BIT0292

ENTER THE NEW NAME

UPDATE

Go Back

19BIT0292

ENTER THE NEW NAME

Naman

UPDATED

UPDATE

Go Back

ID: 89765456

NAME: Naman

QUIZ MARKS: 20

A1 MARKS: 95

A2 MARKS: 70

EXAM MARKS: 90

CUMULATIVE MARKS: 83.25

GRADE: DI

Go Back

2. Assume the participant table is created using the following query,

```
CREATE TABLE PARTICIPANT (PARTICIPANT_NM  
VARCHAR(255), PARTICIPANT_ID INT, MEETING_NM  
VARCHAR(20), MEETING_DAY VARCHAR(15))
```

Write SQL Statements to accomplish the following in a Java Program

1. Determine the names of the columns in the MEETING table, and display the column names on the console.
2. Write a query to find the names of all participants for the meeting with ID 1144. Display the names on the console, preceded by the message, "Names of participants in meeting 1144".
3. Insert a new participant with your name as the participant's name.
4. Count the number of people participating in the meeting with ID 1105.
5. Display a message on the console that gives both the meeting name and the number of participants.
6. Determine the names of all people who participate in meetings that meet on Tuesdays. Display the names, preceded by the message, "Participants attending Tuesday meetings".

DATA IN THE TABLE

MEETING_DAY	MEETING_NM	PARTICIPANT_ID

PARTICIPANT_NM		

TUESDAY XYZ	PJ	1144
TUESDAY ABC	PJ	1144
MONDAY KABC	UJ	1105
MEETING_DAY	MEETING_NM	PARTICIPANT_ID

PARTICIPANT_NM		

MONDAY HBJK	UJ	1105

CODE

```
package javaapplication7;
/**
 * @author bhaum 19BIT0292
 */
import java.sql.*;
public class JavaApplication7
{
    public static void main(String[] args) throws SQLException {
        Connection
con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1525:bhaumik","DV
SYS","123456Or");
        Statement st=con.createStatement();
        ResultSet resultSet = st.executeQuery("SELECT * FROM
participant");
        ResultSetMetaData metaData = resultSet.getMetaData();
        System.out.print("19BIT0292\n1) ");
        for(int i=1;i<=metaData.getColumnCount();i++)
            System.out.print(metaData.getColumnName(i)+"\t");
        System.out.print("\n2)Names of participants in meeting 1144\t\
t");
        resultSet = st.executeQuery("select PARTICIPANT_NM from
PARTICIPANT where PARTICIPANT_ID=1144");
        while(resultSet.next())
            System.out.print(resultSet.getString(1)+"\t");
        System.out.print("\n3) ");
        st.executeQuery("insert into participant
values('WEDNESDAY','IJ',3454,'Bhaumik')");
        resultSet=st.executeQuery("select PARTICIPANT_NM from
PARTICIPANT where PARTICIPANT_NM='Bhaumik'");
        while(resultSet.next())
            System.out.print(resultSet.getString(1)+"\t");
        System.out.print("\n4) ");
        resultSet = st.executeQuery("select count(PARTICIPANT_NM) from
participant where PARTICIPANT_ID=1105");
        while(resultSet.next())
            System.out.print(resultSet.getString(1)+"\t");
        System.out.print("\n5) ");
        resultSet = st.executeQuery("select
MEETING_NM,count(PARTICIPANT_NM) from participant group by MEETING_NM");
        while(resultSet.next())
            System.out.print(resultSet.getString(1)+"-"+resultSet.getString(2)+"\t");
        System.out.print("\n6)Participants attending Tuesday meetings\
t\t");
        resultSet = st.executeQuery("select PARTICIPANT_NM from
PARTICIPANT where MEETING_DAY='TUESDAY'");
        while(resultSet.next())
            System.out.print(resultSet.getString(1)+"\t");
    }
}
```


SCREENSHOT

The screenshot shows the NetBeans IDE interface. The main editor displays a Java file named `JavaApplication7.java` with the following code:

```
1 package javaapplication7;
2 /**
3  * @author bhaum 19BIT0292
4  */
5 import java.sql.*;
6 public class JavaApplication7
7 {
8     public static void main(String[] args) throws SQLException {
9         Connection con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1525:bhaumik", "DVSYS", "123456or");
10        Statement st=con.createStatement();
11        ResultSet resultSet = st.executeQuery("SELECT * FROM participant");
12        ResultSetMetaData metaData = resultSet.getMetaData();
13        System.out.print("19BIT0292\n1 ");
14        for(int i=1;i<=metaData.getColumnCount();i++)
15            System.out.print(metaData.getColumnName(i)+"\t");
16        System.out.print("\n2)Names of participants in meeting 1144\t\t");
17        resultSet = st.executeQuery("select PARTICIPANT_NM from PARTICIPANT where PARTICIPANT_ID=1144");
18        while(resultSet.next())
19            System.out.print(resultSet.getString(1)+"\t");
20        System.out.print("\n3) ");
21        st.executeQuery("insert into participant values('WEDNESDAY','IJ',3454,'Bhaumik')");
22        resultSet=st.executeQuery("select PARTICIPANT_NM from PARTICIPANT where PARTICIPANT_NM='Bhaumik'");
23        while(resultSet.next())
24            System.out.print(resultSet.getString(1)+"\t");
25        System.out.print("\n4) ");
26        resultSet = st.executeQuery("select count(PARTICIPANT_NM) from participant where PARTICIPANT_ID=1105");
27        while(resultSet.next())
28            System.out.print(resultSet.getString(1)+"\t");
29        System.out.print("\n5) ");
30        resultSet = st.executeQuery("select MEETING_NM,count(PARTICIPANT_NM) from participant group by MEETING_NM");
31        while(resultSet.next())
32            System.out.print(resultSet.getString(1)+"-"+resultSet.getString(2)+"\t");
33        System.out.print("\n6)Participants attending Tuesday meetings\t\t");
34        resultSet = st.executeQuery("select PARTICIPANT_NM from PARTICIPANT where MEETING_DAY='TUESDAY'");
35        while(resultSet.next())
36            System.out.print(resultSet.getString(1)+"\t");
37    }
38 }
```

The Output window shows the following text:

```
run:
19BIT0292
1) MEETING_DAY MEETING_NM PARTICIPANT_ID PARTICIPANT_NM
2)Names of participants in meeting 1144 XYZ ABC
3) Bhaumik
4) 2
5) UJ-2 PJ-2 IJ-1
6)Participants attending Tuesday meetings XYZ ABC BUILD SUCCESSFUL (total time: 0 seconds)
```

OUTPUT

run:

19BIT0292

1) MEETING_DAY MEETING_NM PARTICIPANT_ID PARTICIPANT_NM

2)Names of participants in meeting 1144 XYZ ABC

3) Bhaumik

4) 2

5) UJ-2 PJ-2 IJ-1

6)Participants attending Tuesday meetings XYZ ABC BUILD SUCCESSFUL (total time: 0 seconds)

The screenshot shows the NetBeans Output window for the `JavaApplication7` run. The output text is as follows:

```
run:
19BIT0292
1) MEETING_DAY MEETING_NM PARTICIPANT_ID PARTICIPANT_NM
2)Names of participants in meeting 1144 XYZ ABC
3) Bhaumik
4) 2
5) UJ-2 PJ-2 IJ-1
6)Participants attending Tuesday meetings XYZ ABC BUILD SUCCESSFUL (total time: 0 seconds)
```