JAVA AWT BASED- Online MOOC's year wise student database management system - SQL CONNECTIVITY USING JDBC

A

Report

Submitted in partial fulfilment of the

Requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

INFORMATION TECHNOLOGY

By

D. ABHIRAJ GOUD<1602-18-737-061>

Department of Information Technology

Vasavi College of Engineering (Autonomous)

Ibrahimbagh, Hyderabad-31

2020

BONAFIDE CERTIFICATE

This to certify that the project report titled "APTITUDE QUIZ EXAM ANALYSIS SYSTEM" project work of Mr.D.ABHIRAJ GOUD bearing Roll.no:1602-18-737-061 who carried out this project under my supervision in the IV semester for the academic year 2019-2020.

B.LEELAVATHY

Signature
external examiner

Signature
internal examiner

ABSTRACT:

The analysis of student performance in aptitude quiz exam can be done using this application as a mediator interface.

The student details are entered along with the examination center details of aptitude quiz exam. Everyone gets a score card wherein they get the marks of each section and get the result whether they are passed or failed.

The database consists of the student details and the score card of each and every student in that particular list.

Requirement Analysis:

List of tables:

- *Student details*
- *writes/attempts*
- *Aptitude quiz exam*
- *Scores*
- *Marks scored*

List of attributes with their domain types:

Student_details:

NAME: VARCHAR2(20)

HALLTICKET: NUMBER (5)

MAIL_ID: VARCHAR2(20)

CLASS: VARCHAR2(20)

Apptitude_quiz_exam:

DURATION NUMBER(5)

HALLTICKET	VARCHAR2(20)
EXAM_CENTER	VARCHAR2(20)

Marks_scored:

LOGICAL_REASONING	NUMBER(5)
VERBAL_ABILITY	NUMBER(5)
QUANTITATIVE_APTITUDE	NUMBER(5)
RESULT	VARCHAR2(10)
SHEET_ID	VARCHAR2(10)

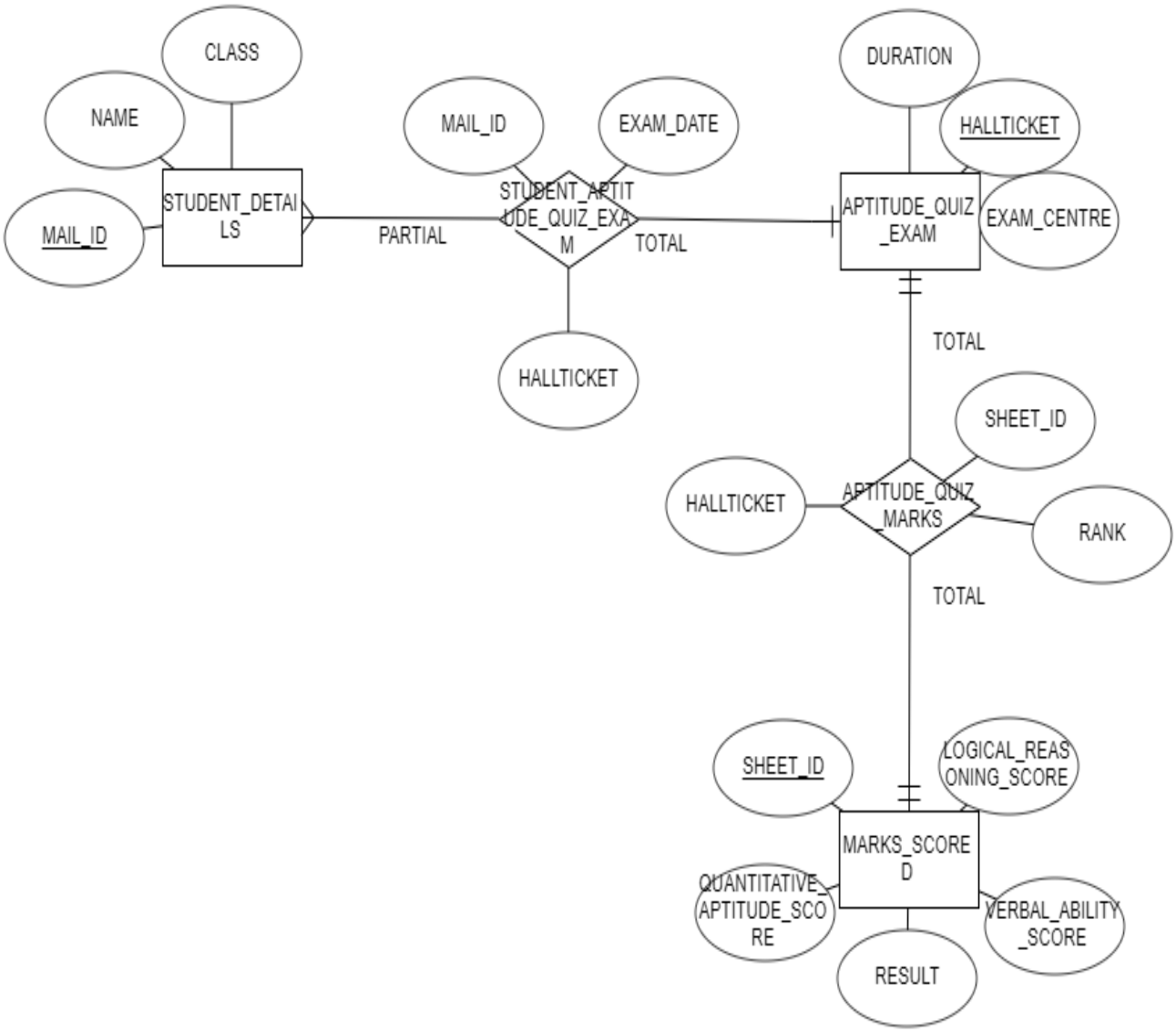
APTITUDE_QUIZ_MARKS:

RANK	NUMBER(10)
SHEET_ID	VARCHAR2(10)
HALLTICKET	VARCHAR2(10)

STUDENT_APTITUDE_QUIZ_EXAM:

EXAM_DATE	DATE
MAIL_ID	VARCHAR2(10)
HALLTICKET	VARCHAR2(10)

ER DIAGRAM:


CLASS
NAME
MAIL_ID
STUDENT_DETAILS
PARTIAL
MAIL_ID
EXAM_DATE
STUDENT_APTITUDE_QUIZ_EXAM
TOTAL
HALLTICKET
DURATION
HALLTICKET
EXAM_CENTRE
APTITUDE_QUIZ_EXAM
TOTAL
SHEET_ID
HALLTICKET
APTITUDE_QUIZ_MARKS
RANK
TOTAL
SHEET_ID
LOGICAL_REASONING_SCORE
MARKS_SCORED
QUANTITATIVE_APTITUDE_SCORE
VERBAL_ABILITY_SCORE
RESULT

MAPPING CARDINALITIES AND PARTICIPATION CONSTRAINTS:

- One student can give any number of exams, so many to one cardinality suit writes.
- Each student who writes the exam has one score card, so one to one cardinality suit scores.

→ All the students might not write the exam so the student details is partial.

→ All the exams written are related to students so it is total.

→ Marks scored by students in the exam must be related to the exam so it is total participation.

DDL AND DML COMMANDS:

```
SQL>create table student_details(
  2  hallticket number(5) primary key,
  3  name varchar2(20),
  4  mail_id varchar2(20),
  5  class varchar2(20));
Table created.

SQL> create table aptitude_quiz_exam(
  2  duration number(5),
  3  hallticket varchar2(20),
  4  exam_center varchar2(20));
Table created.

SQL> create table marks_scored(
  2  logical_reasoning number(5),
  3  verbal_ability number(5),
  4  quantitative_aptitude number(5),
  5  result varchar2(20),
  6  hallticket number(5));
```

Table created.

SQL> create table APTITUDE_QUIZ_MARKS(
  2 rank number(10));
 3 sheet_id varchar2(20);
4 hallticket varchar2(20);
Table created.

SQL> create table STUDENT_APTITUDE_QUIZ_EXAM (
  2 exam_date date);
Table created.
SQL> desc student_details;
Name   Null?   Type
--- -------- ----------------------------
HALLTICKET   NOT NULL NUMBER(5)
NAME   VARCHAR2(20)
MAIL_ID   VARCHAR2(20)
CLASS   VARCHAR2(20)

SQL> desc aptitude_quiz_exam;

Name	Null?	Type
DURATION		NUMBER(5)
HALLTICKET		VARCHAR2(20)
EXAM_CENTER		VARCHAR2(20)

SQL> desc marks_scored;

Name	Null?	Type
LOGICAL_REASONING		NUMBER(5)
VERBAL_ABILITY		NUMBER(5)
QUANTITATIVE_APTITUDE		NUMBER(5)
RESULT		VARCHAR2(20)
HALLTICKET		NUMBER(5)

```
SQL> desc APTITUDE_QUIZ_MARKS;
Name                                      Null?    Type
----------------------------------------- -------- ----------------------------
RANK                                               NUMBER(10)
HALLTICKET                                         VARCHAR2(20)
SHEET_ID                                           VARCHAR2(20)

SQL> DESC  STUDENT_APTITUDE_QUIZ_EXAM;
Name                                      Null?    Type
----------------------------------------- -------- ----------------------------
MAIL_ID                                            VARCHAR2(20)
HALLTICKET                                         VARCHAR2(20)
EXAM_DATE                                          VARCHAR2(20)
SQL> alter table scores(
  2 alter table scores add (hallticket number(5));

Table altered.
```

SQL> alter table writes add(hallticket number(5));

Table altered.

SQL> insert into student_details
values(&hallticket,'&name','&mail_id','&class');

Enter value for hallticket: 061

Enter value for name: abhi

Enter value for mail_id: abhi123@gmail.com

Enter value for class: btech 2nd year

old 1: insert into student_details
values(&hallticket,'&name','&mail_id','&class')

new 1: insert into student_details
values(061,'abhi','abhi123@gmail.com','btech 2nd year')

1 row created.

SQL> /

Enter value for hallticket: 071

Enter value for name: ajay

Enter value for mail_id: ajayband@yahoo.com

Enter value for class: btech 4th year

old 1: insert into student_details
values(&hallticket,'&name','&mail_id','&class')

new 1: insert into student_details
values(071,'ajay','ajayband@yahoo.com','btech 4th year')

1 row created.

SQL> /

Enter value for hallticket: 88

Enter value for name: badri

Enter value for mail_id: badri143@gmail.com

Enter value for class: btech 3rd year

old 1: insert into student_details
values(&hallticket,'&name','&mail_id','&class')

new 1: insert into student_details
values(88,'badri','badri143@gmail.com','btech 3rd year')

1 row created.

SQL> /

Enter value for hallticket: 98

Enter value for name: ram

Enter value for mail_id: ramnath@gmail.com

Enter value for class: btech2nd year

old 1: insert into student_details
values(&hallticket,'&name','&mail_id','&class')

new 1: insert into student_details
values(98,'ram','ramnath@gmail.com','btech2nd year')

1 row created.

SQL> /

Enter value for hallticket: 110

Enter value for name: vaishnavi

Enter value for mail_id: vaish04@gmail.com

Enter value for class: btech 2nd year

old 1: insert into student_details
values(&hallticket,'&name','&mail_id','&class')

new 1: insert into student_details
values(110,'vaishnavi','vaish04@gmail.com','btech 2nd year')

1 row created.

```
SQL> insert into aptitude_quiz_exam values
(&duration,'&hallticket','&exam_center');

Enter value for duration: 3

Enter value for hallticket: 061

Enter value for exam_center: banjara hills

old   1: insert into aptitude_quiz_exam values
(&duration,'&hallticket','&exam_center')

new   1: insert into aptitude_quiz_exam values
(3,'061','banjara hills')


1 row created.


SQL> /

Enter value for duration: 3

Enter value for hallticket: 071

Enter value for exam_center: narsingi

old   1: insert into aptitude_quiz_exam values
(&duration,'&hallticket','&exam_center')

new   1: insert into aptitude_quiz_exam values
(3,'071','narsingi')


1 row created.
```

SQL> /

Enter value for duration: 3

Enter value for hallticket: 88

Enter value for exam_center: mehdipatnam

old 1: insert into aptitude_quiz_exam values (&duration,'&hallticket','&exam_center')

new 1: insert into aptitude_quiz_exam values (3,'88','mehdipatnam')

1 row created.

SQL> /

Enter value for duration: 3

Enter value for hallticket: 98

Enter value for exam_center: miyapur

old 1: insert into aptitude_quiz_exam values (&duration,'&hallticket','&exam_center')

new 1: insert into aptitude_quiz_exam values (3,'98','miyapur')

1 row created.

SQL> /

Enter value for duration: 3

Enter value for hallticket: 110

Enter value for exam_center: jubliee hills

old 1: insert into aptitude_quiz_exam values (&duration,'&hallticket','&exam_center')

new 1: insert into aptitude_quiz_exam values (3,'110','jubliee hills')

1 row created.

SQL> insert into marks_scored values(&logical_reasoning,&verbal_ability,&quantitative_aptitude,'&result',&hallticket);

Enter value for logical_reasoning: 22

Enter value for verbal_ability: 21

Enter value for quantitative_aptitude: 20

Enter value for result: pass

Enter value for hallticket: 061

old 1: insert into marks_scored values(&logical_reasoning,&verbal_ability,&quantitative_aptitude,'&result',&hallticket)

new 1: insert into marks_scored values(22,21,20,'pass',061)

1 row created.

SQL> /

Enter value for logical_reasoning: 09

Enter value for verbal_ability: 11

Enter value for quantitative_aptitude: 1

Enter value for result: fail

Enter value for hallticket: 071

old 1: insert into marks_scored values(&logical_reasoning,&verbal_ability,&quantitative_aptitude,'&result',&hallticket)

new 1: insert into marks_scored values(09,11,1,'fail',071)

1 row created.

SQL> /

Enter value for logical_reasoning: 19

Enter value for verbal_ability: 16

Enter value for quantitative_aptitude: 14

Enter value for result: pass

Enter value for hallticket: 88

old 1: insert into marks_scored values(&logical_reasoning,&verbal_ability,&quantitative_aptitude,'&result',&hallticket)

new 1: insert into marks_scored values(19,16,14,'pass',88)

1 row created.

SQL> /

Enter value for logical_reasoning: 3

Enter value for verbal_ability: 2

Enter value for quantitative_aptitude: 4

Enter value for result: fail

Enter value for hallticket: 98

old 1: insert into marks_scored values(&logical_reasoning,&verbal_ability,&quantitative_aptitude,'&result',&hallticket)

new 1: insert into marks_scored values(3,2,4,'fail',98)

1 row created.

SQL> /

Enter value for logical_reasoning: 24

Enter value for verbal_ability: 25

Enter value for quantitative_aptitude: 23

Enter value for result: pass

Enter value for hallticket: 110

old 1: insert into marks_scored values(&logical_reasoning,&verbal_ability,&quantitative_aptitude,'&result',&hallticket)

new 1: insert into marks_scored values(24,25,23,'pass',110)

1 row created.

SQL> insert into writes values('&exam_date',&hall_ticket);

Enter value for exam_date: 03-FEB-2020

Enter value for hall_ticket: 061

old 1: insert into writes values('&exam_date',&hall_ticket)

new 1: insert into writes values('03-FEB-2020',061)

1 row created.

SQL> /

Enter value for exam_date: 03-FEB-2020

Enter value for hall_ticket: 071

```
old   1: insert into writes values('&exam_date',&hall_ticket)
new   1: insert into writes values('03-FEB-2020',071)

1 row created.

SQL> /
Enter value for exam_date: 03-FEB-2020
Enter value for hall_ticket: 88
old   1: insert into writes values('&exam_date',&hall_ticket)
new   1: insert into writes values('03-FEB-2020',88)

1 row created.

SQL> /
Enter value for exam_date: 19-OCT-2019
Enter value for hall_ticket: 98
old   1: insert into writes values('&exam_date',&hall_ticket)
new   1: insert into writes values('19-OCT-2019',98)

1 row created.

SQL> /
```

```
Enter value for exam_date: 03-FEB-2020
Enter value for hall_ticket: 110
old   1: insert into writes values('&exam_date',&hall_ticket)
new   1: insert into writes values('03-FEB-2020',110)

1 row created.

SQL> INSERT INTO scores values(&rank,&hallticket);
Enter value for rank: 1
Enter value for hallticket: 061
old   1: INSERT INTO scores values(&rank,&hallticket)
new   1: INSERT INTO scores values(1,061)

1 row created.

SQL> /
Enter value for rank: 9999
Enter value for hallticket: 071
old   1: INSERT INTO scores values(&rank,&hallticket)
new   1: INSERT INTO scores values(9999,071)
```

1 row created.

SQL> /
Enter value for rank: 179767246
Enter value for hallticket: 88
old   1: INSERT INTO scores values(&rank,&hallticket)
new   1: INSERT INTO scores values(179767246,88)

1 row created.

SQL> /
Enter value for rank: 97536
Enter value for hallticket: 98
old   1: INSERT INTO scores values(&rank,&hallticket)
new   1: INSERT INTO scores values(97536,98)

1 row created.

SQL> /
Enter value for rank: 432
Enter value for hallticket: 110
old   1: INSERT INTO scores values(&rank,&hallticket)

new 1: INSERT INTO scores values(432,110)

1 row created.

SQL> select * from student_details;

HALLTICKET	NAME	MAIL_ID	CLASS
61	abhi	abhi123@gmail.com	btech 2nd year
71	ajay	ajayband@yahoo.com	btech 4th year
88	badri	badri143@gmail.com	btech 3rd year
98	ram	ramnath@gmail.com	btech2ndyear
110	vaishnavi	vaish04@gmail.com	btech2ndyear

SQL> select * from aptitude_quiz_exam;

DURATION	HALLTICKET	EXAM_CENTER
3	061	banjara hills
3	071	narsingi
3	88	mehdipatnam

3 98 miyapur

3 110 jubliee hills

SQL> select * from marks_scored;

LOGICAL_REASONING VERBAL_ABILITY
QUANTITATIVE_APTITUDE RESULT

--- --- --- ---
--

HALLTICKET

---

22 21 20 pass
61

9 11 1 fail
71

19 16 14 pass
88

LOGICAL_REASONING VERBAL_ABILITY
QUANTITATIVE_APTITUDE RESULT

--- --- --- ---
--

HALLTICKET

---

3 2 4 fail
98

24 25 23 pass
110

SQL> select * from STUDENT_APTITUDE_QUIZ_EXAM;

MAIL_ID HALLTICKET EXAM_DATE

--- --- ---

abhi123@gmail.com 061 03-FEB-2020

badri143@gmail.com 88 03-FEB-2020

ajayband@yahoo.com 071 03-FEB-2020

ramnath@gmail.com 98 27-FEB-2020

vaish04@gmail.com 110 03-FEB-2020

SQL> select * from APTITUDE_QUIZ_MARKS;

RANK	HALLTICKET	SHEET_ID
1	061	123
9999	071	134
179767246	88	145
97536	98	189
432	110	210

DESCRIPTION:

The code describes about the analysis of the student in aptitude quiz exam. The marks along with the result has been displayed of the student in this mini project.

<u>THROUGH THE PROJECT:</u>

This project helps to store data in a efficient way and it can be achieved through various sql commands and we can also store this for any future use and also we can save our data in a many different areas so we cannot lost all the data at once. The details cannot be lost so it is safer to use it .

IMPLEMENTATION

FRONT END PROGRAMS

1)insert aptitude quiz exam details:

```
package aptitude_analysis;

import java.awt.FlowLayout;
import java.awt.GridLayout;
import java.awt.TextArea;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import java.sql.Connection;
```

```
import java.sql.DriverManager;
import java.sql.SQLException;

import javax.swing.JButton;
import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JOptionPane;
import javax.swing.JPanel;
import javax.swing.JTextField;

public class insert_aptitude_quiz_exam extends JFrame {

    /**
     *
     */
    private static final long serialVersionUID = 1L;
    JPanel jp1,jp2,jp3;
    Connection con;
    int i;
    java.sql.Statement stmt;
    JLabel du;
```

```
    JLabel ht;
    JLabel ec;
    JTextField d,h,e;
    TextArea ta;
    JButton in;
    void displaySQLErrors(SQLException e) {
    ta.append("\nSQLException:" + e.getMessage() +"\n");
    ta.append("SQLState:    "+ e.getSQLState() + "\n");
    ta.append("VendorError:  " + e.getErrorCode() + "\n");

}

    public insert_aptitude_quiz_exam()
    {
        try {
            Class.forName("oracle.jdbc.driver.OracleDriver");
        } catch (ClassNotFoundException e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
        try {
```

```
con=DriverManager.getConnection("jdbc:oracle:thin:@loca
lhost:1521:ORCL","project","vasavi");
        } catch (SQLException e) {
            // TODO Auto-generated catch block
            displaySQLErrors(e);
        }
        try {
            stmt=con.createStatement();
        } catch (SQLException e) {
            // TODO Auto-generated catch block
            displaySQLErrors(e);
        }
        du=new JLabel("Duration of exam");
        d=new JTextField(10);
        ht=new JLabel("Hall-ticket");
        h=new JTextField(10);
        ec=new JLabel("Exam-center");
        e=new JTextField(10);
        ta=new TextArea(20,100);
        in=new JButton("submit");
```

```
        jp1=new JPanel(new FlowLayout());
        jp2=new JPanel(new FlowLayout());
        jp3=new JPanel(new FlowLayout());
        jp1.add(du);
        jp1.add(d);
        jp1.add(ht);
        jp1.add(h);
        jp1.add(ec);
        jp1.add(e);
        jp2.add(in);
        jp3.add(ta);
        add(jp1);
        add(jp2);
        add(jp3);
        setVisible(true);
        setSize(2000,1000);
        setTitle("Enter following details:");
        setLayout(new FlowLayout());
        pack();
in.addActionListener(new ActionListener() {
```

```
        @Override
        public void actionPerformed(ActionEvent argo) {
            // TODO Auto-generated method stub
            try {
                String duration=d.getText();
                if(checkint(duration)==0) {
                    JOptionPane.showMessageDialog(null,
"Duration should be an Integer");
                    throw new Exception();
                }
                 i=stmt.executeUpdate("insert into
aptitude_quiz_exam values ("+ d.getText()
+","'+h.getText()+"','"+e.getText()+"')");
            } catch (SQLException e) {
                // TODO Auto-generated catch block
                displaySQLErrors(e);
            } catch (Exception e1) {
                // TODO Auto-generated catch block
                e1.printStackTrace();
            }
            ta.append("\n Inserted "+i+"rows successfully");
```

```
            }
        });
    }
    public int checkint(String rank) {
    try {
        Integer.parseInt(rank);
        return 1;
    }
    catch(Exception e) {
        return 0;
    }


    }


}
```

2)update aptitude quiz exam details

```
package aptitude_analysis;

import java.awt.FlowLayout;
import java.awt.GridLayout;
import java.awt.List;
import java.awt.TextArea;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import java.awt.event.ItemEvent;
import java.awt.event.ItemListener;
import java.sql.Connection;
import java.sql.DriverManager;
```

```
import java.sql.ResultSet;
import java.sql.SQLException;

import javax.swing.JButton;
import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JPanel;
import javax.swing.JTextField;

public class update_aptitude_quiz_exam extends JFrame{

    /**
     *
     */
    private static final long serialVersionUID = 1L;
    JPanel jp1,jp2,jp3;
    Connection con;
    int i;
    java.sql.Statement stmt;
    JLabel du;
    JLabel ht;
```

```
JLabel ec;
JTextField d,h,e;
TextArea ta;
JButton in;
List lis;
ResultSet rs;
String sel;
void displaySQLErrors(SQLException e) {
    ta.append("\nSQLException:" + e.getMessage() +"\n");
    ta.append("SQLState:    "+ e.getSQLState() + "\n");
    ta.append("VendorError:  " + e.getErrorCode() + "\n");

}

public update_aptitude_quiz_exam()
{
    try {
        Class.forName("oracle.jdbc.driver.OracleDriver");
    } catch (ClassNotFoundException e) {
        // TODO Auto-generated catch block
        e.printStackTrace();
```

```
        }
        try {

con=DriverManager.getConnection("jdbc:oracle:thin:@loca
lhost:1521:ORCL","project","vasavi");
        } catch (SQLException e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
        try {
            stmt=con.createStatement();
        } catch (SQLException e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
        lis=new List();
        du=new JLabel("Duration of exam");
        d=new JTextField(10);
        ht=new JLabel("Hall-ticket");
        h=new JTextField(10);
        ec=new JLabel("Exam-center");
```

```
e=new JTextField(10);
ta=new TextArea(20,100);
in=new JButton("submit");
jp1=new JPanel(new FlowLayout());
jp2=new JPanel(new FlowLayout());
jp3=new JPanel(new FlowLayout());
jp1.add(du);
jp1.add(d);
jp1.add(ht);
jp1.add(h);
jp1.add(ec);
jp1.add(e);
jp2.add(in);
jp3.add(ta);
add(jp1);
add(jp2);
add(jp3);
add(lis);
try {
```

```
            rs=stmt.executeQuery("select hallticket from
aptitude_quiz_exam");
            while(rs.next()) {
               lis.add(rs.getString(1));
            }
         } catch (SQLException e) {
            // TODO Auto-generated catch block
            displaySQLErrors(e);
         }
         lis.addItemListener(new ItemListener() {

            @Override
            public void itemStateChanged(ItemEvent argo) {
               // TODO Auto-generated method stub
               try {
                  sel=lis.getSelectedItem();
                  rs=stmt.executeQuery("select
duration,hallticket,exam_center from aptitude_quiz_exam
where hallticket="+lis.getSelectedItem()+"");
               if(rs.next()) {
                  d.setText(rs.getString(1));
```

```
                h.setText(rs.getString(2));
                e.setText(rs.getString(3));
            }
            } catch (SQLException e) {
                // TODO Auto-generated catch block
                displaySQLErrors(e);
            }
        }

    });
    setVisible(true);
    setSize(2000,1000);
    setTitle("Enter following details:");
    setLayout(new FlowLayout());
    pack();

in.addActionListener(new ActionListener() {

        @Override
        public void actionPerformed(ActionEvent argo) {
            // TODO Auto-generated method stub
```

```
            try {
                i=stmt.executeUpdate("update
aptitude_quiz_exam set
duration="+d.getText()+",exam_center='"+e.getText()+"'wh
ere hallticket='"+h.getText()+"'");
            } catch (SQLException e) {
               // TODO Auto-generated catch block
               displaySQLErrors(e);
            }
            ta.append("\n Updated "+i+"rows successfully");
         }
      });
   }

}
```

3)delete aptitude quiz exam details

```
package aptitude_analysis;

import java.awt.FlowLayout;
import java.awt.GridLayout;
import java.awt.List;
import java.awt.TextArea;
```

```
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import java.awt.event.ItemEvent;
import java.awt.event.ItemListener;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.SQLException;

import javax.swing.JButton;
import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JPanel;
import javax.swing.JTextField;

public class delete_aptitude_quiz_exam extends JFrame{

    /**
     *
     */
    private static final long serialVersionUID = 1L;
```

```
JPanel jp1,jp2,jp3;
Connection con;
int i;
java.sql.Statement stmt;
JLabel du;
JLabel ht;
JLabel ec;
JTextField d,h,e;
TextArea ta;
JButton in;
List lis;
ResultSet rs;
String sel;

public delete_aptitude_quiz_exam()
{
   try {
      Class.forName("oracle.jdbc.driver.OracleDriver");
   } catch (ClassNotFoundException e) {
      // TODO Auto-generated catch block
      e.printStackTrace();
```

```
        }
        try {

con=DriverManager.getConnection("jdbc:oracle:thin:@loca
lhost:1521:ORCL","project","vasavi");
        } catch (SQLException e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
        try {
            stmt=con.createStatement();
        } catch (SQLException e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
        lis=new List();
        du=new JLabel("Duration of exam");
        d=new JTextField(10);
        ht=new JLabel("Hall-ticket");
        h=new JTextField(10);
        ec=new JLabel("Exam-center");
```

```
e=new JTextField(10);
ta=new TextArea(20,100);
in=new JButton("Delete");
jp1=new JPanel(new FlowLayout());
jp2=new JPanel(new FlowLayout());
jp3=new JPanel(new FlowLayout());
jp1.add(du);
jp1.add(d);
jp1.add(ht);
jp1.add(h);
jp1.add(ec);
jp1.add(e);
jp2.add(in);
jp3.add(ta);
add(jp1);
add(jp2);
add(jp3);
add(lis);
try {
```

```
            rs=stmt.executeQuery("select hallticket from
aptitude_quiz_exam");
            while(rs.next()) {
               lis.add(rs.getString(1));
            }
         } catch (SQLException e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
         }
         lis.addItemListener(new ItemListener() {

            @Override
            public void itemStateChanged(ItemEvent argo) {
               // TODO Auto-generated method stub
               try {
                  sel=lis.getSelectedItem();
                  rs=stmt.executeQuery("select
duration,hallticket,exam_center from aptitude_quiz_exam
where hallticket="+lis.getSelectedItem()+"");
               if(rs.next()) {
                  d.setText(rs.getString(1));
```

```
                h.setText(rs.getString(2));
                e.setText(rs.getString(3));
            }
            } catch (SQLException e) {
                // TODO Auto-generated catch block
                e.printStackTrace();
            }
        }

    });
    setVisible(true);
    setSize(2000,1000);
    setTitle("Enter following details:");
    setLayout(new FlowLayout());
    pack();

in.addActionListener(new ActionListener() {

        @Override
        public void actionPerformed(ActionEvent argo) {
            // TODO Auto-generated method stub
```

```
            try {
                i=stmt.executeUpdate("delete from
aptitude_quiz_exam where hallticket='"+h.getText()+"'");
            } catch (SQLException e) {
                // TODO Auto-generated catch block
                e.printStackTrace();
            }
            ta.append("\n deleted "+i+"rows successfully");
        }
    });
  }

}
```

4)Main Method

```
package aptitude_analysis;

import java.awt.FlowLayout;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;

import javax.swing.JFrame;
```

```
import javax.swing.JMenu;
import javax.swing.JMenuBar;
import javax.swing.JMenuItem;

public class First_frame extends JFrame {

    /**
     *
     */
    private static final long serialVersionUID = 1L;
    JMenuBar mnubar;
    JMenu m1,m2,m3,m4,m5;
    JMenuItem
in1,in2,in3,in4,in5,up1,up2,up3,up4,up5,dl1,dl2,dl3,dl4,dl5;
    public First_frame() {
        mnubar=new JMenuBar();
        m1=new JMenu("Student_Details");
        m2=new JMenu("Aprtitude_Quiz_Exam");
        m3=new JMenu("Marks_scored");
        m4=new JMenu("Aptitude_quiz_marks");
        m5=new JMenu("Student_Aptitude_quiz_exam");
```

```
in1=new JMenuItem("Insert");
up1=new JMenuItem("Update");
dl1=new JMenuItem("Delete");
in2=new JMenuItem("Insert");
up2=new JMenuItem("Update");
dl2=new JMenuItem("Delete");
in3=new JMenuItem("Insert");
up3=new JMenuItem("Update");
dl3=new JMenuItem("Delete");
in4=new JMenuItem("Insert");
up4=new JMenuItem("Update");
dl4=new JMenuItem("Delete");
in5=new JMenuItem("Insert");
up5=new JMenuItem("Update");
dl5=new JMenuItem("Delete");
setVisible(true);
setSize(2000,1000);
setTitle("Aptitude Quiz Performance Analysis");
setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
setLayout(new FlowLayout());
```

```
setJMenuBar(mnubar);
mnubar.add(m1);
m1.add(in1);
m1.add(up1);
m1.add(dl1);
mnubar.add(m2);
m2.add(in2);
m2.add(up2);
m2.add(dl2);
mnubar.add(m3);
m3.add(in3);
m3.add(up3);
m3.add(dl3);
mnubar.add(m4);
m4.add(in4);
m4.add(up4);
m4.add(dl4);
mnubar.add(m5);
m5.add(in5);
m5.add(up5);
```

```
m5.add(dl5);

in1.addActionListener(new ActionListener() {

    @Override
    public void actionPerformed(ActionEvent e) {
        // TODO Auto-generated method stub
        new insert_student_details();
    }
});
up1.addActionListener(new ActionListener() {

    @Override
    public void actionPerformed(ActionEvent argo) {
        // TODO Auto-generated method stub
        new update_student_details();

    }
});
dl1.addActionListener(new ActionListener() {

    @Override
```

```
    public void actionPerformed(ActionEvent e) {
        // TODO Auto-generated method stub
        new delete_student_details();

    }
});
in2.addActionListener(new ActionListener() {

    @Override
    public void actionPerformed(ActionEvent argo) {
        // TODO Auto-generated method stub
        new insert_aptitude_quiz_exam();
    }
});
up2.addActionListener(new ActionListener() {

    @Override
    public void actionPerformed(ActionEvent argo) {
        // TODO Auto-generated method stub
        new update_aptitude_quiz_exam();
```

```
    }
});
dl2.addActionListener(new ActionListener() {

    @Override
    public void actionPerformed(ActionEvent e) {
        // TODO Auto-generated method stub
        new delete_aptitude_quiz_exam();

    }
});
in3.addActionListener(new ActionListener() {

    @Override
    public void actionPerformed(ActionEvent argo) {
        // TODO Auto-generated method stub
        new insert_marks_scored();

    }
});
up3.addActionListener(new ActionListener() {
```

```
    @Override
    public void actionPerformed(ActionEvent argo) {
        // TODO Auto-generated method stub
        new update_marks_scored();

    }
});
dl3.addActionListener(new ActionListener() {

    @Override
    public void actionPerformed(ActionEvent e) {
        // TODO Auto-generated method stub
        new delete_marks_scored();

    }
});
in4.addActionListener(new ActionListener() {

    @Override
    public void actionPerformed(ActionEvent argo) {
        // TODO Auto-generated method stub
```

```
        new insert_aptitude_quiz_marks();

    }
});
up4.addActionListener(new ActionListener() {

    @Override
    public void actionPerformed(ActionEvent argo) {
        // TODO Auto-generated method stub
        new update_aptitude_quiz_marks();

    }
});
dl4.addActionListener(new ActionListener() {

    @Override
    public void actionPerformed(ActionEvent e) {
        // TODO Auto-generated method stub
        new delete_aptitude_quiz_marks();

    }
});
```

```
in5.addActionListener(new ActionListener() {

    @Override
    public void actionPerformed(ActionEvent argo) {
        // TODO Auto-generated method stub
        new insert_student_Aptitude_quiz_exam();

    }
});
up5.addActionListener(new ActionListener() {

    @Override
    public void actionPerformed(ActionEvent argo) {
        // TODO Auto-generated method stub
        new update_student_Aptitude_quiz_exam();

    }
});
dl5.addActionListener(new ActionListener() {

    @Override
    public void actionPerformed(ActionEvent e) {
```

```
            // TODO Auto-generated method stub
            new delete_student_Aptitude_quiz_exam();

        }
    });

}


public static void main(String a[]) {
    new First_frame();
}

}
```

Java-SQL Connectivity with the Database:

Java Database Connectivity (JDBC) is an application programming interface (API) for the programming language Java, which defines how a client may access a database. It is a Java-based data access technology used for Java database connectivity. It is part of the Java Standard Edition platform, from Oracle Corporation. It provides methods to query and update data in a database and is oriented towards relational databases.

Block of code for JAVA- SQL connectivity with JDBC:

```
public void connectToDB()
        {
                try
                {

connection=DriverManager.getConnection("jdbc:oracle:thi
n:@localhost:1521:orcl","project","vasavi");

statement=connection.createStatement();
                }
                catch(SQLException connectException)
                {

System.out.println(connectException.getMessage());

System.out.println(connectException.getSQLState());

System.out.println(connectException.getErrorCode());
                        System.exit(1);
                }
Catch(Exception e)
```

```
            {
                System.err.println("Unable to find and load
driver");
                System.exit(1);
            }
        }
```

Thus, the connection from Java to Oracle database is performed and therefore, can be used for updating tables in the database directly.

SOFTWARE USED:

*Java Eclipse, Oracle 11g Database, Java SE version 7, SQL*Plus.*

Java AWT:

Java AWT (Abstract Window Toolkit) is an API to develop GUI or window-based applications in java.

Java AWT components are platform-dependent i.e. components are displayed according to the view of operating system.

AWT is heavyweight i.e. its components are using the resources of OS. The java.awt package provides classes for

AWT API such as TextField, Label, TextArea, RadioButton, CheckBox, Choice, List etc.

SQL:

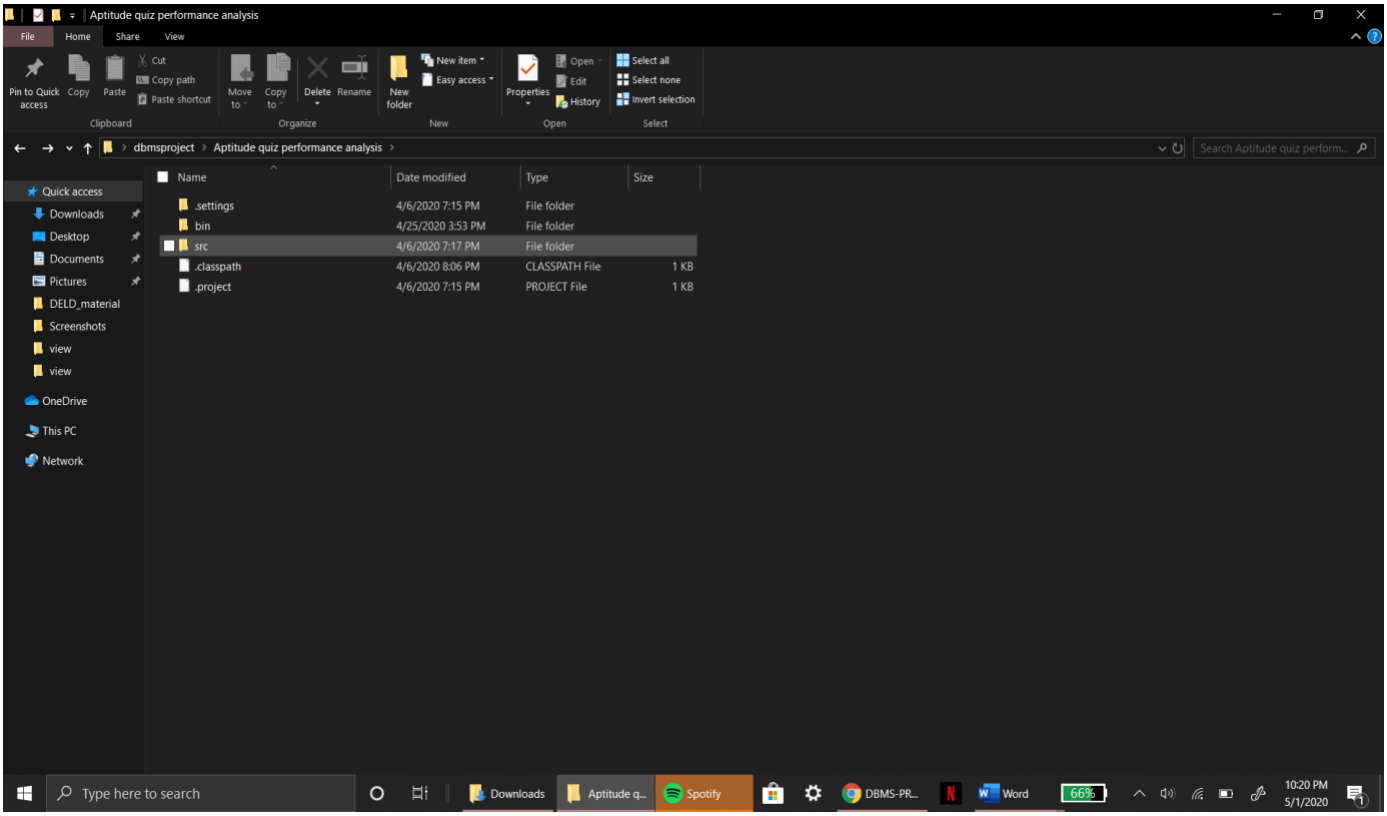
Structure Query Language(SQL) is a database query language used for storing and managing data in Relational DBMS. SQL was the first commercial language introduced for E.F Codd's Relational model of database. Today almost all RDBMS (MySQL, Oracle, Infomix, Sybase, MS Access) use SQL as the standard database query language. SQL is used to perform all types of data operations in RDBMS.

GITHUB LINK:

https://github.com/abhirajgoud135/DBMS-PROJECT

FOLDER STRUCTURE:

This project contains a folder named src in which it has 5 different folders for different purposes each folder has 3 codes such as to make insert, delete, update. By this we can navigate easily to reach code and we can make many changes as we can want easily.

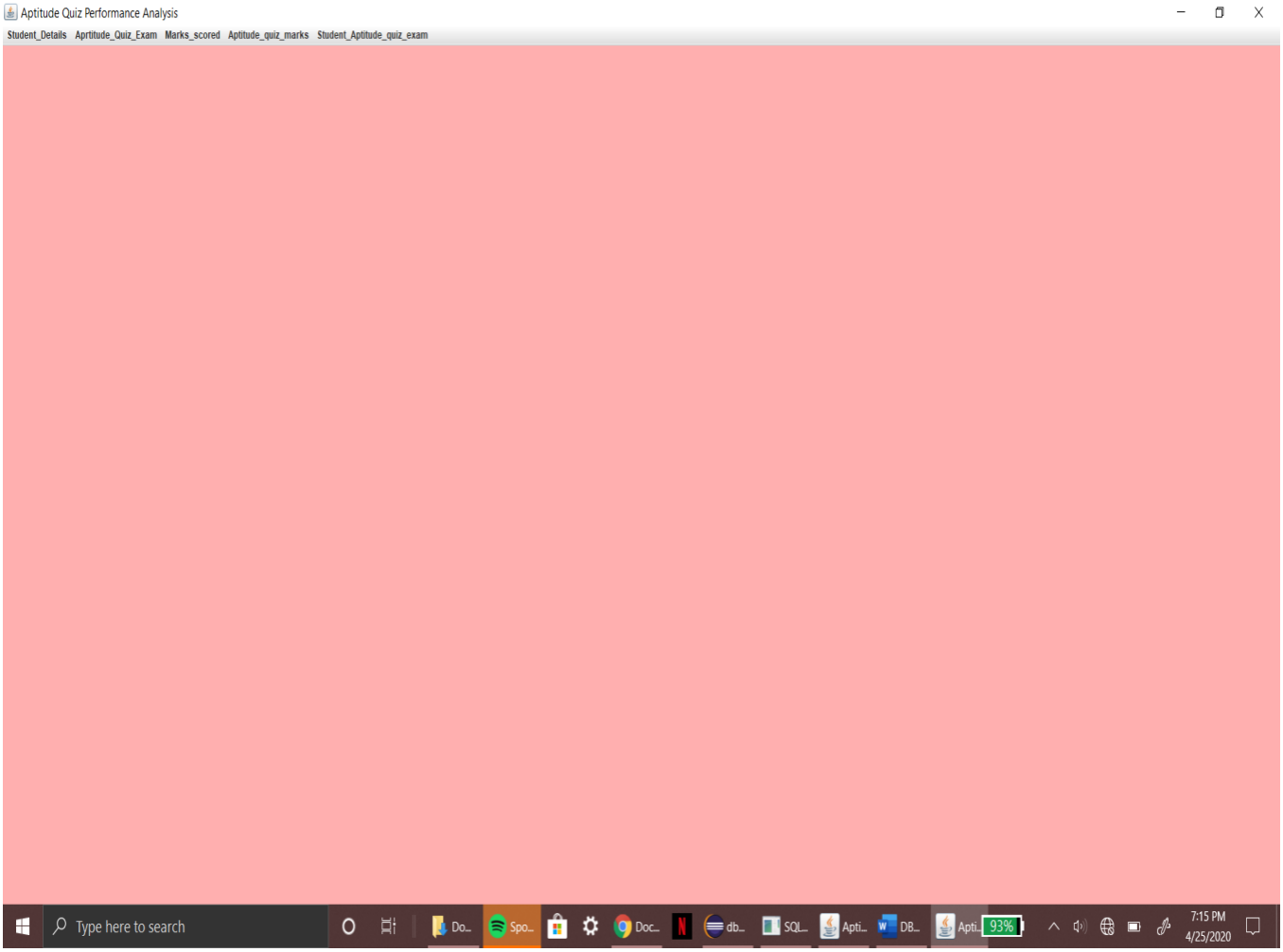


TESTING

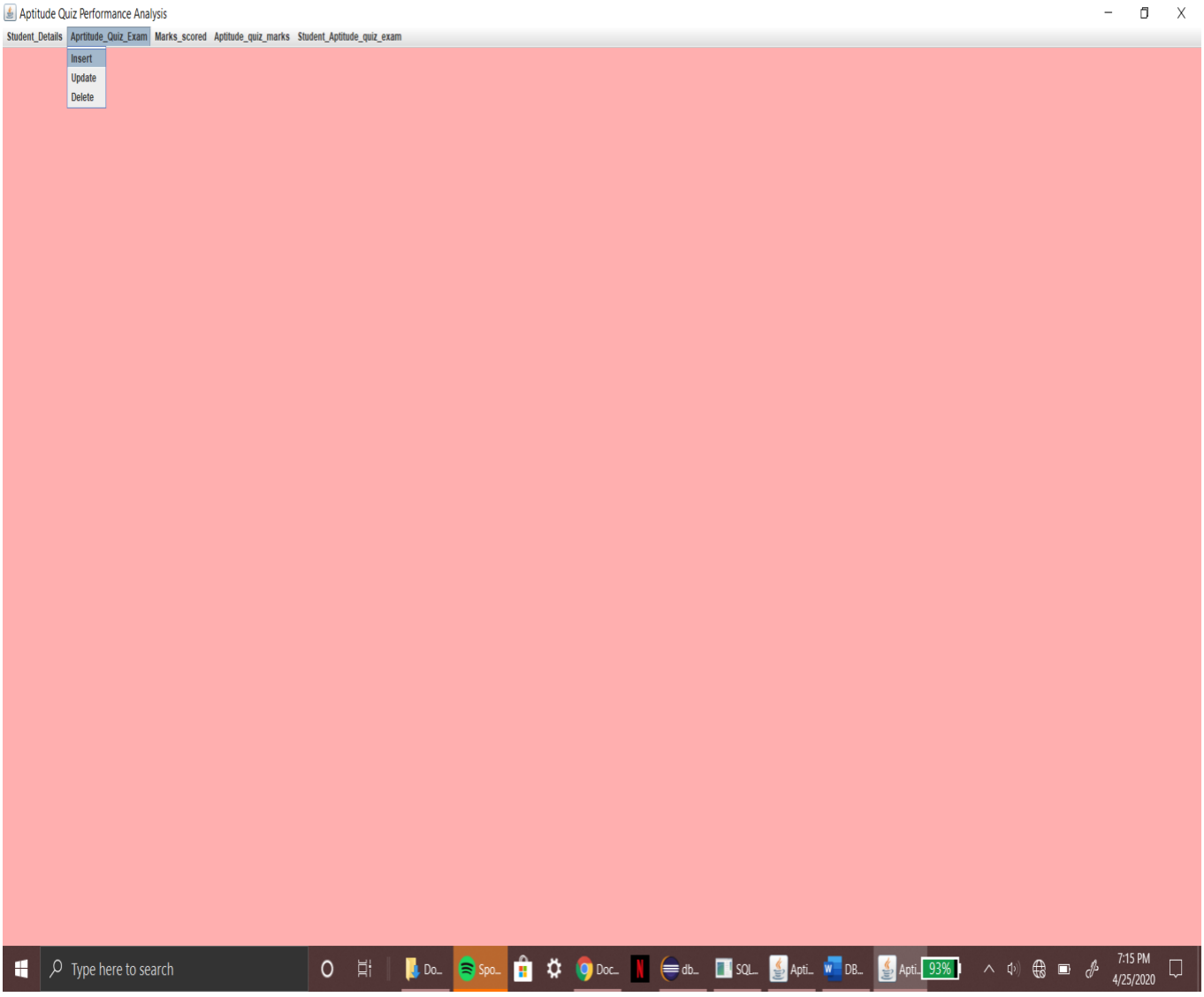
The program executes three basic operations those are insert update and delete on 5 different tables. Along with this, it also has an output column which gives information about how many rows have been edited. Errors syntactical or exceptional will be shown if occurred.

HOME PAGE:

1)The home page represents the various options about the quiz and the details of students.

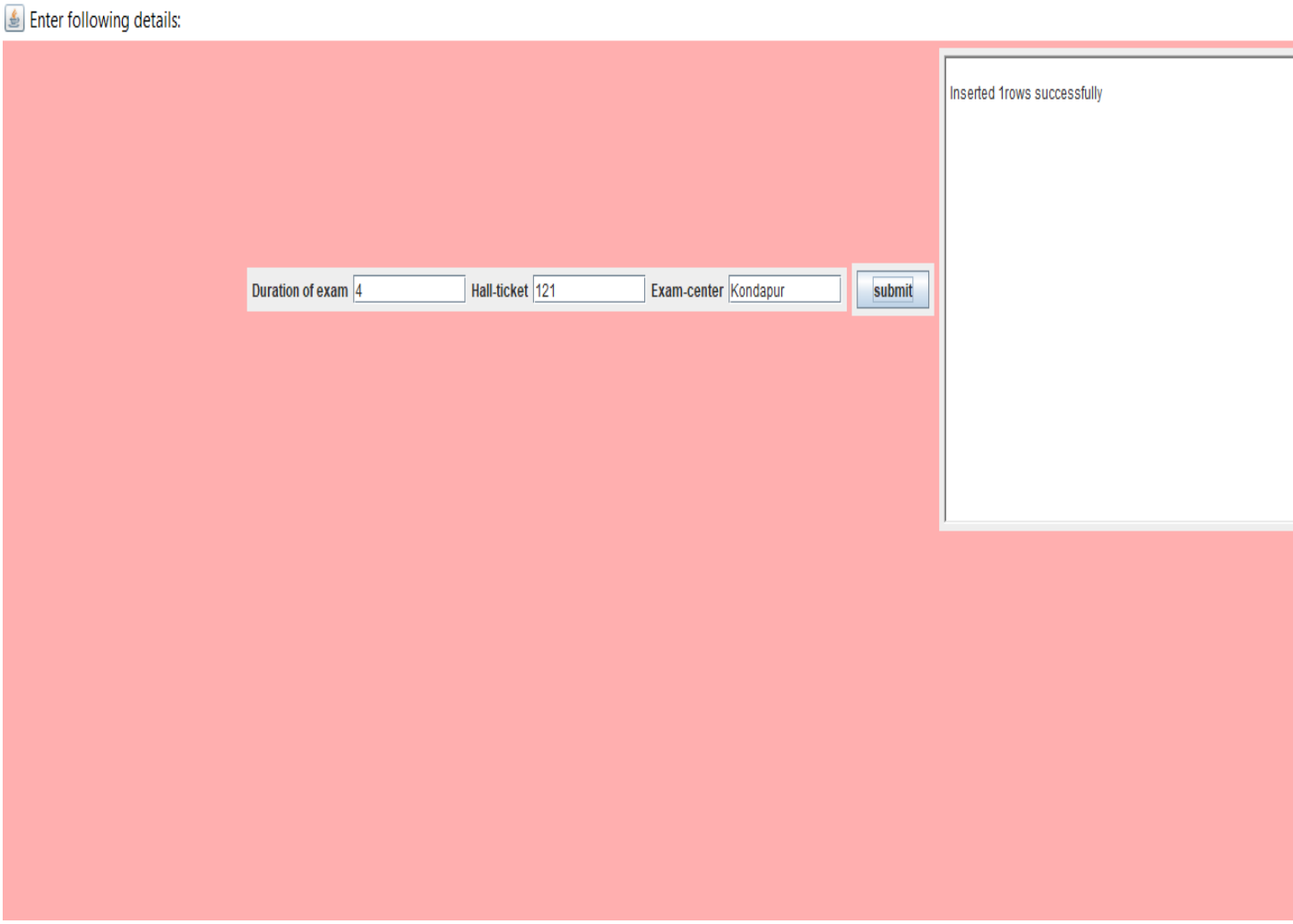


2)The second step checks the attributes present in the Aptitude_quiz_exam table and allows to select an option and glance the details of it.



INSERT QUIZ DETAILS:

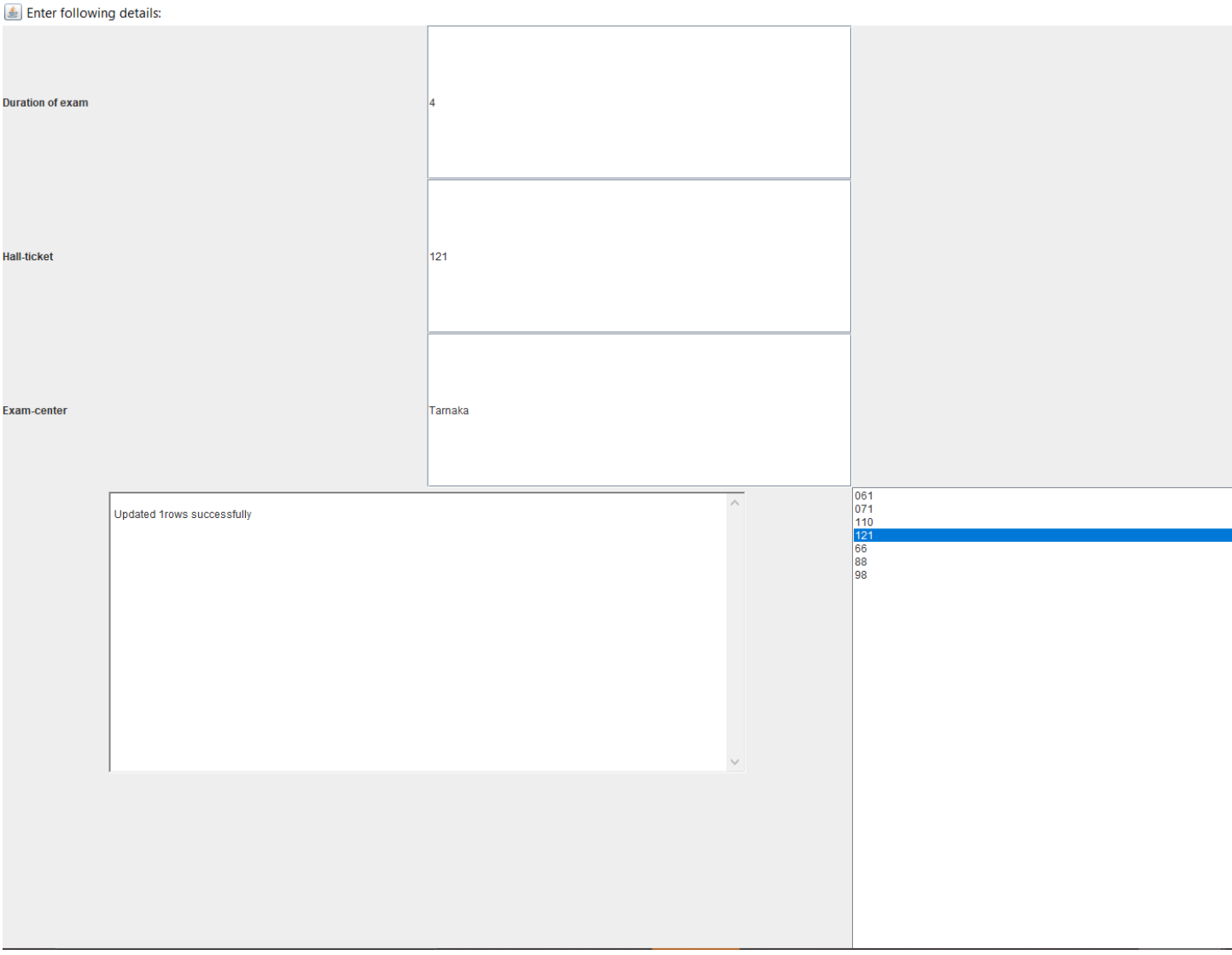
3)The insert table allows us to insert a new hall-ticket into the table along with the duration and exam-center. If there are no errors the hall-ticket will be inserted successfully.




```
SQL Plus
With the Partitioning, OLAP, Data Mining and Real Application Testing options

SQL> select * from aptitude_quiz_exam;

  DURATION HALLTICKET           EXAM_CENTER
---------- -------------------- --------------------
         4 66                   canada
         3 061                  USA
         3 071                  narsingi
         3 88                   mehdipatnam
         3 98                   miyapur
         3 110                  jubliee hills

6 rows selected.

SQL> select * from aptitude_quiz_exam;

  DURATION HALLTICKET           EXAM_CENTER
---------- -------------------- --------------------
         4 66                   canada
         3 061                  USA
         3 071                  narsingi
         3 88                   mehdipatnam
         3 98                   miyapur
         3 110                  jubliee hills
         4 121                  Kondapur

7 rows selected.

SQL>
```

UPDATE QUIZ DETAILS:

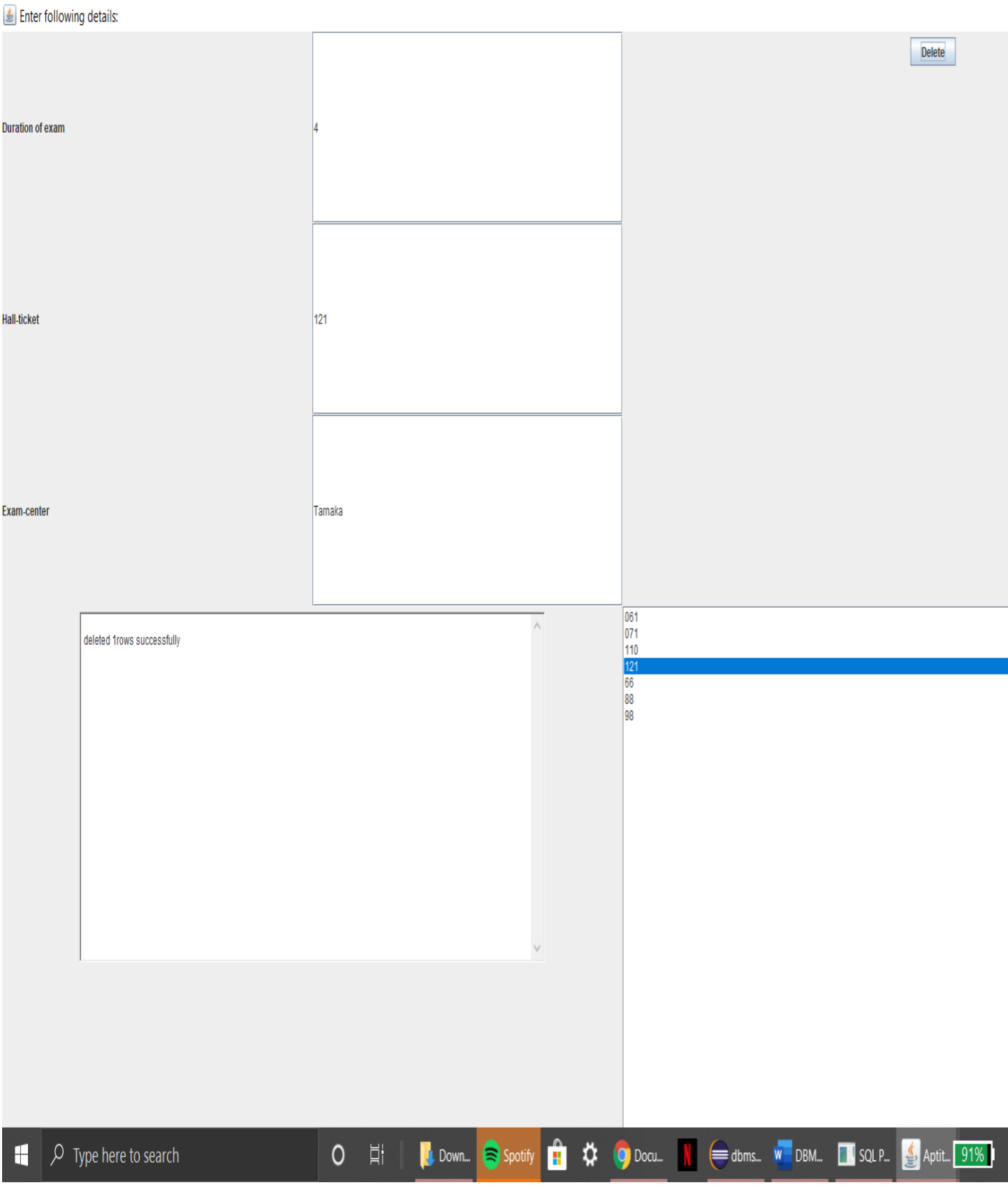
4)This step allows to update the table of the existing details; we should select the hall-ticket and then need to update the details.



```
SQL> select * from aptitude_quiz_exam;

  DURATION HALLTICKET           EXAM_CENTER
---------- -------------------- --------------------
         4 66                   canada
         4 121                  Tarnaka
         3 061                  USA
         3 071                  narsingi
         3 88                   mehdipatnam
         3 98                   miyapur
         3 110                  jubliee hills

7 rows selected.

SQL>
```

DELETE QUIZ DETAILS:

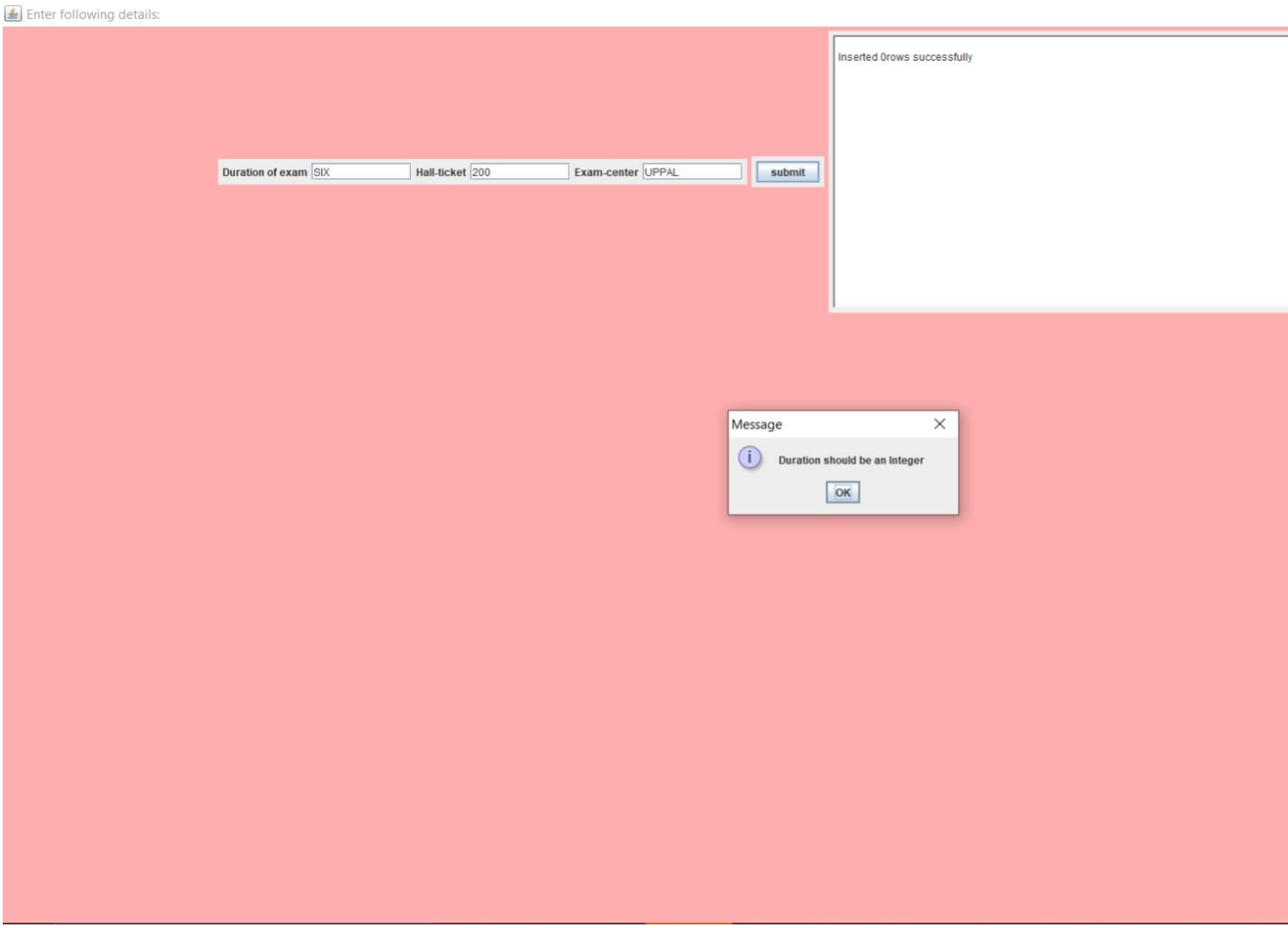
5)This step allows us to delete the row which is existing and then select the row and press delete then it automatically deletes the selected hall-ticket from the table.


Enter following details:
Delete
Duration of exam
4
Hall-ticket
121
Exam-center
Tamaka
deleted 1rows successfully
061
071
110
121
66
88
98
Type here to search
Down...
Spotify
Docu...
dbms...
DBM...
SQL P...
Aptit...
91%

```
QL> select * from aptitude_quiz_exam;

 DURATION HALLTICKET           EXAM_CENTER
--------- -------------------- --------------------
        4 66                   canada
        4 121                  Tarnaka
        3 061                  USA
        3 071                  narsingi
        3 88                   mehdipatnam
        3 98                   miyapur
        3 110                  jubliee hills

 rows selected.

QL>
```

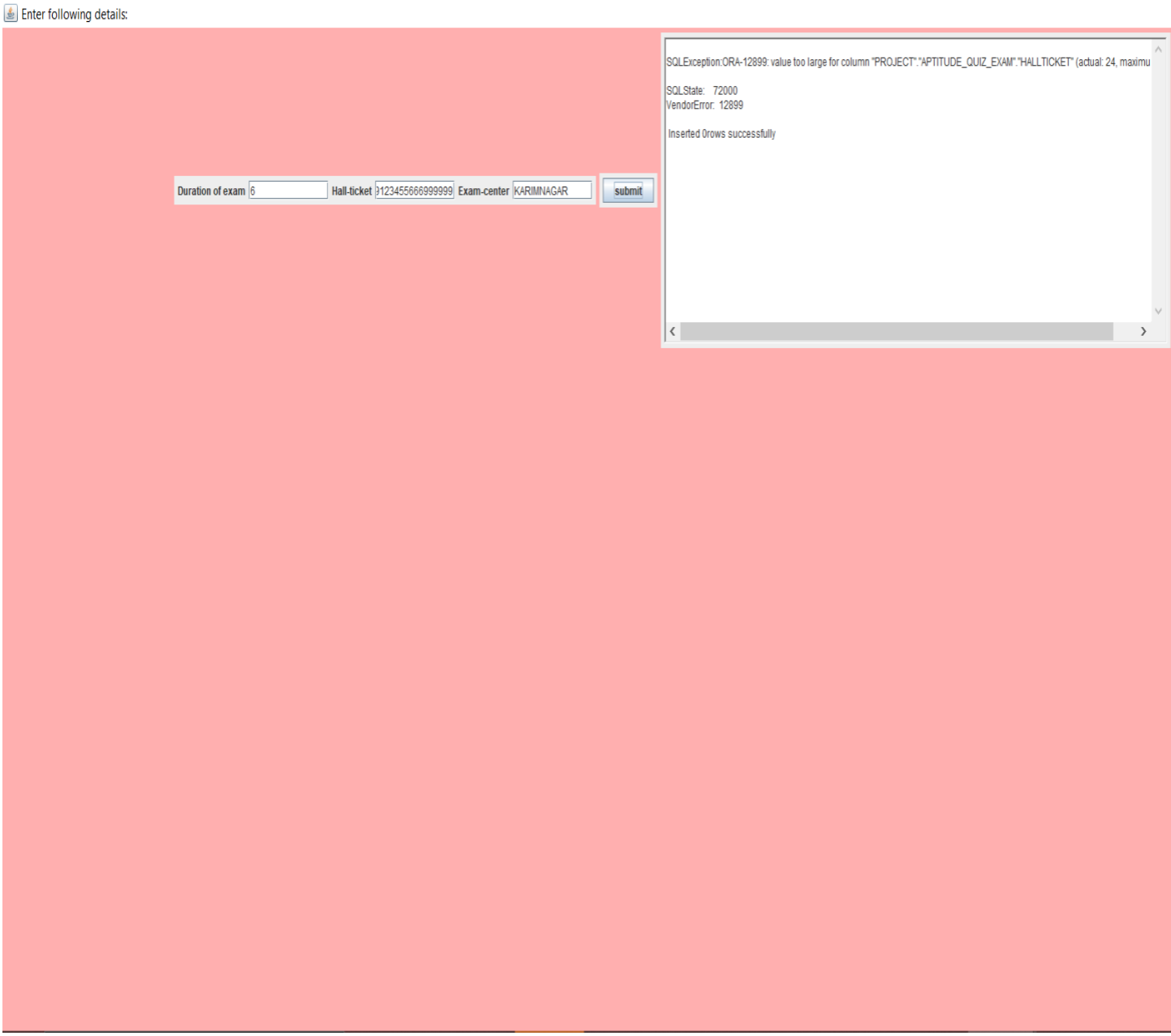
DIALOG BOX:

6)This step pops a dialog box when we enter the duration in text as the datatype assigned to duration is number so we should enter only a number.



EXCEPTIONS:

7)This step gives a sql message when there is an error when the size of the attribute is exceeded.



REFERENCES:

https://gopract.com/pages/aptitude-topics.aspx

https://www.quora.com/What-are-the-important-topics-in-the-aptitude-GATE

https://docs.oracle.com/javase/7/docs/api/

https://www.javatpoint.com/dbms-tutorial