```
    }
  }
}

public static void main (String args[])
{
    new Ass3setB3();
}
```

'C'

Gautami
08/10/2024

EXPERIMENT : No.

Assignment 4.

DATE

* Set A.

1) Create a student table with fields roll number, name, percentage. Insert values in the table. Display all the details of the student table in a tabular format on the screen (using swing).

→

```
import javax.swing.*;
import java.sql.*;

class Ass2A1 extends JFrame
{
    JTable stdl;
    connection cn=null;
    statement stm;
    Resultset rs;
    Prepared statement psmt;
    string [] colHead s = {"Roll", "Name", "Age"};
      string [] data;
      int newcount = 0;;

Ass2A1()
{
  super("Table & DB connectivity");
  setsize(500,500);
  setLocation(300,300);
try
{
```

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```
cn = DriverManger.getConnection("jdbc:mysql://localhost:8080","root","root");
stm = cn.createstatement(ResultSet.TYPE_SCROLL_
SENSITIUE.Resultset.CONCUR_UPDATEBLE);

rs = stm.executeQuery("select count * from stud");
    rs.next();
    rowcount = rs.getInt(1);
    data = new string[rowcount][3];
   rs = stm.executeQuery("select * from stud order
    by roll");
      rs.next();
      while(rs.next())
     {
       for(int x=0; x<3; x++)
       data[i][0] = rs.getstring[1];
       data[i][1] = rs.getstring[2];
       data[i][2] = rs.getstring[3];
          i++;
     }
    std = new JTable(data, colHeads);
  int v = scrollPane(Constants.VERTICAL_SCROLLBAR_AS_
  NEEDED;
int h = scrollPane(Cconstants, HORIZONTAL_SCROLLBAR_
        AS-NEEDED;
       JScrollPane jsp = new JScrollpane(std.v.h);
          add(jsp);
       }
         catch(Exception ex)
       {
        System.out.println(ex);
    }
```

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```
setDefaultCloseOperation(JFrame.EXIT_ON_
CLOSE);
setVisible(true);
}
public static void main(String [] a)
{
new Ass2A1();
}
}
```

2] Write a program to display information about the database and list all the tables in the database (Use DatabaseMetaData).

→

```
import java.sql.*;
class Ass2a2
{
public static void main(String [] args)
throws Exception
{
Connection conn = null;
Statement stm;
Resultset rs;
try
{
cn = DriverManager.getConnection("jdbc:mysql:
//localhost:3333/tybcs", "root", "root");
```

```
DatabaseMetaData dbmd = cn.getMetaData();
System.out.println("Database =" +dbmd.getDatabaseProduct
Name());
System.out.println("Database version =" + dbmd.
getDatabaseProductVersion());
System.out.println("Driver Name =" +dbmd.getDriverName());
System.out.println("Driver Version =" + dbmd.getDriverVersion());
System.out.println("UserName =" +dbmd.getUserName());
System.out.println("Catlogs " +dbmd.getCatlogs());
System.out.println("Tables in the database :");
rs = dbmd.getTable(null, null, null, new String[] {"Table"});
while(rs.next())
{
  String tableName = rs.getString("TABLE_NAME")
  System.out.println(tableName);
}
}catch(Exception e)
{
  System.out.println(e);
}
}
}
```

3] Write a program to display infosmation about all columns in the student table. (Use ResultSetMetaData).

→
```
import java.sql.*;
public class Ass203
{
  public static void main(String[] args)
  {
    Connection cn=null;
    Statement stm;
    ResultSet rs;
```

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```
ResultSetMetaData metaData;
try
{
  cn = DriverManager.getConnection("jdbc:mysql://
localhost:3333/bybcc","root","root");
  stm = cn.createStatement();
rs = stm.executeQuery("Select * from stud");
metaData = rs.getMetaData();
int ColumnCount = metaData.getColumnCount;
 for(int i=1; i<=columnCount; i++)
 {
  System.out.println("Column Name: "+metaColumnName
    (i));
System.out.println("Column Type: "+meta.getColumnTypeName
    (i));
system.out.println("Is Nullable: "+metaData.isNullable(i));
system.out.println("Column size: "+metaData.getColumn
  DisplaySize(i));
system.out.println("--------");
}
  rs.close();
  stm.close();
  cn.close();
} catch(Exception e)
 {
   System.out.println(e);
 }
}
}
```

Teacher's Sign.: _____

*Set B

1] Write a menu driven program (command line interface) to perform the following operations on student table.
1. Insert 2. Modify 3. Delete 4. Search 5. View All 6. Exit.

→
```
import java.sql.*;
import java.util.*;
class Ass2B1
{
public static void main (String a [])
{
try {
Scanner sc = new Scanner (System.in)
connection cn = null;
Preparestatement stm;
Resultset rs;
string name;
string sql;
int roll, percentage, ch;
cn = DriverManager.getConnection ("jdbc : mysql //
localhost:3333 /" root", "root");
stm = cn. createStatement (Resultset. TYPE_SCROLL_SENSITIVE,
Resultset. CONCURR_UPDATABLE);
do
{
System.out. println ("enter 1. INSERT");
system.out.println ("enter 2 : MODIFY");
system.out. println ("enter 3: DELETE");
system.out.println ("enter 4: SEARCH");
system.out.println ("enter 5: VIEWALL");
system.out.println ("enter choice");
ch = sc.nextInt ();
switch (ch)
{
```

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```
case 1:
  system.out.println("enter Roll to insert");
   roll = sc.next();
  system.out.println("Enter percentage to insert");
  percentage = sc.nextInt();
  sql = "insert into info values("+roll+","+name+",
       "+percentage+");
   psmt = cn.prepareStatement(sql);
   psmt.execute();
   psmt.close();
   break;
case 2:
  rs = stm.executeQuery("select * from info");
   int uper;
   string uname;
  System.out.println("Enter name to update");
   uname = sc.next();
  system.out.println("enter percentage to update");
   uper = sc.nextInt();
  sql = "update into set name = "+uname+"
  percentage = "+uper+" where roll = "+roll;
   psmt = cn.prepareStatement(sql);
   psmt.execute();
   psmt.close();
   break;

case 3:
system.out.println("Enter Roll to delete");
   roll = sc.nextInt();
```

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Teacher's Sign.: _____

```
sql="delete from info where roll =" +roll ;
Psmt =cn.prepare statement (sql);
 psmt . execute();
  psmt.close();
   break;

case 4:
    int srch;
     rs = stm. executeQuery ("select * from info order by
          roll");
    System.out.psintln ("Enter Roll to search");
      srch = sc.nextInt();
     rs = stm. executeQuery ("select * from info where roll =
         " +srch);
      rs . first();
    system.out.psintln ("\t\n" +rs. getstring (1) + "\t");
    system .out.psintln (" " +rs. getstring (2) + "\t");
    system.out.psintln (" "+ rs. getstring (3) +"\n");
     break;

   case 5:
     rs = stm. executeQuery ("select * from info");
      while (rs.next())
    {
     system .out.psintln ("\t\n" +rs. getstring (1) +"\t");
    system.out.psintln (" " +rs.getsteing (2)+"\t");
    system.out.psintln (" " +rs.getstsing (3)+"\n");
    }
    break;
}
while (ch!=7);
} catch (Exception e)
{
   system.out.psintln (e);
}
}}
```

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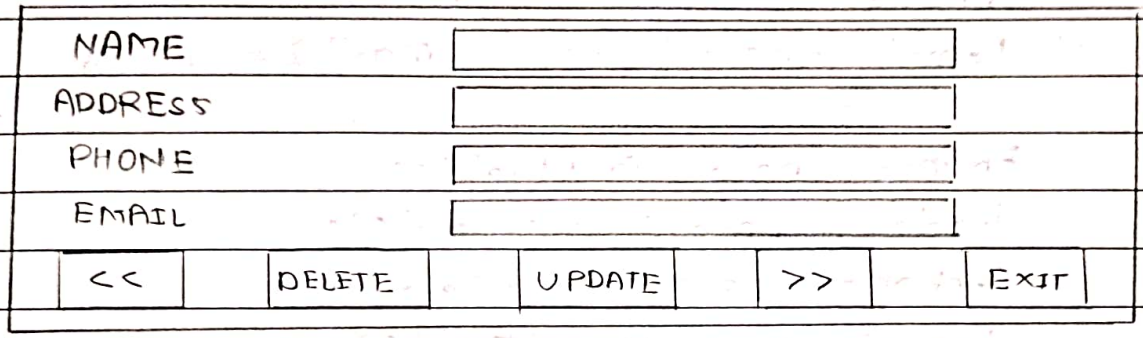
2) Design following Phone Book Application Screen using swing & write a code for various operations like Delete, update, Next, Previous, Raise an appropriate exception if invalid data is entered like name left blank and negative phone Number.



→
```
import java.sql.*;
import javax.swing.*;
import javax.swing.event.*;
import java.awt.*;
import java.awt.event.*;
import java.util.*;

class myFrame extends JFrame implements ActionListener
{
    JLabel lname, laddr, lPhone, lemail;
    JTextFields, tname, taddr, tphone, temail;
    JButton prv, del, updt, nxt, ext;
    connection cn = null;
    statement stm;
    Resultset rs;
    prepared statement psmt;
```

Teacher's Sign.: _____

```
string sql, name, address, email;
 int phone;

myFrame()
{
  setSize(500,500);
  setLocation(300,100);
  setLayout(null);
  lname = new JLabel("Name");
  laddr = new JLabel("Address");
  lphone = new JLabel("Phone");
  lemail = new JLabel("Email");

  tname = new JTextField();
  taddr = new JTextField();
  tphone = new JTextField();
  temail = new JTextField();

  prev = new JButton("<<");
  del = new JButton("Delete");
  updt = new JButton("update");
  nxt = new JButton(">>");
  ext = new JButton("exit");

add(lname); add(laddr); add(updt); add(taddr);
add(lphone); add(nxt);
 add(lPhone); add(lemail); add(ext);
  add(lemail); add(prv);
  add(lname); add(del);

prv.addActionListener(this);
 del.addActionListener(this);
updt.addActionlistener(this);
nxt.addActionlistener(this);
ext.addActionlistener(this);
```

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```
lname.setBounds(70,70,120,30);
tname.setBounds(210,70,120,30);
laddr.setBounds(70,120,120,30);
taddr.setBounds(210,120,120,30);
lphone.setBounds(70,170,120,30);
tphone.setBounds(210,170,120,30);
lemail.setBounds(70,220,120,30);
temail.setBounds(210,220,120,30);
prv.setBounds(30,290,80,30);
del.setBounds(120,290,80,30);
updt.setBounds(210,290,80,30);
nxt.setBounds(300,290,80,30);
ext.setBounds(390,290,80,30);

try{
cn=DriverManager.getConnection("jdbc:mysql://
localhost:3333","root","root");
stm=cn.createStatement(ResultSet.TYPE_SCROLL_
SENSITIVE,ResultSet.CONCUR_UPDATABLE);
rs=stm.executeQuery("select * from phone");
rs.first();
display();
}catch(Exception e)
system.out.println(e);
}
setVisible(true);
}

public void actionperformed(ActionEvent e)
{
```

Teacher's Sign.: _____

```
try
{
  if (e.getSource()==prv)
  {
   rs.previous();
   if(rs.isBeforeFirst())
      rs.first();
      display();
  }
  if(e.getSource()==del)
  {
   if (tname.getText().length()>0)
  {
   sql="delete from phone where name =" +tname.getText()
       + " ";
   psmt = cn.prepareStatement(sql);
    psmt.execute();
    refresh();
  }
  else
  {
   Jopion pane.showMessageDialog(null,"Name cannot
  be empty");
  }
}
  if (e.getSource()==updt)
{
 if (tname.getText()length()>0 && Integer.parseInt
(tphone.getText())>0)
{
sql ="update phone set addr =' ' + taddr.getText()+
" ", phnumber =" + tphone.getText()+ ", email =
" " + temail.getText()+ " " where name =" " +


psmt= cn.prepareStatement(sql);
 psmt.execute();
   refresh();
}
```

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```
else
{
  Joptionpane.showMessageDialog(null,"phone
  Number cannot be Negative");
}
}
  if (e.getSource()==nxt)
  {
    rs.next();
    if(rs.isAfterLast())
      rs.Last();
      display();
  }
  if (e.getSource()==ext)
  {
    system.exit(0);
  }
}
  catch (Exception e)
  {
    System.out.println(e);
  }
}
  public void display()
  {
    try
    {
      tname.setText(rs.getString(1));
      taddr.setText(rs.getString(2));
```

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```
tphone.setText(rs.getString(3));
temail.setText(rs.getString(4));
}
catch(Exception ex)
{
System.out.println(ex);
}
}
public void refresh()
{
try
{
rs=stm.executeQuery("select * from phone");
rs.next();
display();
psmt.close();
}
catch(Exception ex)
{
system.out.println(ex);
}
}
class Asr2b2
{
public static void main(String a[])
{
new myFrame();
}
}
```

'C'

Gautami

08/10/2024