



Build Your IT Skill

JDBC

Java™ database connectivity



រៀបរាប់ដោយ៖

គ្រូរោងចក្របច្ចេកទេស

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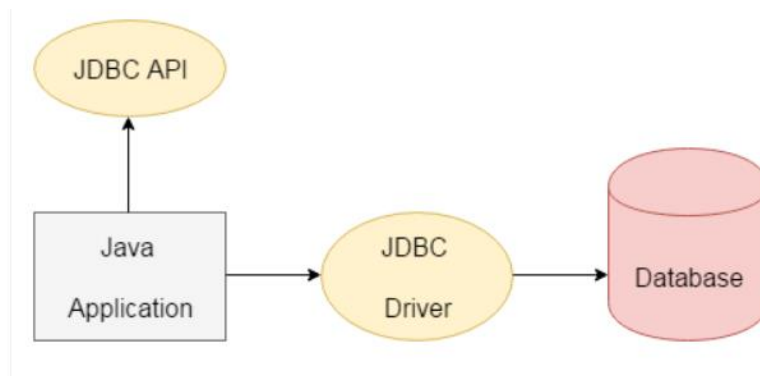
ជំនួយការដោយ៖

Mr. Sous Seyha

JDBC Database (Graphic User Interface)

I. ដូចម្តេចទៅដែលហៅថា JDBC?

JDBC ឈរលើពាក្យថា Java Database Connectivity សំដៅទៅលើការ តភ្ជាប់ Database រវាង Java ទៅកាន់ Database ណាមួយផ្សេងទៀតដូចជា Ms. Access, SQL Server, Oracle, Progress SQL -ល-។



ការប្រើប្រាស់នូវ JDBC API គឺវាបានផ្តល់លទ្ធភាពជាច្រើនសំរាប់អ្នក Developer ដូចជា Connect ទៅកាន់ database, Execute queries និង update statements ទៅកាន់ database និង Retrieve លទ្ធផលចេញពី database។

II. ជំហានតភ្ជាប់ទៅកាន់ Database

ដើម្បីធ្វើការតភ្ជាប់ទៅកាន់ Database តាមលក្ខណៈ នៃ JDBC Driver ដូចខាងក្រោម៖

1. Register the driver class:សំដៅលើការ ដាក់ ឬកំនត់នូវ Driver សំរាប់ពី Java ទៅកាន់ Database ណាមួយដែលចង់តភ្ជាប់វា ដូចជា Ms. Access, SQL Server, Oracle, MySQL, Progress SQL -ល-

ខាងក្រោមគឺជាប្រភេទ driver ដែលសំរាប់ភ្ជាប់ទៅកាន់ Database ផ្សេងៗ៖

```
1 Syntax: Oracle
2
3     Class.forName("oracle.jdbc.driver.OracleDriver");
4
5 Syntax: Ms. SQL Server
6
7     Class.forName("com.microsoft.sqlserver.jdbc.SQLServerDriver");
8
9 Syntax: MySQL
10
11    Class.forName("com.mysql.jdbc.Driver");
12
13 Syntax: Ms. Access
14
15    Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");
16
```

2. Create the connection object: សំដៅលើការបង្កើតនូវ Object Connection ដើម្បីធ្វើការតភ្ជាប់រវាង Java និង Database ផ្សេងៗ។

```
1 Syntax1:
2 Connection con=DriverManager.getConnection(Connection_String,user_Name,password);
3
4 Syntax2:
5
6 Connection con=DriverManager.getConnection(Connection_String,,);
```

3. Create the Statement object: សំដៅលើការបង្កើតនូវ Object សំរាប់អោយគេសរសេរនូវ SQL Statement ដូចជា Select, Create, Delete, Update ជាដើម។

Syntax:

Statement stmt=con.createStatement();

4. Execute the query: សំដៅលើការប្រើប្រាស់នូវ Method ផ្សេងៗ ដើម្បីធ្វើការ Execute នូវ Statement។

```

2  ResultSet rs=stmt.executeQuery("select * from emp");
3
4  while(rs.next()){
5      System.out.println(rs.getInt(1)+" "+rs.getString(2));
6  }

```

5. Close the connection object: គឺជាដំណាក់កាលចុងក្រោយ ទាំងអស់នៃ
ដំណើរការដូចជាការបិទ connection ជាដើម។

```
con.close();
```

Type of Query :

- "INSERT INTO table_name (field1,field2,field3,...) VALUES(?,?,?,...)";
- "UPDATE table_name set field=?, field=?,field=?,... WHERE field=?(Condition)";
- "DELETE From table_name WHERE field=?(Condition)";
- "SELECT * FROM table_name";

Link: 1. <https://www.w3schools.com/sql/default.asp>

2. <https://www.javatpoint.com/java-jdbc>

ឧទាហរណ៍៖

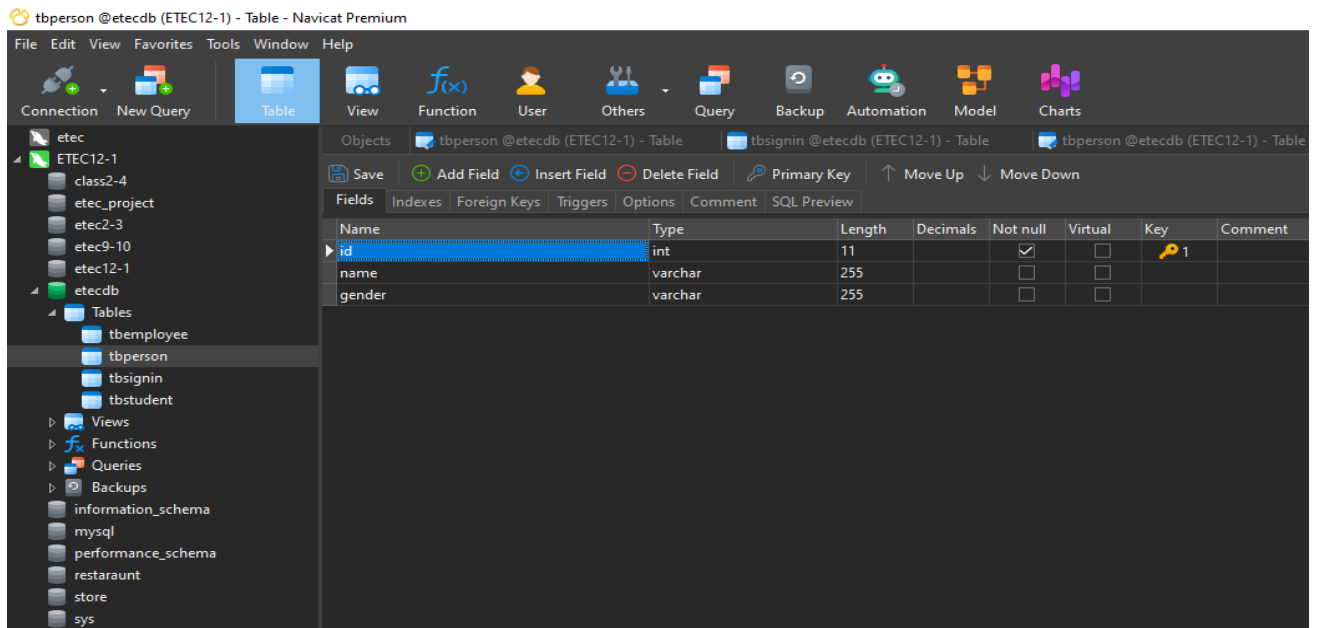


The form is titled "Person Information" and contains the following fields and controls:

- ID :** A text box with the value "Auto ID".
- Name :** A text box.
- Gender :** Two radio buttons labeled "Male" and "Female".
- Buttons:** "Save" and "Exit".
- Table:** A table with 3 columns: ID, Name, and Gender. It contains 4 rows of data.

ID	Name	Gender
1	Meng Rithy	Male
2	Heng Liza	Female
3	Chheng Vasna	Male
4	Seng Chenda	Male

•ការបង្កើតTable ក្នុង Navicate



•កំរង Connect Databases

```

1 package Database;
2 import com.mysql.jdbc.Connection;
3 import java.sql.DriverManager;
4 import java.sql.SQLException;
5 import java.sql.ResultSet;
6 import java.sql.PreparedStatement;
7 import javax.swing.JOptionPane;
8 import javax.swing.table.DefaultTableModel;
9 public class Person extends javax.swing.JFrame {
10     private PreparedStatement ps;
11     private ResultSet r;
12     private String sql;
13     private DefaultTableModel model;
14     public Person() {
15         initComponents();
16         model = (DefaultTableModel) tbtable.getModel();
17     }
18     Connection connection(){
19         Connection con = null;
20         try {
21             Class.forName("com.mysql.jdbc.Driver");
22             con = (Connection) DriverManager.getConnection("jdbc:mysql://localhost:3306/etecdb","root","");
23             System.out.println("Completed....");
24         } catch (ClassNotFoundException | SQLException e) {
25             System.err.println("Connection Error: "+e.getMessage());
26         }
27         return con;
28     }

```

***Note:

- PreparedStatement គឺប្រភេទ Class ប្រើសម្រាប់បោះទិន្នន័យទៅក្នុង Databases
- ResultSet គឺប្រភេទ Class ប្រើសម្រាប់ទាញទិន្នន័យទៅក្នុង Databases
- jdbc:mysql គឺជាប្រភេទរបស់ Databases (MySQL)
- localhost:3306 គឺជា Port របស់ Databases
- etecdb គឺជាឈ្មោះរបស់ Databases
- root គឺជា Username Databases
- បញ្ជាក់នៅក្នុង Databases នេះមិនមាន Password ទេ

• ការទាញយកទិន្នន័យពី Database

```
29
30 private void FetchData() {
31     try {
32         sql="SELECT * FROM tbperson";
33         ps=connection().prepareStatement(sql);
34         r=ps.executeQuery();
35         while(r.next()==true){
36             int id = r.getInt(1);
37             String name = r.getString(2);
38             String gender = r.getString(3);
39             Object row[]={id,name,gender};
40             model.addRow(row);
41         }
42     } catch (Exception e) {
43         JOptionPane.showMessageDialog(this, e);
44     }
45 }
46 @SuppressWarnings("unchecked")
47 Generated Code
196
197 private void formWindowOpened(java.awt.event.WindowEvent evt) {
198     FetchData();
199 }
```

• ការបញ្ចូលទិន្នន័យទៅក្នុង DATABASES

```

201 private void Clear() {
202     txtname.setText("");
203     rbmale.setSelected(true);
204 }
205 private void btnSaveActionPerformed(java.awt.event.ActionEvent evt) {
206     try {
207         String name = txtname.getText();
208         String gender = rbmale.isSelected() == true ? "Male" : "Female";
209         sql = "INSERT INTO tbperson(name,gender) VALUES(?,?) ";
210         ps = connection().prepareStatement(sql);
211         ps.setString(1, name);
212         ps.setString(2, gender);
213         int index = ps.executeUpdate();
214         if(index > 0) {
215             JOptionPane.showMessageDialog(this, "Data saved...");
216             model.setRowCount(0);
217             FetchData();
218             Clear();
219         } else {
220             JOptionPane.showMessageDialog(this, "Error save data...!");
221         }
222     } catch (Exception e) {
223         JOptionPane.showMessageDialog(this, e);
224     }
225 }

```

• ទិន្នន័យ ក្នុង Database


tbperson @etecdb (ETEC12-1) - Table - Navicat Premium

id	name	gender
1	Meng Rithy	Male
2	Heng Liza	Female
3	Chheng Vasna	Male
4	Seng Chenda	Male



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STUDENT INFORMATION



ID C Programming

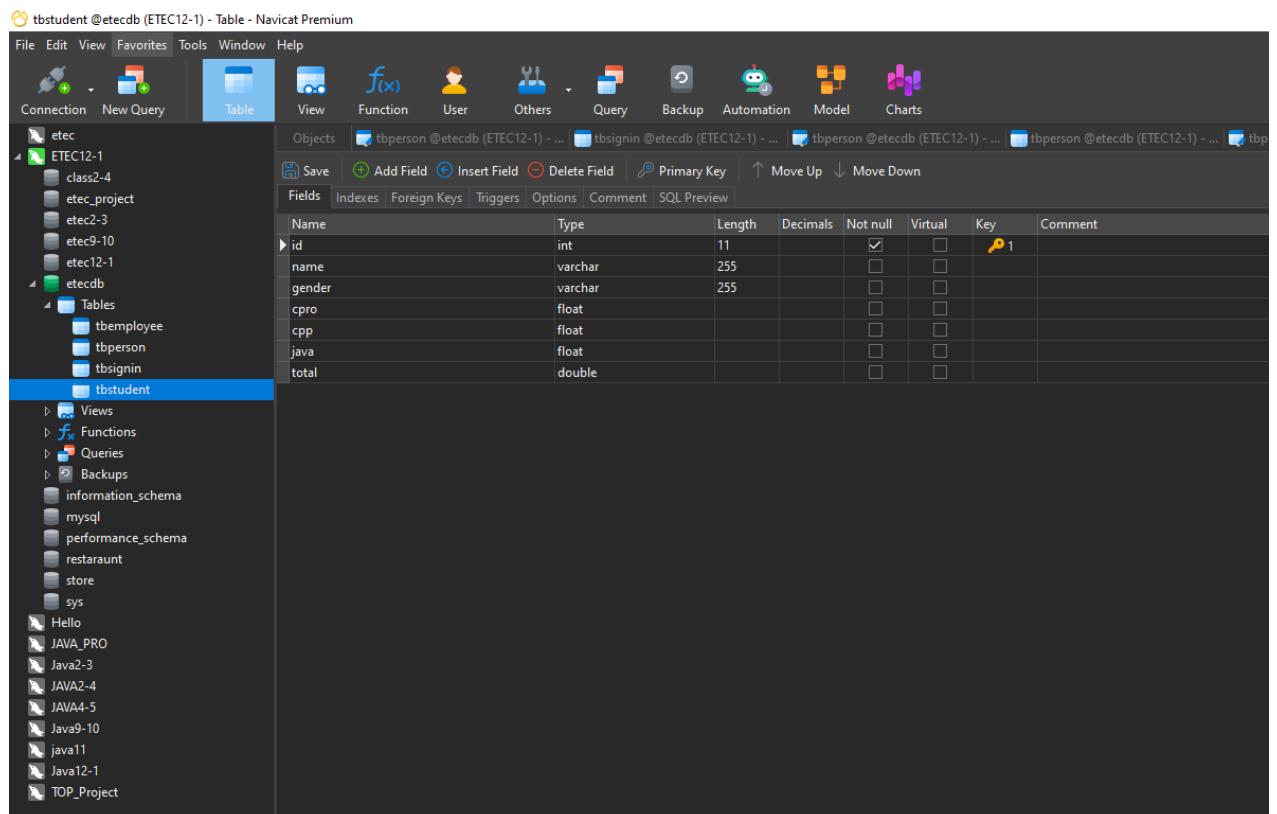
Name C++ Programming

Gender ☐ Male ☐ Female Java Programming

Total

ID	Name	Gender	C Programming	C++ Programming	Java Programming	Total
1	Meng SreyRoth	Female	90.0	97.0	89.0	276.0
2	Heng Rithv	Male	80.0	60.0	89.0	229.0
3	Chheng Nesa	Male	90.0	67.0	79.0	236.0

•ការបង្កើតTable ក្នុង Navicate



• ការ Connect Databases

```

1 package Database;
2 import com.mysql.jdbc.Connection;
3 import java.sql.DriverManager;
4 import java.sql.PreparedStatement;
5 import java.sql.ResultSet;
6 import java.sql.SQLException;
7 import java.text.DecimalFormat;
8 import javax.swing.JOptionPane;
9 import javax.swing.table.DefaultTableModel;
10 public class Student1 extends javax.swing.JFrame {
11     private PreparedStatement ps;
12     private ResultSet r;
13     private String sql;
14     private DefaultTableModel model;
15     public Student1() {
16         initComponents();
17         model = (DefaultTableModel) jTable1.getModel();
18         FetchData();
19     }
20     Connection connection() {
21         Connection con = null;
22         try {
23             Class.forName("com.mysql.jdbc.Driver");
24             con = (Connection) DriverManager.getConnection("jdbc:mysql://localhost:3306/etecdb","root","");
25             System.out.println("Completed....");
26         } catch (ClassNotFoundException | SQLException e) {
27             System.err.println("Connection Error: "+e.getMessage());
28         }
29         return con;
30     }

```

• ការអានយកទិន្នន័យពី Database

```

15     public Student1() {
16         initComponents();
17         model = (DefaultTableModel) jTable1.getModel();
18         FetchData();
19     }
20     Connection connection() {
21         Connection con = null;
22         try {
23             Class.forName("com.mysql.jdbc.Driver");
24             con = (Connection) DriverManager.getConnection("jdbc:mysql://localhost:3306/etecdb","root","");
25             System.out.println("Completed....");
26         } catch (ClassNotFoundException | SQLException e) {
27             System.err.println("Connection Error: "+e.getMessage());
28         }
29         return con;
30     }
31     private void FetchData() {
32         try {
33             sql="SELECT * FROM tbstudent";
34             ps=connection().prepareStatement(sql);
35             r=ps.executeQuery();
36             while(r.next()==true){
37                 int id = r.getInt("id");
38                 String name = r.getString("name");
39                 String gender = r.getString("gender");
40                 float cpro = r.getFloat("cpro");
41                 float cpp = r.getFloat("cpp");
42                 float java = r.getFloat("java");
43                 double total = r.getDouble("total");
44                 Object row[]={id,name,gender,cpro,cpp,java,total};
45                 model.addRow(row);
46             }
47         } catch (Exception e) {
48             JOptionPane.showMessageDialog(this, e);
49         }
50     }

```

```

292 private void btnSaveActionPerformed(java.awt.event.ActionEvent evt) {
293     try {
294         String name = txtname.getText();
295         String gender = chmale.isSelected()==true ? "Male" : "Female";
296         float cpro = Float.parseFloat(txtcpro.getText());
297         float cpp = Float.parseFloat(txtcpp.getText());
298         float java = Float.parseFloat(txtjava.getText());
299         double total = cpro+cpp+java;
300         sql="INSERT INTO tbstudent(name,gender,cpro,cpp,java,total) VALUES(?,?,?,?,?)";
301         ps=connection().prepareStatement(sql);
302         ps.setString(1, name);
303         ps.setString(2, gender);
304         ps.setFloat(3, cpro);
305         ps.setFloat(4, cpp);
306         ps.setFloat(5, java);
307         ps.setDouble(6, total);
308         int index = ps.executeUpdate();
309         if(index>0){
310             JOptionPane.showMessageDialog(this, "Student information saved..");
311             model.setRowCount(0);
312             FetchData();
313             Clear();
314         }else{
315             JOptionPane.showMessageDialog(this, "Error save data..!", "Student Information", JOptionPane.ERROR_MESSAGE);
316         }
317     } catch (Exception e) {
318         JOptionPane.showMessageDialog(this, e, "Student Information", JOptionPane.ERROR_MESSAGE);
319     }
320 }

```

• ការកែតម្រូវ(Update)ទិន្នន័យក្នុងDatabase

- យើងអាចប្រើប្រាស់ MouseClicked ដើម្បីទាយស្រួលស្វែងរកទិន្នន័យក្នុងការUpdate
- > MouseClicked

```

343 private void tbtableMouseClicked(java.awt.event.MouseEvent evt) {
344     int row = tbtable.getSelectedRow();
345     txtid.setText(model.getValueAt(row, 0).toString());
346     txtname.setText(model.getValueAt(row, 1).toString());
347     String gender = model.getValueAt(row, 2).toString();
348     if (gender.equalsIgnoreCase("Male"))
349         chmale.setSelected(true);
350     else
351         chfemale.setSelected(true);
352     txtcpro.setText(model.getValueAt(row, 3).toString());
353     txtcpp.setText(model.getValueAt(row, 4).toString());
354     txtjava.setText(model.getValueAt(row, 5).toString());
355     txttotal.setText(model.getValueAt(row, 6).toString());
356 }
357

```

Update ទិន្នន័យក្នុង Database

```

359 private void btnupdateActionPerformed(java.awt.event.ActionEvent evt) {
360     if(JOptionPane.showConfirmDialog(null, "You want to update?", "Student Information",JOptionPane.YES_NO_OPTION)==JOptionPane.
361         try {
362             int id = Integer.parseInt(txtid.getText());
363             String name = txtname.getText();
364             String gender = chmale.isSelected()==true ? "Male" : "Female";
365             float cpro = Float.parseFloat(txtcpro.getText());
366             float cpp = Float.parseFloat(txtcpp.getText());
367             float java = Float.parseFloat(txtjava.getText());
368             double total = cpro+cpp+java;
369             sql="UPDATE tbstudent SET name=?,gender=?,cpro=?,cpp=?,java=?,total=? WHERE id=?";
370             ps=connection().prepareStatement(sql);
371             ps.setString(1, name);
372             ps.setString(2, gender);
373             ps.setFloat(3, cpro);
374             ps.setFloat(4, cpp);
375             ps.setFloat(5, java);
376             ps.setDouble(6, total);
377             ps.setInt(7, id);
378             int index = ps.executeUpdate();
379             if(index>0){
380                 JOptionPane.showMessageDialog(this, "Student information updated...");
381                 model.setRowCount(0);
382                 FetchData();
383                 Clear();
384             }else{
385                 JOptionPane.showMessageDialog(this, "Error update data..!", "Student Information",JOptionPane.ERROR_MESSAGE);
386             }
387         } catch (Exception e) {
388             JOptionPane.showMessageDialog(this, e, "Student Information",JOptionPane.ERROR_MESSAGE);
389         }
390     }
391 }

```

• ការលុប(Delete) ទិន្នន័យក្នុង Database

```

394 private void btndeleteActionPerformed(java.awt.event.ActionEvent evt) {
395     if(JOptionPane.showConfirmDialog(null, "You want to delete?", "Staff Information",JOptionPane.YES_NO_OPTION)==JOptionPane.
396         try {
397             int id = Integer.parseInt(txtid.getText());
398             sql="DELETE FROM tbstudent WHERE id=?";
399             ps=connection().prepareStatement(sql);
400             ps.setInt(1, id);
401             int index = ps.executeUpdate();
402             if(index>0){
403                 JOptionPane.showMessageDialog(this, "Student information deleted...");
404                 model.setRowCount(0);
405                 FetchData();
406                 Clear();
407             }else{
408                 JOptionPane.showMessageDialog(this, "Error delete data..!", "Student Information",JOptionPane.ERROR_MESSAGE);
409             }
410         } catch (Exception e) {
411             JOptionPane.showMessageDialog(this, e);
412         }
413     }

```

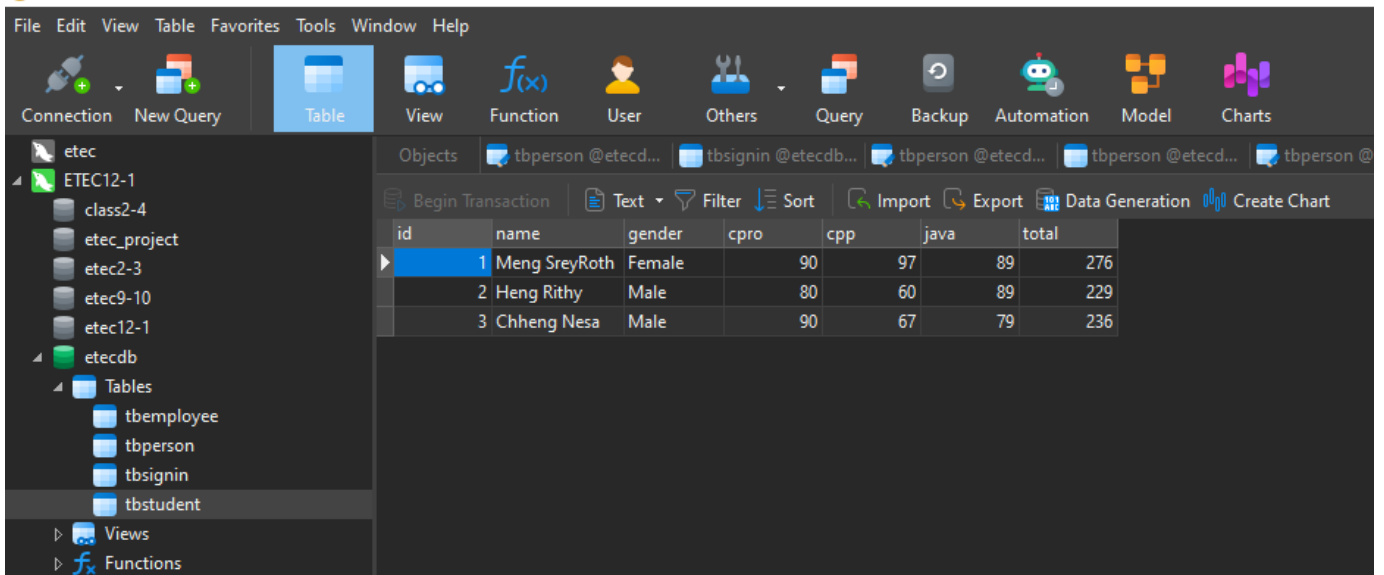
• Exit button

```

416 private void btnexitActionPerformed(java.awt.event.ActionEvent evt) {
417     if(JOptionPane.showConfirmDialog(null, "You want to delete?", "Staff Information", JOptionPane.YES_NO_OPTION) == JOptionPane.YES_NO_OPTION) {
418         System.exit(0);
419     }
  
```

• ទិន្នន័យ ក្នុង Database

tbstudent @etecdb (ETEC12-1) - Table - Navicat Premium



The screenshot shows the Navicat Premium interface. On the left, the 'etecdb' database is expanded, showing tables: tbemployee, tbperson, tbsignin, and tbstudent. The main window displays the 'tbperson' table with the following data:

id	name	gender	cpro	cpp	java	total
1	Meng SreyRoth	Female	90	97	89	276
2	Heng Rithy	Male	80	60	89	229
3	Chheng Nesa	Male	90	67	79	236

ឧទាហរណ៍ ៣៖

Employee Information



ID

4

Salary

1000.0

Name

Mr.Jonh

Date start work

Nov 8, 2022

Gender

☐ Male
 ☒ Female

Address

Phnom Penh


Position

Android Developer

Marital status

In a relationship

Image



ers\SEYHA\Desktop\School\jpg

Save

Update

Delete

Eixt

Search

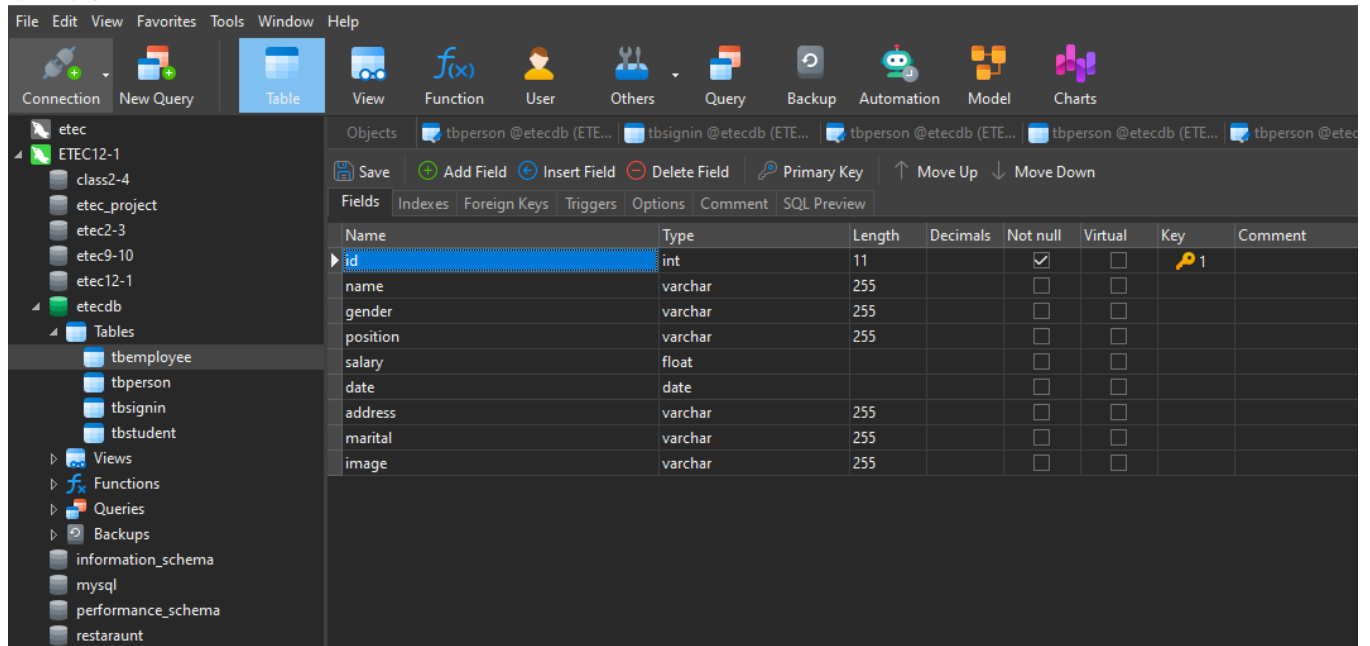
Select...

ID	Name	Gender	Position	Salary	Date	Address	Marital status	Image
4	Mr.Jonh	Female	Android Develo...	1000.0	2022-11-08	Phnom Penh	In a relationship	C:\Users\SEYH...
5	Chenda	Male	Web Developer	1000.0	2022-11-15	Battambang	In a relationship	C:\Users\SEYH...

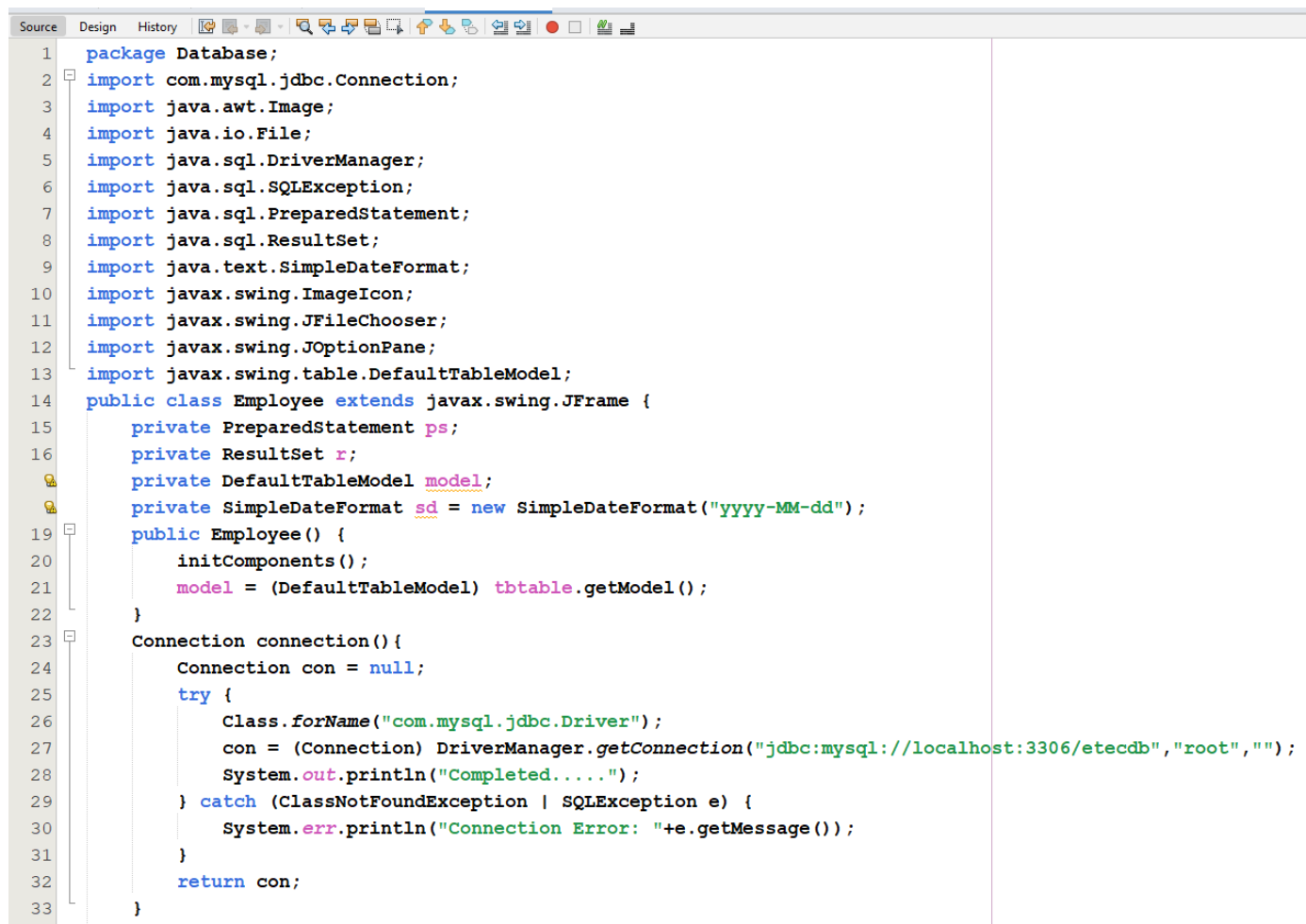


•ការបង្កើតTable ក្នុង Navicate

tbemployee @etecdb (ETEC12-1) - Table - Navicat Premium



•ការ Connect Databases



• ការពាក្យយកទិន្នន័យពី Database

```

34 private void FetchData() {
35     try {
36         ps=connection().prepareStatement("SELECT * FROM tblemployee");
37         r=ps.executeQuery();
38         while(r.next()){
39             int id = r.getInt("id");
40             String name = r.getString("name");
41             String gender = r.getString("gender");
42             String position = r.getString("position");
43             float salary = r.getFloat("salary");
44             String date = r.getString("date");
45             String address = r.getString("address");
46             String marital = r.getString("marital");
47             String image = r.getString("image");
48             Object row[]={id,name,gender,position,salary,date,address,marital,image};
49             model.addRow(row);
50         }
51     } catch (Exception e) {
52         JOptionPane.showMessageDialog(this, e);
53     }
54 }

```

• ការពាក្យយករូបភាព

```

55 void Clear() {
56     txtid.setText("Auto ID");
57     txtname.setText(null);
58     rbmale.setSelected(true);
59     cbposition.setSelectedIndex(0);
60     txtsalary.setText(null);
61     txtdate.setDate(null);
62     txtaddress.setText(null);
63     cbmarital.setSelectedIndex(0);
64     txtimage.setText(null);
65     lbimage.setIcon(null);
66 }
67 @SuppressWarnings("unchecked")
68 Generated Code
347
349 private void formWindowOpened(java.awt.event.WindowEvent evt) {
350     FetchData();
351 }
351
353 private void btnimageActionPerformed(java.awt.event.ActionEvent evt) {
354     JFileChooser chooser = new JFileChooser();
355     chooser.showOpenDialog(null);
356     File f = chooser.getSelectedFile();
357     String filename = f.getAbsolutePath();
358     txtimage.setText(filename);
359     Image getAbsolutePath=null;
360     ImageIcon icon = new ImageIcon(filename);
361     Image image = icon.getImage().getScaledInstance(lbimage.getWidth(), lbimage.getHeight(), Image.SCALE_SMOOTH);
362     lbimage.setIcon(icon);
363 }

```


• ការបញ្ចូលទិន្នន័យទៅក្នុង Databases

```

365 private void btnSaveActionPerformed(java.awt.event.ActionEvent evt) {
366     try {
367         ps=connection().prepareStatement("INSERT INTO tbemployee(name,gender,position,salary,date,address,marital,image) VALUES(?,?,?,?,?,?,?,?)");
368         ps.setString(1, txtname.getText());
369         ps.setString(2, rbmale.isSelected()==true ? "Male" : "Female");
370         ps.setString(3, cbposition.getSelectedItem().toString());
371         ps.setFloat(4, Float.parseFloat(txtsalary.getText()));
372         ps.setString(5, sd.format(txtdate.getDate()));
373         ps.setString(6, txtaddress.getText());
374         ps.setString(7, cbmarital.getSelectedItem().toString());
375         ps.setString(8, txtimage.getText());
376         int index = ps.executeUpdate();
377         if(index>0){
378             JOptionPane.showMessageDialog(this, "Save success...");
379             model.setRowCount(0);
380             FetchData();
381             Clear();
382         }else{
383             JOptionPane.showMessageDialog(this, "Error save data...!", "Employee information", JOptionPane.ERROR_MESSAGE);
384         }
385     } catch (Exception e) {
386         JOptionPane.showMessageDialog(this, e, "Employee information", JOptionPane.ERROR_MESSAGE);
387     }
388 }

```

• ការកែតម្រូវ(Update)ទិន្នន័យក្នុង Database

> MouseClicked

```

482 private void tbtableMouseClicked(java.awt.event.MouseEvent evt) {
483     int row = tbtable.getSelectedRow();
484     txtid.setText(tbtable.getValueAt(row, 0).toString());
485     txtname.setText(tbtable.getValueAt(row, 1).toString());
486     String gender = tbtable.getValueAt(row, 2).toString();
487     if(gender.equalsIgnoreCase("Male"))
488         rbmale.setSelected(true);
489     else
490         rbfemale.setSelected(true);
491     cbposition.setSelectedItem(tbtable.getValueAt(row, 3).toString());
492     txtsalary.setText(tbtable.getValueAt(row, 4).toString());
493     try {
494         java.util.Date st = sd.parse(tbtable.getValueAt(row, 5).toString());
495         txtdate.setDate(st);
496     } catch (Exception e) {
497         JOptionPane.showMessageDialog(this, e);
498     }
499     txtaddress.setText(tbtable.getValueAt(row, 6).toString());
500     cbmarital.setSelectedItem(tbtable.getValueAt(row, 7).toString());
501     txtimage.setText(tbtable.getValueAt(row, 8).toString());
502     lbimage.setIcon(new ImageIcon(model.getValueAt(row, 8).toString()));
503 }

```

> Update ពិន្ទន៍យក្ខន Database

```

private void btnupdateActionPerformed(java.awt.event.ActionEvent evt) {
    if(JOptionPane.showConfirmDialog(this, "Do you want to update?", "Employee", JOptionPane.YES_NO_OPTION)==JOptionPane.YES_NO_OPTION) {
        try {
            ps=connection().prepareStatement("UPDATE tbemployee SET name=?,gender=?,position=?,salary=?,date=?,address=?,marital=?,image=? WHERE id=?");
            ps.setString(1, txtname.getText());
            ps.setString(2, rbmale.isSelected()==true ? "Male" : "Female");
            ps.setString(3, cbposition.getSelectedItem().toString());
            ps.setFloat(4, Float.parseFloat(txtsalary.getText()));
            ps.setString(5, sd.format(txtdate.getDate()));
            ps.setString(6, txtaddress.getText());
            ps.setString(7, cbmarital.getSelectedItem().toString());
            ps.setString(8, txtimage.getText());
            ps.setInt(9, Integer.parseInt(txtid.getText()));
            int index = ps.executeUpdate();
            if(index>0){
                JOptionPane.showMessageDialog(this, "Update success...");
                model.setRowCount(0);
                FetchData();
                Clear();
            }else{
                JOptionPane.showMessageDialog(this, "Error update data...!", "Employee information", JOptionPane.ERROR_MESSAGE);
            }
        } catch (Exception e) {
            JOptionPane.showMessageDialog(this, e, "Employee information", JOptionPane.ERROR_MESSAGE);
        }
    }
}

```

• ការលុប(Delete)ពិន្ទន៍យក្ខន Database

```

private void btndeleteActionPerformed(java.awt.event.ActionEvent evt) {
    if(JOptionPane.showConfirmDialog(this, "Do you want to delete?", "Employee", JOptionPane.YES_NO_OPTION)==JOptionPane.YES_NO_OPTION) {
        try {
            ps=connection().prepareStatement("DELETE FROM tbemployee WHERE id=?");
            ps.setInt(1, Integer.parseInt(txtid.getText()));
            int index = ps.executeUpdate();
            if(index>0){
                JOptionPane.showMessageDialog(this, "Delelet success...");
                model.setRowCount(0);
                FetchData();
                Clear();
            }else{
                JOptionPane.showMessageDialog(this, "Error delete data...!", "Employee information", JOptionPane.ERROR_MESSAGE);
            }
        } catch (Exception e) {
            JOptionPane.showMessageDialog(this, e, "Employee information", JOptionPane.ERROR_MESSAGE);
        }
    }
}

```

• Exit button

```

private void btnexitActionPerformed(java.awt.event.ActionEvent evt) {
    if(JOptionPane.showConfirmDialog(this, "Do you want to Exit?", "Employee", JOptionPane.YES_NO_OPTION)==JOptionPane.YES_NO_OPTION) {
        System.exit(0);
    }
}

```


Search ITEM

```
private void SearchItem(String query) {
    try {
        ps=connection().prepareStatement("SELECT * FROM tbemployee WHERE "+ query+"=?");
        ps.setString(1, txtsearch.getText());
        r=ps.executeQuery();
        if(r.next()==true){
            int id = r.getInt("id");
            String name = r.getString("name");
            String gender = r.getString("gender");
            String position = r.getString("position");
            float salary = r.getFloat("salary");
            String date = r.getString("date");
            String address = r.getString("address");
            String marital = r.getString("marital");
            String image = r.getString("image");
            Object row[]={id,name,gender,position,salary,date,address,marital,image};
            model.setRowCount(0);
            model.addRow(row);
        }else{
            JOptionPane.showMessageDialog(this, "Search not found","Employee information",JOptionPane.ERROR_MESSAGE);
        }
    } catch (Exception e) {
        JOptionPane.showMessageDialog(this, e,"Employee information",JOptionPane.ERROR_MESSAGE);
    }
}

private void btnsearchActionPerformed(java.awt.event.ActionEvent evt) {
    int index = cbsearch.getSelectedIndex();
    if(index==1){
        SearchItem("name");
    }else if(index==2){
        SearchItem("position");
    }else if(index==3){
        SearchItem("address");
    }else{
        JOptionPane.showMessageDialog(this, "Please select one option...!", "Employee information",JOptionPane.ERROR_MESSAGE);
    }
}
}
```

• ទិន្នន័យ ក្នុង Database

tbemployee @etecdb (ETEC12-1) - Table - Navicat Premium

File Edit View Table Favorites Tools Window Help

Connection New Query Table View Function User Others Query Backup Automation Model Charts

Objects tbperson @etecdb (...) tbsignin @etecdb (E... tbperson @etecdb (...) tbperson @etecdb (...) tbperson @etecdb (...) Untitled @ete

Begin Transaction Text Filter Sort Import Export Data Generation Create Chart

id	name	gender	position	salary	date	address	marital	image
4	Mr.Jonh	Female	Android Developer	1000	2022-11-08	Phnom Penh In a relations C:\Users\SEYHA\Desktop\School\		jpg
5	Chenda	Male	Web Developer	1000	2022-11-15	Battambang In a relations C:\Users\SEYHA\Desktop\School\		b3.jpg

etec

ETEC12-1

class2-4

etec_project

etec2-3

etec9-10

etec12-1

etecdb

Tables

tbemployee

tbperson

tbsignin

tbstudent

Views

ឧទាហរណ៍ ៤៖

- ការ Sign in និង Sign up

> Sign in



```
1 package Database;
2 import com.mysql.jdbc.Connection;
3 import java.sql.DriverManager;
4 import java.sql.SQLException;
5 import java.sql.PreparedStatement;
6 import java.sql.ResultSet;
7 import javax.swing.JOptionPane;
8 public class Singin extends JFrame {
9     PreparedStatement ps;
10    ResultSet r;
11    String sql;
12    public Singin() {
13        initComponents();
14    }
15
16    Connection connection(){
17        Connection con = null;
18        try {
19            Class.forName("com.mysql.jdbc.Driver");
20            con = (Connection) DriverManager.getConnection("jdbc:mysql://localhost:3306/etecdb","root","");
21            System.out.println("Completed.....");
22        } catch (ClassNotFoundException | SQLException e) {
23            System.err.println("Connection Error: "+e.getMessage());
24        }
25        return con;
26    }
27    @SuppressWarnings("unchecked")
28    Generated Code
128
129    private void btnregisterActionPerformed(java.awt.event.ActionEvent evt) {
130
131        signup up = new signup();
132        up.setVisible(true);
133        dispose();
134
135    }
136
137    private void btnsigninActionPerformed(java.awt.event.ActionEvent evt) {
138        try {
139            String email = txtemail.getText();
140            String password = txtpassword.getText();
141            sql="SELECT * FROM tbsignin WHERE email=? AND password=?";
142            ps=connection().prepareStatement(sql);
143            ps.setString(1, email);
144            ps.setString(2, password);
145            r=ps.executeQuery();
146            if(r.next()==true){
147                JOptionPane.showMessageDialog(this, "Welcome to user login.");
148                HomeScreen h = new HomeScreen();
149                h.setVisible(true);
150                dispose();
151            }else{
152                JOptionPane.showMessageDialog(this, "Invalid username or password...!");
153            }
154        } catch (Exception e) {
155            JOptionPane.showMessageDialog(this, e);
156        }
157    }
```


> Sign Up

```

1 package Database;
2
3 import java.util.ArrayList;
4
5 public class List_User {
6
7     private String email;
8     private String password;
9
10    public List_User(String email, String password) {
11        this.email = email;
12        this.password = password;
13    }
14    public String getEmail() {
15        return email;
16    }
17    public String getPassword() {
18        return password;
19    }
20    static ArrayList<List_User> list = new ArrayList<>();
21 }
22

```


លទ្ធផលទទួលបាន៖






SIGN UP YOUR ACCOUNT

EMAIL

 sreyroth1202@gmail.com

PASSWORD

 *****

CONFIRM PASSWORD

 *****

SIGN UP

YOU HAVE NO ACCOUNT YET? [SIGN IN NOW](#)

```

1 package Database;
2 import com.mysql.jdbc.Connection;
3 import java.sql.DriverManager;
4 import java.sql.SQLException;
5 import java.sql.PreparedStatement;
6 import java.sql.ResultSet;
7 import javax.swing.JOptionPane;
8 public class signup extends javax.swing.JFrame {
9     PreparedStatement ps;
10    ResultSet r;
11    String sql;
12    public signup() {
13        initComponents();
14        FetchData();
15    }
16    Connection connection(){
17        Connection con = null;
18        try {
19            Class.forName("com.mysql.jdbc.Driver");
20            con = (Connection) DriverManager.getConnection("jdbc:mysql://localhost:3306/etecdb","root","");
21            System.out.println("Completed....");
22        } catch (ClassNotFoundException | SQLException e) {
23            System.err.println("Connection Error: "+e.getMessage());
24        }
25        return con;
26    }
27
28    private void FetchData(){
29        try {
30            ps=connection().prepareStatement("SELECT * FROM tbsignin");
31            r=ps.executeQuery();
32            while(r.next()==true){
33                List_User.list.add(new List_User(r.getString("email"), r.getString("password")));
34            }
35        } catch (Exception e) {
36            JOptionPane.showMessageDialog(this, e);
37        }
38    }
39    @SuppressWarnings("unchecked")

```

```

429 private void Clear(){
430     txtemail.setText("");
431     txtpassword.setText("");
432     txtcomfrimpassword.setText("");
433 }
434 private void btnsignupActionPerformed(java.awt.event.ActionEvent evt) {
435     try {
436         boolean b=false;
437         String email = txtemail.getText();
438         String password = txtpassword.getText();
439         String comfirmpassword = txtcomfrimpassword.getText();
440         if(email.equals("") || password.equals("") || comfirmpassword.equals("")){
441             JOptionPane.showMessageDialog(null, "Enter your information...!", "Register Form", JOptionPane.ERROR_MESSAGE);
442         }else{
443             if(password.equals(comfirmpassword)){
444                 for(int i=0;i<List_User.list.size();i++){
445                     if(email.equals(List_User.list.get(i).getEmail())){
446                         b=true;
447                         JOptionPane.showMessageDialog(null, "Account have already...!", "Register", JOptionPane.ERROR_MESSAGE);
448                         break;
449                     }
450                 }

```



```

451     if(b==false){
452         ps=connection().prepareStatement("INSERT INTO tbsignin(email,password) VALUES(?,?)");
453         ps.setString(1, email);
454         ps.setString(2, password);
455         int index = ps.executeUpdate();
456         if(index>0){
457             JOptionPane.showMessageDialog(this, "Account created.");
458             Clear();
459         }else{
460             JOptionPane.showMessageDialog(this, "Error! create account...!", "Register", JOptionPane.ERROR_MESSAGE);
461         }
462     }
463     }else{
464         JOptionPane.showMessageDialog(null, "Incorrect confirm password", "Register", JOptionPane.ERROR_MESSAGE);
465     }
466 }
467
468 } catch (Exception e) {
469     JOptionPane.showMessageDialog(this, e);
470 }
471
472 }

```

លំហាត់អនុវត្តទី១

ចូរសរសេរកូដអោយអាចបញ្ចូលទិន្នន័យទៅក្នុង Databases

Staff Informations

ID-Staff

Name

Gender ☒ Male ☐ Female


Position

Salary

DOJ

Address

Phone










Search Data








ID-staff	Name	Gender	Position	Salary	DOJ	Address	Phone	Images
10	Sok Dara	Male	App Developer	1200.0	19-10-22	Phon Penh	099	/Users/macbook/NetBea...

Add
Update
Delete
Images
Exit Programe

លំហាត់អនុវត្តទី២

Food Menu

Egg fried rice	Shrimp Max	Fried rice	Noodles	Shrimp&Salmon	Hot noodles	Spaghetti
						
Price :2.5\$	Price :2.5\$	Price :2.5\$	Price :2.5\$	Price :2.5\$	Price :2.5\$	Price :2.5\$
Amount : <input type="text" value="0"/>	Amount : <input type="text" value="0"/>	Amount : <input type="text" value="0"/>	Amount : <input type="text" value="0"/>	Amount : <input type="text" value="0"/>	Amount : <input type="text" value="0"/>	Amount : <input type="text" value="0"/>

Squid	Max Food	Frying Egg	Shrimp	Lobster	Pizza	Burger
						
Price :2.5\$	Price :2.5\$	Price :2.5\$	Price :2.5\$	Price :2.5\$	Price :2.5\$	Price :2.5\$
Amount : <input type="text" value="0"/>	Amount : <input type="text" value="0"/>	Amount : <input type="text" value="0"/>	Amount : <input type="text" value="0"/>	Amount : <input type="text" value="0"/>	Amount : <input type="text" value="0"/>	Amount : <input type="text" value="0"/>

Item	Qty	Price	Amount

Buy
Remove
Reset
BACK



**“គ្រូសុំអរគុណ និង ជូនការប្តូរនាពេលវេលា
 ក្នុងជីវិតជា IT Programmer ដល់ពូកែនិង ល្អ
 ដើម្បីប្រទេសជាតិយើងទាំងអស់គ្នា...!**

—គ្រូអាយធីចិត្តល្អ

GoodLuck.