**package** homework\_insert\_data\_in\_customers\_table;

**import** javax.swing.\*;

**import** java.awt.\*;

**import** java.awt.event.\*;

**import** java.sql.Connection;

**import** java.sql.DriverManager;

**import** java.sql.PreparedStatement;

**import** java.sql.ResultSet;

**import** java.sql.SQLException;

**public** **class** GuiMain **implements** ActionListener

{

**public** **static** **void** main(String[] args)

{

GuiMain gui = **new** GuiMain();

}

**private** JFrame frame = **new** JFrame ("Updating 'Customers' table from database");

**private** JLabel name = **new** JLabel("First Name");

**private** JLabel lastname = **new** JLabel("Last name");

**private** JLabel phonenr = **new** JLabel("Phone number");

**private** JLabel email = **new** JLabel("Email");

**private** JTextField fname = **new** JTextField(20);

**private** JTextField flastname = **new** JTextField(20);

**private** JTextField fphonenr = **new** JTextField(15);

**private** JTextField femail = **new** JTextField(20);

**private** JButton bclose = **new** JButton("Close");

**private** JButton bsavedata = **new** JButton("Save Data");

**public** GuiMain()

{

frame.setSize(300,150);

frame.setLocationRelativeTo(**null**);

frame.setDefaultCloseOperation(frame.*EXIT\_ON\_CLOSE*);

frame.setLayout(**new** GridLayout(5,1));

JPanel firstpanel = **new** JPanel(**new** GridLayout(1,2));

firstpanel.add(name);

firstpanel.add(fname);

JPanel secondpanel = **new** JPanel(**new** GridLayout(1,2));

secondpanel.add(lastname);

secondpanel.add(flastname);

JPanel thirdpanel = **new** JPanel(**new** GridLayout(1,2));

thirdpanel.add(phonenr);

thirdpanel.add(fphonenr);

JPanel fourthpanel = **new** JPanel(**new** GridLayout(1,2));

fourthpanel.add(email);

fourthpanel.add(femail);

JPanel fifthpanel = **new** JPanel(**new** GridLayout(1,2));

fifthpanel.add(bclose);

fifthpanel.add(bsavedata);

bclose.addActionListener(**this**);

bsavedata.addActionListener(**this**);

frame.add(firstpanel);

frame.add(secondpanel);

frame.add(thirdpanel);

frame.add(fourthpanel);

frame.add(fifthpanel);

frame.pack();

frame.setVisible(**true**);

}

//Handles clicks on buttons Close and Save data

**public** **void** actionPerformed(ActionEvent event)

{

**if** (event.getSource() == bsavedata)

{

**try** {

// calling the method for inserting data from the GUI

insertData(fname.getText(),flastname.getText(),

Integer.*parseInt*(fphonenr.getText()),femail.getText());

// calling the method for printing all database in the console

displayData();

//calling the method for printing the last line from DB in the console

displayLastLine();

}

**catch** (NumberFormatException e) {

// **TODO** Auto-generated catch block

e.printStackTrace();

}

**catch** (SQLException e) {

// **TODO** Auto-generated catch block

e.printStackTrace();

}

}

**else** **if** (event.getSource() == bclose)

{

frame.dispose();

}

}

**protected** **void** insertData(String name, String lastName, **int** phoneNr, String email) **throws** SQLException

{

Connection conn = **null**;

PreparedStatement preparedStatement = **null**;

**try**

{

conn = DriverManager

.*getConnection*("jdbc:mysql://localhost/my\_first\_database?user=root&password=");

preparedStatement = conn.prepareStatement("INSERT INTO customers VALUES(default,?,?,?,?)");

preparedStatement.setString(1, name);

preparedStatement.setString(2, lastName);

preparedStatement.setInt(3, phoneNr);

preparedStatement.setString(4, email);

preparedStatement.executeUpdate();

System.*out*.println("Database Updated");

}

**catch** (SQLException e) {

System.*out*.println(e);

}

**finally** {

**if** (conn != **null**) {

conn.close();

}

}

}

**protected** **void** displayData()**throws** SQLException

{

Connection conn = **null**;

PreparedStatement preparedStatement = **null**;

ResultSet result = **null**;

**try** {

conn = DriverManager

.*getConnection*("jdbc:mysql://localhost/my\_first\_database?user=root&password=");

preparedStatement = conn.prepareStatement("SELECT \* FROM customers");

result = preparedStatement.executeQuery();

**while** (result.next()) {

**int** id = result.getInt("id");

String name = result.getString("name");

String lastName = result.getString("last\_name");

**int** phone = result.getInt("phone");

String email = result.getString("email");

System.*out*.println(id + "," + name + "," + lastName + "," +

+ phone + "," + email);

}

System.*out*.println("End of table!");

} **catch** (SQLException e) {

System.*out*.println(e);

}

**finally** {

**if** (conn != **null**) {

conn.close();

}

}

}

**protected** **void** displayLastLine()**throws** SQLException

{

Connection conn = **null**;

PreparedStatement preparedStatement = **null**;

ResultSet result = **null**;

**try** {

conn = DriverManager

.*getConnection*("jdbc:mysql://localhost/my\_first\_database?user=root&password=");

preparedStatement = conn.prepareStatement("SELECT \* FROM customers WHERE ID = (SELECT MAX(ID) FROM customers)");

result = preparedStatement.executeQuery();

**while** (result.next()) {

**int** id = result.getInt("id");

String name = result.getString("name");

String lastName = result.getString("last\_name");

**int** phone = result.getInt("phone");

String email = result.getString("email");

System.*out*.println(id + "," + name + "," + lastName + "," +

+ phone + "," + email);

}

System.*out*.println("End of table!");

} **catch** (SQLException e) {

System.*out*.println(e);

}

**finally** {

**if** (conn != **null**) {

conn.close();

}

}

}

}