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Assignment 14.1 :-

Swing Code :- import
java.awt.*; import
java.awt.event.*; import
javax.swing.*;

```java
public class StudentInfoUI extends JFrame {
private JTextField rollNumberField;    private
JButton fetchButton;    private JTextArea
infoArea;

   public StudentInfoUI() {
setTitle("Student Information");

setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

    // create components    rollNumberField
= new JTextField(10);    fetchButton = new
JButton("Fetch Info"); infoArea = new
JTextArea(10, 40);
    // add components to layout    JPanel
panel = new JPanel();    panel.add(new
JLabel("Roll        Number:        "));
panel.add(rollNumberField);
panel.add(fetchButton);    add(panel,
BorderLayout.NORTH);    add(new
JScrollPane(infoArea),
```

```java
BorderLayout.CENTER);

    // add event listener to button
fetchButton.addActionListener(new ActionListener()
{        public void actionPerformed(ActionEvent e)
{
        // get roll number from text field
String rollNumber =  rollNumberField.getText();

        // send request to servlet
        String response =
ServletUtil.fetchStudentInfo(rollNumber);

        // display response in text area
infoArea.setText(response);
    }
  });
  pack();
setVisible(true);
  }

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

Servlet Code :-   import java.io.IOException;

import java.io.PrintWriter; import

java.sql.Connection; import

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


import javax.servlet.ServletException; import
javax.servlet.http.HttpServlet; import
javax.servlet.http.HttpServletRequest; import
javax.servlet.http.HttpServletResponse;


public class StudentDetailsServlet extends
HttpServlet {


    public void doGet(HttpServletRequest request,
HttpServletResponse response)

        throws ServletException, IOException {


        String rollNumber =
request.getParameter("rollNumber");

        String driver = "com.mysql.jdbc.Driver";

        String url =
"jdbc:mysql://localhost:3306/student";

        String user = "root";

        String password = "password";

        Connection con = null;

        PreparedStatement pst = null;

        ResultSet rs = null;

        String query = "select * from student_details
where roll_number=?";

        try {
```

```java
        Class.forName(driver);          con =
DriverManager.getConnection(url, user,
password);          pst =
con.prepareStatement(query);
pst.setString(1, rollNumber);          rs =
pst.executeQuery();
response.setContentType("text/html");
PrintWriter out = response.getWriter();
out.println("<html><body>");
        if (rs.next()) {
            out.println("<h2>Student Details</h2>");
            out.println("<p><b>Name:</b> " +
rs.getString("name") + "</p>");
            out.println("<p><b>Class:</b> " +
rs.getString("class") + "</p>");
            out.println("<p><b>Marks:</b> " +
rs.getString("marks") + "</p>");
            out.println("<p><b>Age:</b> " +
rs.getString("age") + "</p>");
            out.println("<p><b>Gender:</b> " +
rs.getString("gender") + "</p>");
        } else {
            out.println("<h2>No student found with
Roll Number " + rollNumber + "</h2>");
        }
        out.println("</body></html>");
} catch (ClassNotFoundException e) {
        e.printStackTrace();
} catch (SQLException e) {
        e.printStackTrace();
    } finally {          try
{            if (rs != null)
```

```java
{               rs.close();
}           if (pst !=
null) {
pst.close();
        }
        if (con != null) {
con.close();
        }
    } catch (SQLException e) {
        e.printStackTrace();
    }
  }
 }
}
```