5. Write a Servlet Program to perform Insert, update and View operations on Employee Table

Employee

Name	Password	Email	Country

Add New Employee

Name: Rahul Kumar

Password: ••••••••

Email: rahulkk@gmail.com

Country: India ▼

Save Employee

view employees

Employees List

Id	Name	Password	Email	Country	Edit
63	Amit Kumar	amtkmjj45	amitkumar@gmail.com	India	edit
61	Rahul Kumar	rahul4000	rahulkk@gmail.com	India	edit
62	Sonoo Jaiswal	sonoobsk	sonoojaiswal1987@gmail.com	India	edit
44	adarsh kumar	kkkkk	adarsh232@gmail.com	India	edit

Update Employee

Name: Amit Kumar Rana

Password: ••••••••

Email: amitkumar12@gmail.com

Country: India ▼

Edit & Save

Index.html

```
<!DOCTYPE html>
<html>
  <head>
    <title>Start Page</title>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
  </head>
  <body>
    <h1>Add Employee</h1>
    <form method="POST" action="AddEmployee">
      <table>
```

```html
      <tr>
         <td> Name </td>
         <td> <input type="text" name="ename"></td>

      </tr>
      <tr>
         <td> Password</td>
         <td> <input type="password" name="password"></td>

      </tr>
      <tr>
         <td> Email</td>
         <td> <input type="email" name="email"></td>
      </tr>
      <tr>
         <td> Country</td>
            <td>
               <select name="country">
                  <option> India</option>
                  <option> US</option>
                  <option>Germany </option>
               </select>
            </td>
      </tr>
      <tr>
         <td colspan="2">
            <input type="submit" name="submit" value="Save Employee">
         </td>
      </tr>

   </table>

</form>
<a href="ViewEmployee"> View Employees</a>


   </body>
</html>
```

AddEmployee.java

```java
package com.pb5;

import java.io.IOException;
import java.io.PrintWriter;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.SQLException;
import java.sql.Statement;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
```

```java
import javax.servlet.http.HttpServletResponse;

@WebServlet(name = "AddEmployee", urlPatterns = {"/AddEmployee"})
public class AddEmployee extends HttpServlet {
    protected void processRequest(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        try (PrintWriter out = response.getWriter())
        {

            String ename = request.getParameter("ename");
            String password = request.getParameter("password");
            String email = request.getParameter("email");
            String country = request.getParameter("country");

            Class.forName("org.apache.derby.jdbc.ClientDriver");
            out.println("Hello");
            Connection con =
DriverManager.getConnection("jdbc:derby://localhost:1527/EMPDB","vcp","vcp");

            Statement stmt =con.createStatement();
            String sql="INSERT INTO VCP.EMP(ENAME, PASSWORD, EMAIL,
COUNTRY) VALUES ('"+ename+"','"+password+"','"+email+"','"+country+"')";
            int r=stmt.executeUpdate(sql);

            stmt.close();
            con.close();
            out.println("<!DOCTYPE html>");
            out.println("<html>");
            out.println("<head>");
            out.println("<title>Servlet AddEmployee</title>");
            out.println("</head>");
            out.println("<body>");
            if(r==1)
                out.println("<h1>Record Saved</h1>");
            else
                out.println("<h1>Error in Saving Record</h1>");

            out.println("</body>");
            out.println("</html>");
        } catch (ClassNotFoundException ex) {
            Logger.getLogger(AddEmployee.class.getName()).log(Level.SEVERE, null, ex);
        } catch (SQLException ex) {
            Logger.getLogger(AddEmployee.class.getName()).log(Level.SEVERE, null, ex);
        }
    }

    // <editor-fold defaultstate="collapsed" desc="HttpServlet methods. Click on the + sign on
the left to edit the code.">
    /**
     * Handles the HTTP <code>GET</code> method.
     *
     * @param request servlet request
     * @param response servlet response
     * @throws ServletException if a servlet-specific error occurs
```

```java
 * @throws IOException if an I/O error occurs
 */
@Override
protected void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
    processRequest(request, response);
}

@Override
protected void doPost(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
    processRequest(request, response);
}

/**
 * Returns a short description of the servlet.
 *
 * @return a String containing servlet description
 */
@Override
public String getServletInfo() {
    return "Short description";
}// </editor-fold>

}
```

UpdateEmployee.java

```java
package com.pb5;

import java.io.IOException;
import java.io.PrintWriter;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

@WebServlet(name = "UpdateEmployee", urlPatterns = {"/UpdateEmployee"})
public class UpdateEmployee extends HttpServlet {

    protected void processRequest(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        try (PrintWriter out = response.getWriter()) {
            int id=Integer.parseInt(request.getParameter("id"));
            Class.forName("org.apache.derby.jdbc.ClientDriver");
```

```java
        Connection con =
DriverManager.getConnection("jdbc:derby://localhost:1527/EMPDB","vcp","vcp");

        Statement stmt =con.createStatement();
        String sql="Select * from VCP.EMP where ID="+id;
        ResultSet rs=stmt.executeQuery(sql);
        rs.next();
        /* TODO output your page here. You may use following sample code. */
        out.println("<!DOCTYPE html>");
        out.println("<html>");
        out.println("<head>");
        out.println("<title>Servlet UpdateEmployee</title>");
        out.println("</head>");
        out.println("<body>");

        out.println("<h1>Update Employee</h1>");
        out.println("<form method=\"POST\" action=\"SaveEmployee\">");
        out.println("<input type=\"hidden\" name=\"id\" value=\"" + rs.getString("ID") +
"\">");

        out.println("<table>");
        out.println("<tr>");
        out.println("<td> Name </td>");
        out.println("<td> <input type=\"text\" name=\"ename\" value=\"" +
rs.getString("ENAME") + "\"></td>");
        out.println("</tr>");

        out.println("<tr>");
        out.println("<td> Password</td>");
        out.println("<td> <input type=\"password\" name=\"password\" value=\"" +
rs.getString("PASSWORD") + "\"></td>");
        out.println("</tr>");

        out.println("<tr>");
        out.println("<td> Email</td>");
        out.println("<td> <input type=\"email\" name=\"email\" value=\"" +
rs.getString("EMAIL") + "\"></td>");
        out.println("</tr>");

        out.println("<tr>");
        out.println("<td> Country</td>");
        out.println("<td>");
        out.println("<select name=\"country\">");
        String s =rs.getString("COUNTRY").equals("India")?"Selected":"";
        out.println("<option selected>" + rs.getString("COUNTRY") + "</option>");
        out.println("<option "+s+">India</option>");
        s =rs.getString("COUNTRY").equals("US")?"Selected":"";
        out.println("<option "+s+">US</option>");
        s =rs.getString("COUNTRY").equals("Germany")?"Selected":"";
        out.println("<option "+s+">Germany</option>");
        out.println("</select>");
        out.println("</td>");
        out.println("</tr>");

        out.println("<tr>");
```

```java
        out.println("<td colspan=\"2\">");
        out.println("<input type=\"submit\" name=\"submit\" value=\"Edit & Save
Employee\">");
        out.println("</td>");
        out.println("</tr>");
        out.println("</table>");
      out.println("  </form>");
        out.println("</body>");
        out.println("</html>");
    } catch (ClassNotFoundException ex) {
        Logger.getLogger(UpdateEmployee.class.getName()).log(Level.SEVERE, null, ex);
    } catch (SQLException ex) {
        Logger.getLogger(UpdateEmployee.class.getName()).log(Level.SEVERE, null, ex);
    }
  }


  @Override
  protected void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
    processRequest(request, response);
  }

  /**
   * Handles the HTTP <code>POST</code> method.
   *
   * @param request servlet request
   * @param response servlet response
   * @throws ServletException if a servlet-specific error occurs
   * @throws IOException if an I/O error occurs
   */
  @Override
  protected void doPost(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
    processRequest(request, response);
  }

  /**
   * Returns a short description of the servlet.
   *
   * @return a String containing servlet description
   */
  @Override
  public String getServletInfo() {
    return "Short description";
  }// </editor-fold>

}
```

SaveEmployee.java

```java
/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change
this license
```

```java
 * Click nbfs://nbhost/SystemFileSystem/Templates/JSP_Servlet/Servlet.java to edit this
template
 */
package com.pb5;

import java.io.IOException;
import java.io.PrintWriter;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.SQLException;
import java.sql.Statement;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

/**
 *
 * @author praka
 */
@WebServlet(name = "SaveEmployee", urlPatterns = {"/SaveEmployee"})
public class SaveEmployee extends HttpServlet {


    protected void processRequest(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        try (PrintWriter out = response.getWriter()) {
            String id =request.getParameter("id");
            String ename = request.getParameter("ename");
            String password = request.getParameter("password");
            String email = request.getParameter("email");
            String country = request.getParameter("country");

            Class.forName("org.apache.derby.jdbc.ClientDriver");

            Connection con =
DriverManager.getConnection("jdbc:derby://localhost:1527/EMPDB","vcp","vcp");

            Statement stmt =con.createStatement();
            String sql="Update VCP.EMP Set ENAME='"+ename+"',
PASSWORD='"+password+"' , EMAIL='"+email+"' , COUNTRY='"+country+"' Where
ID="+id;

            int r=stmt.executeUpdate(sql);


            /* TODO output your page here. You may use following sample code. */
            out.println("<!DOCTYPE html>");
            out.println("<html>");
            out.println("<head>");
            out.println("<title>Servlet SaveEmployee</title>");
```

```java
            out.println("</head>");
            out.println("<body>");

            if(r==1)
                out.println("<h1>Record Saved</h1>");
            else
                out.println("<h1>Error in Saving Record</h1>");

            out.println("<a href=\"index.html\"> Home</a>");
            out.println("</body>");
            out.println("</html>");
        } catch (ClassNotFoundException ex) {
            Logger.getLogger(SaveEmployee.class.getName()).log(Level.SEVERE, null, ex);
        } catch (SQLException ex) {
            Logger.getLogger(SaveEmployee.class.getName()).log(Level.SEVERE, null, ex);
        }
    }


    @Override
    protected void doGet(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        processRequest(request, response);
    }

    /**
     * Handles the HTTP <code>POST</code> method.
     *
     * @param request servlet request
     * @param response servlet response
     * @throws ServletException if a servlet-specific error occurs
     * @throws IOException if an I/O error occurs
     */
    @Override
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        processRequest(request, response);
    }


    @Override
    public String getServletInfo() {
        return "Short description";
    }// </editor-fold>

}
```

ViewEmployee.java

```java
package com.pb5;

import java.io.IOException;
import java.io.PrintWriter;
import java.sql.Connection;
```

```java
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

@WebServlet(name = "ViewEmployee", urlPatterns = {"/ViewEmployee"})
public class ViewEmployee extends HttpServlet {

    protected void processRequest(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException, ClassNotFoundException, SQLException {
        response.setContentType("text/html;charset=UTF-8");
        try (PrintWriter out = response.getWriter()) {
            Class.forName("org.apache.derby.jdbc.ClientDriver");
            Connection con =
DriverManager.getConnection("jdbc:derby://localhost:1527/EMPDB","vcp","vcp");

            Statement stmt =con.createStatement();
            String sql="Select * from VCP.EMP";
            ResultSet rs=stmt.executeQuery(sql);
            /* TODO output your page here. You may use following sample code. */
            out.println("<!DOCTYPE html>");
            out.println("<html>");
            out.println("<head>");
            out.println("<title>Servlet ViewEmployee</title>");
            out.println("</head>");
            out.println("<body>");
            out.println("<h1>Employee List</h1>");
            out.println("<table border=\"2\">");
            out.println("<tr>");
            out.println("<th>ID</th><th>Name</th><th>Password</th><th>email</th>
<th>country</th>");
            out.println("</tr>");
            while(rs.next())
            {
            out.println("<tr>");
            out.println("<td>"+rs.getString("ID")+  "</td>");
            out.println("<td>"+rs.getString("ENAME")+  "</td>");
            out.println("<td>"+rs.getString("PASSWORD")+  "</td>");
            out.println("<td>"+rs.getString("EMAIL")+  "</td>");
            out.println("<td>"+rs.getString("COUNTRY")+  "</td>");
            out.println("<td> <a
href=\"UpdateEmployee?id="+rs.getString("ID")+"\">Edit</a></td>");
            out.println("</tr>");
            }
            out.println("</table>");

            out.println("</body>");
            out.println("</html>");
```

```java
            stmt.close();
            con.close();
        }
    }

    @Override
    protected void doGet(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        try {
            processRequest(request, response);
        } catch (ClassNotFoundException ex) {
            Logger.getLogger(ViewEmployee.class.getName()).log(Level.SEVERE, null, ex);
        } catch (SQLException ex) {
            Logger.getLogger(ViewEmployee.class.getName()).log(Level.SEVERE, null, ex);
        }
    }

    @Override
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        try {
            processRequest(request, response);
        } catch (ClassNotFoundException ex) {
            Logger.getLogger(ViewEmployee.class.getName()).log(Level.SEVERE, null, ex);
        } catch (SQLException ex) {
            Logger.getLogger(ViewEmployee.class.getName()).log(Level.SEVERE, null, ex);
        }
    }

    @Override
    public String getServletInfo() {
        return "Short description";
    }// </editor-fold>

}
```