**Index.html**

<!DOCTYPE html>

<html>

<head>

<title>EMPLOYEE CRUD PROCESS</title>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

</head>

<body>

<h1>Add New Employee</h1>

<form action="saveServlet" method="post">

<table>

<tr><td>Id:</td><td><input type="number" name="hid"/></td></tr>

<tr><td>Name:</td><td><input type="text" name="hname"/></td></tr>

<tr><td>Salary:</td><td><input type="number" name="hsalary"/></td></tr>

<tr><td>Department: </td><td><input type="text" name="hdept"/></td></tr>

<tr><td colspan="2"><input type="submit" value="Save Employee"/></td></tr>

</table>

</form>

<br/>

<a href="ViewServlet">view employees</a> </body>

</html>

**Employee.java**

package pojopackage;

public class Employee {

int id, salary;

String name, dept;

public int getId() {

return id;

}

public void setId(int id) {

this.id = id;

}

public int getSalary() {

return salary;

}

public void setSalary(int salary) {

this.salary = salary;

}

public String getName() {

return name;

}

public void setName(String name) {

this.name = name;

}

public String getDept() {

return dept;

}

public void setDept(String dept) {

this.dept = dept;

}

}

**EmployeeDAO.java**

package daopackage;

import java.util.\*;

import java.sql.\*;

import pojopackage.Employee;

public class EmployeeDAO {

public static Connection con=null;

public static Connection getConnection(){

try{

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

con=DriverManager.getConnection("jdbc:derby://localhost:1527/A2Database","user1","password1");

}catch(Exception e){System.out.println(e);}

return con;

}

//INSERT NEW RECORD

public static int save(Employee e){

int status=0;

try{

Connection con=EmployeeDAO.getConnection();

PreparedStatement ps=con.prepareStatement(

"insert into employee values (?,?,?,?)");

ps.setInt(1,e.getId());

ps.setString(2,e.getName());

ps.setInt(3,e.getSalary());

ps.setString(4,e.getDept());

status=ps.executeUpdate();

con.close();

}catch(Exception ex){ex.printStackTrace();}

return status;

}

//UPDATE RECORD

public static int update(Employee e){

int status=0;

try{

Connection con=EmployeeDAO.getConnection();

PreparedStatement ps=con.prepareStatement(

"update employee set empname=?,empsalary=?,empdept=? where empid=?");

ps.setString(1,e.getName());

ps.setInt(2,e.getSalary());

ps.setString(3,e.getDept());

ps.setInt(4,e.getId());

status=ps.executeUpdate();

con.close();

}catch(Exception ex){ex.printStackTrace();}

return status;

}

//DELETE A RECORD

public static int delete(int id){

int status=0;

try{

Connection con=EmployeeDAO.getConnection();

PreparedStatement ps=con.prepareStatement("delete from employee where empid=?");

ps.setInt(1,id);

status=ps.executeUpdate();

con.close();

}catch(Exception e){e.printStackTrace();}

return status;

}

public static Employee getEmployeeById(int id){

Employee e=new Employee();

try{

Connection con=EmployeeDAO.getConnection();

PreparedStatement ps=con.prepareStatement("select \* from employee where empid=?");

ps.setInt(1,id);

ResultSet rs=ps.executeQuery();

if(rs.next()){

e.setId(rs.getInt(1));

e.setName(rs.getString(2));

e.setSalary(rs.getInt(3));

e.setDept(rs.getString(4));

}

con.close();

}catch(Exception ex){ex.printStackTrace();}

return e;

}

public static List<Employee> getAllEmployees(){

List<Employee> list=new ArrayList<Employee>();

try{

Connection con=EmployeeDAO.getConnection();

PreparedStatement ps=con.prepareStatement("select \* from employee order by empid");

ResultSet rs=ps.executeQuery();

while(rs.next()){

Employee e=new Employee();

e.setId(rs.getInt(1));

e.setName(rs.getString(2));

e.setSalary(rs.getInt(3));

e.setDept(rs.getString(4));

list.add(e);

}

con.close();

}catch(Exception e){e.printStackTrace();}

return list;

}

}

**saveServlet.java**

package controller;

import java.io.IOException;

import java.io.PrintWriter;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

import pojopackage.Employee;

import daopackage.EmployeeDAO;

public class saveServlet 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("hid"));

String name=request.getParameter("hname");

int salary=Integer.parseInt(request.getParameter("hsalary"));

String dept=request.getParameter("hdept");

//passing parameter to object

Employee e = new Employee();

e.setId(id);

e.setName(name);

e.setSalary(salary);

e.setDept(dept);

int status=EmployeeDAO.save(e);

if(status>0){

out.print("<p>Record saved successfully!</p>");

request.getRequestDispatcher("index.html").include(request, response);

}else{

out.println("Sorry! unable to save record");

}

out.close();

}

}

// <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

\* @throws IOException if an I/O error occurs

\*/

@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>

}

**ViewServlet.java**

package controller;

import java.io.IOException;

import java.io.PrintWriter;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

import java.util.List;

import pojopackage.Employee;

import daopackage.EmployeeDAO;

public class ViewServlet extends HttpServlet {

protected void processRequest(HttpServletRequest request, HttpServletResponse response)

throws ServletException, IOException {

response.setContentType("text/html;charset=UTF-8");

try (PrintWriter out = response.getWriter()) {

/\* TODO output your page here. You may use following sample code. \*/

out.println("<a href='index.html'>Add New Employee</a>");

out.println("<h1>Employees List</h1>");

List<Employee> list=EmployeeDAO.getAllEmployees();

out.print("<table border='1' width='100%'");

out.print("<tr><th>Id</th><th>Name</th><th>Salary</th><th>Department</th><th>Edit</th><th>Delete</th></tr>");

for(Employee e:list){

out.print("<tr><td>"+e.getId()+"</td><td>"+e.getName()+"</td><td>"+e.getSalary()+

"</td><td>"+e.getDept()+"</td><td><a href='EditServlet?hid="

+e.getId()+"'>edit</a></td><td><a href='DeleteServlet?hid="+e.getId()+"'>delete</a></td></tr>");

}

out.print("</table>");

out.close();

}

}

// <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

\* @throws IOException if an I/O error occurs

\*/

@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>

}

**EditServlet.java**

/\*

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\* To change this template file, choose Tools | Templates

\* and open the template in the editor.

\*/

package controller;

import daopackage.EmployeeDAO;

import java.io.IOException;

import java.io.PrintWriter;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

import pojopackage.Employee;

/\*\*

\*

\* @author avran

\*/

public class EditServlet extends HttpServlet {

/\*\*

\* Processes requests for both HTTP <code>GET</code> and <code>POST</code>

\* methods.

\*

\* @param request servlet request

\* @param response servlet response

\* @throws ServletException if a servlet-specific error occurs

\* @throws IOException if an I/O error occurs

\*/

protected void processRequest(HttpServletRequest request, HttpServletResponse response)

throws ServletException, IOException {

response.setContentType("text/html;charset=UTF-8");

try (PrintWriter out = response.getWriter()) {

/\* TODO output your page here. You may use following sample code. \*/

out.println("<h1>Update Employee</h1>");

int id=Integer.parseInt(request.getParameter("hid"));

Employee e=EmployeeDAO.getEmployeeById(id);

out.print("<form action='EditServlet2' method='post'>");

out.print("<table>");

out.print("<tr><td></td><td><input type='hidden' name='hid' value='"+e.getId()+"'/></td></tr>");

out.print("<tr><td>Name:</td><td><input type='text' name='hname' value='"+e.getName()+"'/></td></tr>");

out.print("<tr><td>Salary:</td><td><input type='number' name='hsalary' value='"+

e.getSalary()+"'/> </td></tr>");

out.print("<tr><td>Dept:</td><td><input type='text' name='hdept' value='"+

e.getDept()+"'/></td></tr>");

out.print("<tr><td colspan='2'><input type='submit' value='Edit & Save '/></td></tr>");

out.print("</table>");

out.print("</form>");

out.close();

}

}

// <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

\* @throws IOException if an I/O error occurs

\*/

@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>

}

**EditServlet2.java**

package controller;

import daopackage.EmployeeDAO;

import java.io.IOException;

import java.io.PrintWriter;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

import pojopackage.Employee;

public class EditServlet2 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 sid=request.getParameter("hid");

int id=Integer.parseInt(sid);

String name=request.getParameter("hname");

int salary=Integer.parseInt(request.getParameter("hsalary"));

String dept = request.getParameter("hdept");

Employee e=new Employee();

e.setId(id);

e.setName(name);

e.setSalary(salary);

e.setDept(dept);

int status=EmployeeDAO.update(e);

if(status>0){

response.sendRedirect("ViewServlet");

}else{

out.println("Sorry! unable to update record");

}

out.close();

}

}

// <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

\* @throws IOException if an I/O error occurs

\*/

@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>

}

**DeleteServlet.java**

/\*

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\* To change this template file, choose Tools | Templates

\* and open the template in the editor.

\*/

package controller;

import daopackage.EmployeeDAO;

import java.io.IOException;

import java.io.PrintWriter;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

/\*\*

\*

\* @author avran

\*/

public class DeleteServlet extends HttpServlet {

/\*\*

\* Processes requests for both HTTP <code>GET</code> and <code>POST</code>

\* methods.

\*

\* @param request servlet request

\* @param response servlet response

\* @throws ServletException if a servlet-specific error occurs

\* @throws IOException if an I/O error occurs

\*/

protected void processRequest(HttpServletRequest request, HttpServletResponse response)

throws ServletException, IOException {

response.setContentType("text/html;charset=UTF-8");

try (PrintWriter out = response.getWriter()) {

String sid=request.getParameter("hid");

int id=Integer.parseInt(sid);

EmployeeDAO.delete(id);

response.sendRedirect("ViewServlet");

}

}

// <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

\* @throws IOException if an I/O error occurs

\*/

@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>

}