index.html

```html
<form action="welcome" method="get">
Enter your name<input type="text" name="name"><br>
<input type="submit" value="login">
</form>
```

```java
                    public class DemoServ extends HttpServlet{
              public void doGet(HttpServletRequest req,HttpServletResponse res)
                        throws ServletException,IOException  {
                            res.setContentType("text/html");
                            PrintWriter pw=res.getWriter();
                  String name=req.getParameter("name");//will return value
                            pw.println("Welcome "+name);
                                  pw.close();  }}
```

```java
RequestDispatcher rd=request.getRequestDispatcher("servlet2");
rd.forward(request, response);
request.getRequestDispatcher("login.html").include(request, response);
```

```xml
                    <servlet>
                       <servlet-name>WelcomeServlet</servlet-name>
                       <servlet-class>WelcomeServlet</servlet-class>
                     </servlet>

                     <servlet-mapping>
                       <servlet-name>Login</servlet-name>
                       <url-pattern>/servlet1</url-pattern>
                     </servlet-mapping>
```

```java
response.sendRedirect("http://www.javatpoint.com");
String name=request.getParameter("name");
response.sendRedirect("https://www.google.co.in/#q="+name);
```

```xml
              <servlet>
                 ......
                <init-param>
                  <param-name>parametername</param-name>
                  <param-value>parametervalue</param-value>
                </init-param>
                 ......
              </servlet>
```
```java
ServletConfig config=getServletConfig();
String driver=config.getInitParameter("driver");
out.print("Driver is: "+driver);
```

```
      <context-param>
      <param-name>dname</param-name>
      <param-value>sun.jdbc.odbc.JdbcOdbcDriver</param-value>
      </context-param>
//creating ServletContext object
ServletContext context=getServletContext();
  //Getting the value of the initialization parameter and printing it
String driverName=context.getInitParameter("dname");
pw.println("driver name is="+driverName);
----------------------------------------
              //ServletContext to set and get attribute
              ServletContext context=getServletContext();
              context.setAttribute("company","IBM");
               out.println("Welcome to first servlet");
              out.println("<a href='servlet2'>visit</a>");

              …………………………..
              ServletContext context=getServletContext();
              String n=(String)context.getAttribute("company");
               out.println("Welcome to "+n);
              -------------------------------------------------------
        Cookie ck=new Cookie("name",n);
         response.addCookie(ck);
        request.getRequestDispatcher("servlet222").include(request, response);
………………
        Cookie ck[]=request.getCookies();
        String n=ck[0].getValue();
        out.print("Hello im am second serlet "+n);
-------------------------
//URL Rewriting
//appending the username in the query string
out.print("<a href='servlet222?uname666="+n+"'>visit</a>");
//getting value from the query string
  String n=request.getParameter("uname666");
  out.print("Hello "+n);
-----------------------
//HttpSession
      String n=request.getParameter("userName");
      out.print("Welcome "+n);
      HttpSession session=request.getSession();
      session.setAttribute("uname345",n);
      out.print("<a href='servlet2'>visit</a>");
…………………………
        HttpSession session=request.getSession(false);
        String n=(String)session.getAttribute("uname345");
         out.print("Hello "+n);
```

```
//Filter
                    <web-app>
                     <servlet>
                    <servlet-name>s1</servlet-name>
                    <servlet-class>HelloServlet</servlet-class>
                    </servlet>
                     <servlet-mapping>
                    <servlet-name>s1</servlet-name>
                    <url-pattern>/servlet1</url-pattern>
                    </servlet-mapping>
                      <filter>
                    <filter-name>f1</filter-name>
                    <filter-class>MyFilter</filter-class>
                    </filter>
                       <filter-mapping>
                    <filter-name>f1</filter-name>
                    <url-pattern>/servlet1</url-pattern>
                    </filter-mapping>
                         </web-app>
public void doFilter(ServletRequest req, ServletResponse resp,
    FilterChain chain) throws IOException, ServletException {}
chain.doFilter(req, resp);//sends request to next resource
//FilterConfig
FilterConfig config;
public void init(FilterConfig config) throws ServletException {
    this.config=config;  }
String s=config.getInitParameter("construction");
                    <filter>
                      <filter-name>f1</filter-name>
                      <filter-class>MyFilter</filter-class>
                      <init-param>
                      <param-name>construction</param-name>
                      <param-value>no</param-value>
                      </init-param>
                      </filter>


//CRUD

<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>

<h1>Add New Employee</h1>
<form action="SaveServlet" method="post">
<table>
<tr><td>Name:</td><td><input type="text" name="name"/></td></tr>
```

```html
<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" style="width:150px">
<option>India</option>
<option>USA</option>
<option>UK</option>
<option>Other</option>
</select>
</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>
```

Emp.java
```java
public class Emp {
private int id;
private String name,password,email,country;
public int getId() {
   return id;
}
public void setId(int id) {
   this.id = id;
}
public String getName() {
   return name;
}
public void setName(String name) {
   this.name = name;
}
public String getPassword() {
   return password;
}
public void setPassword(String password) {
   this.password = password;
}
public String getEmail() {
   return email;
}
public void setEmail(String email) {
   this.email = email;
}
public String getCountry() {
   return country;
}
public void setCountry(String country) {
   this.country = country;
}
 }
```

```java
EmpDao.java
public class EmpDao {

    public static Connection getConnection(){
        Connection con=null;
        try{
            Class.forName("oracle.jdbc.driver.OracleDriver");

con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe","system","oracle");
        }catch(Exception e){System.out.println(e);}
        return con;
    }
    public static int save(Emp e){
        int status=0;
        try{
            Connection con=EmpDao.getConnection();
            PreparedStatement ps=con.prepareStatement(
                    "insert into user905(name,password,email,country) values (?,?,?,?)");
            ps.setString(1,e.getName());
            ps.setString(2,e.getPassword());
            ps.setString(3,e.getEmail());
            ps.setString(4,e.getCountry());

            status=ps.executeUpdate();

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

        return status;
    }
    public static int update(Emp e){
        int status=0;
        try{
            Connection con=EmpDao.getConnection();
            PreparedStatement ps=con.prepareStatement(
                    "update user905 set name=?,password=?,email=?,country=? where id=?");
            ps.setString(1,e.getName());
            ps.setString(2,e.getPassword());
            ps.setString(3,e.getEmail());
            ps.setString(4,e.getCountry());
            ps.setInt(5,e.getId());

            status=ps.executeUpdate();

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

        return status;
    }
    public static int delete(int id){
        int status=0;
        try{
            Connection con=EmpDao.getConnection();
            PreparedStatement ps=con.prepareStatement("delete from user905 where id=?");
            ps.setInt(1,id);
            status=ps.executeUpdate();
```

```java
            con.close();
        }catch(Exception e){e.printStackTrace();}

        return status;
    }
    public static Emp getEmployeeById(int id){
        Emp e=new Emp();

        try{
            Connection con=EmpDao.getConnection();
            PreparedStatement ps=con.prepareStatement("select * from user905 where id=?");
            ps.setInt(1,id);
            ResultSet rs=ps.executeQuery();
            if(rs.next()){
                e.setId(rs.getInt(1));
                e.setName(rs.getString(2));
                e.setPassword(rs.getString(3));
                e.setEmail(rs.getString(4));
                e.setCountry(rs.getString(5));
            }
            con.close();
        }catch(Exception ex){ex.printStackTrace();}

        return e;
    }
    public static List<Emp> getAllEmployees(){
        List<Emp> list=new ArrayList<Emp>();

        try{
            Connection con=EmpDao.getConnection();
            PreparedStatement ps=con.prepareStatement("select * from user905");
            ResultSet rs=ps.executeQuery();
            while(rs.next()){
                Emp e=new Emp();
                e.setId(rs.getInt(1));
                e.setName(rs.getString(2));
                e.setPassword(rs.getString(3));
                e.setEmail(rs.getString(4));
                e.setCountry(rs.getString(5));
                list.add(e);
            }
            con.close();
        }catch(Exception e){e.printStackTrace();}

        return list;
    }
}
```

SaveServlet.java
```java
@WebServlet("/SaveServlet")
public class SaveServlet extends HttpServlet {
```

```java
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
    response.setContentType("text/html");
    PrintWriter out=response.getWriter();

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

    Emp e=new Emp();
    e.setName(name);
    e.setPassword(password);
    e.setEmail(email);
    e.setCountry(country);

    int status=EmpDao.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();
    }

}
```

EditServlet.java
```java
public class EditServlet extends HttpServlet {
    protected void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
    response.setContentType("text/html");
    PrintWriter out=response.getWriter();
    out.println("<h1>Update Employee</h1>");
    String sid=request.getParameter("id");
    int id=Integer.parseInt(sid);

    Emp e=EmpDao.getEmployeeById(id);

    out.print("<form action='EditServlet2' method='post'>");
    out.print("<table>");
    out.print("<tr><td></td><td><input type='hidden' name='id'
value='"+e.getId()+"'/></td></tr>");
    out.print("<tr><td>Name:</td><td><input type='text' name='name'
value='"+e.getName()+"'/></td></tr>");
    out.print("<tr><td>Password:</td><td><input type='password' name='password'
value='"+e.getPassword()+"'/>
            </td></tr>");
    out.print("<tr><td>Email:</td><td><input type='email' name='email'
value='"+e.getEmail()+"'/></td></tr>");
    out.print("<tr><td>Country:</td><td>");
    out.print("<select name='country' style='width:150px'>");
    out.print("<option>India</option>");
    out.print("<option>USA</option>");
```

```java
    out.print("<option>UK</option>");
    out.print("<option>Other</option>");
    out.print("</select>");
    out.print("</td></tr>");
    out.print("<tr><td colspan='2'><input type='submit' value='Edit & Save '/></td></tr>");
    out.print("</table>");
    out.print("</form>");

    out.close();
    }
}
```

DeleteServlet.java

```java
public class DeleteServlet extends HttpServlet {
    protected void doGet(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        String sid=request.getParameter("id");
        int id=Integer.parseInt(sid);
        EmpDao.delete(id);
        response.sendRedirect("ViewServlet");
    }
---------------------------------------
public class ViewServlet extends HttpServlet {
    protected void doGet(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        response.setContentType("text/html");
        PrintWriter out=response.getWriter();
        out.println("<a href='index.html'>Add New Employee</a>");
        out.println("<h1>Employees List</h1>");

        List<Emp> list=EmpDao.getAllEmployees();

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

out.print("<tr><th>Id</th><th>Name</th><th>Password</th><th>Email</th><th>Country</th>
            <th>Edit</th><th>Delete</th></tr>");
        for(Emp e:list){

out.print("<tr><td>"+e.getId()+"</td><td>"+e.getName()+"</td><td>"+e.getPassword()+"</td>
            <td>"+e.getEmail()+"</td><td>"+e.getCountry()+"</td><td><a
href='EditServlet?id="+e.getId()+"'>edit</a></td>
            <td><a href='DeleteServlet?id="+e.getId()+"'>delete</a></td></tr>");
        }
        out.print("</table>");

        out.close();
    }
}
```