```
1. Wap to demonstrate GenericServlet.
import java.io.*;
import javax.servlet.*;
public class servletDemo extends GenericServlet
       public void service(ServletRequest req, ServletResponse res)throws IOException, ServletException
              res.setContentType("text/html");
              PrintWriter pw=res.getWriter();
              pw.print("<html><body><h1>Hello World</h1></body></html>");
}
Web.xml
<servlet>
       <servlet-name>servletDemo</servlet-name>
       <servlet-class>servletDemo</servlet-class>
</servlet>
<servlet-mapping>
       <servlet-name>servletDemo</servlet-name>
       <url><url-pattern>/servlet/servletDemo</url-pattern></url-pattern></url>
</servlet-mapping>
   2. Wap to demonstrate HttpServlet.
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class exHttpServ extends HttpServlet
       public void doGet(HttpServletRequest req,HttpServletResponse res)throws
       ServletException, IOException
              res.setContentType("text/html");
              PrintWriter out=res.getWriter();
              out.println("<html>");
              out.println("<body><marquee><h1>Welcome to Servlet</h1></marquee></body>");
              out.println("</html>");
Web.xml
<servlet>
       <servlet-name>exHttpServ</servlet-name>
       <servlet-class>exHttpServ</servlet-class>
```

```
</servlet>
<servlet-mapping>
       <servlet-name>exHttpServ</servlet-name>
       <url><!re><url-pattern>/servlet/exHttpServ</url-pattern>
</servlet-mapping>
   3. Wap to demonstrate GET method.
exForm.html
<html>
<body>
<form name="f1" action="servlet/exForm">
Enter Your Name:<input type="text" name="t1">
<input type="submit"/>
</form>
</body>
</html>
exForm.java
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class exForm extends HttpServlet
       public void doGet(HttpServletRequest req,HttpServletResponse res)throws
       ServletException,IOException
       {
              res.setContentType("text/html");
              PrintWriter out=res.getWriter();
              out.println("<html><body>");
              out.println("<h1>Welcome, "+req.getParameter("t1")+"</h1>");
              out.println("</body></html>");
}
Web.xml
<servlet>
       <servlet-name>exForm</servlet-name>
       <servlet-class>exForm</servlet-class>
</servlet>
<servlet-mapping>
       <servlet-name>exForm</servlet-name>
       <url><url-pattern>/servlet/exForm</url-pattern></url
</servlet-mapping>
```

4. Wap to demonstrate POST method. exPost.html <html> <body> <form name="f1" action="servlet/exPost" method="post"> Enter a:<input type="text" name="t1"/><br/> Enter b:<input type="text" name="t2"/><br/> <input type="submit"/> </form> </body> </html> exPost.java import java.io.\*; import javax.servlet.\*; import javax.servlet.http.\*; public class exPost extends HttpServlet public void doPost(HttpServletRequest req,HttpServletResponse res)throws IOException, ServletException { res.setContentType("text/html"); PrintWriter out=res.getWriter(); out.println("<html><body>"); int a,b,c; a=Integer.parseInt(req.getParameter("t1")); b=Integer.parseInt(req.getParameter("t2")); c=a+b; out.println("<b>Addition is:"+c+"</b>"); out.println("</body></html>"); Web.xml <servlet> <servlet-name>exPost</servlet-name> <servlet-class>exPost/servlet-class> </servlet> <servlet-mapping> <servlet-name>exPost</servlet-name> <url>pattern>/servlet/exPost</url-pattern></url-pattern>

</servlet-mapping>

5. Wap to calculate area of circle. Area.java import java.io.\*; import javax.servlet.\*; import javax.servlet.http.\*; public class area extends HttpServlet public void doGet(HttpServletRequest req,HttpServletResponse res)throws IOException, ServletException { res.setContentType("text/html"); PrintWriter out=res.getWriter(); out.println("<html><body>"); out.println("<form name='f1' action='arcir'>"); out.println("Enter radius:<input type='text' name='t1'><br/>'); out.println("<input type='submit'/>"); out.println("</form></body></html>"); } Arcir.java import java.io.\*; import javax.servlet.\*; import javax.servlet.http.\*; public class arcir extends HttpServlet public void doGet(HttpServletRequest req,HttpServletResponse res)throws IOException, ServletException { res.setContentType("text/html"); PrintWriter out=res.getWriter(); out.println("<html><body>"); double r=Double.parseDouble(req.getParameter("t1")); double ar=3.14\*r\*r; out.println("<b>Area of Circle:"+ar); out.println("</b>"); out.println("</body></html>"); Web.xml <servlet> <servlet-name>area</servlet-name> <servlet-class>area/servlet-class>

</servlet>

```
<servlet-mapping>
                    <servlet-name>area</servlet-name>
                    <url><!url-pattern>/servlet/area</url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-patter
</servlet-mapping>
<servlet>
                    <servlet-name>arcir</servlet-name>
                    <servlet-class>arcir</servlet-class>
</servlet>
<servlet-mapping>
                    <servlet-name>arcir</servlet-name>
                    <url>pattern>/servlet/arcir</url-pattern></url-pattern>
</servlet-mapping>
          6. Wap to demonstrate Cookies.
SetCookie.java
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class SetCookie extends HttpServlet
                    public void doGet(HttpServletRequest req,HttpServletResponse res)throws
                    IOException, ServletException
                                         for(int i=0; i<3; i++)
                                                              Cookie cookie=new Cookie("Session-Cookie"+i,"Cookie Value-S"+i);
                                                              res.addCookie(cookie);
                                                              cookie=new Cookie("Persistent-Cookie"+i,"Cookie Value-P"+i);
                                                              cookie.setMaxAge(3600);
                                                              res.addCookie(cookie);
                                         res.setContentType("text/html");
                                         PrintWriter out=res.getWriter();
                                         out.println("<html><body>");
                                         out.println("<b><a href='http://localhost:8082/servlets-examples/servlet/showCookie'>Show
                    Cookie</a></b></body></html>");
showCookie.java
import java.io.*;
import javax.servlet.http.*;
```

```
import javax.servlet.*;
public class showCookie extends HttpServlet
      public void doGet(HttpServletRequest req,HttpServletResponse res)throws
      IOException, ServletException
             PrintWriter out;
             try
                    out=res.getWriter();
                    out.println("<html><body>");
                    out.println("Cookie NameCookie Value");
                    Cookie[] cookies=req.getCookies();
                    Cookie cookie;
                    for(int i=0;i<cookies.length;i++)
                           cookie=cookies[i];
      out.println(""+cookie.getName()+""+cookie.getValue()+"");
                    out.println("</body></html>");
             catch(Exception e){}
Web.xml
<servlet>
      <servlet-name>SetCookie</servlet-name>
      <servlet-class>SetCookie/servlet-class>
</servlet>
<servlet-mapping>
      <servlet-name>SetCookie</servlet-name>
      <url>url-pattern>/servlet/setcookie</url-pattern></url-pattern>
</servlet-mapping>
<servlet>
      <servlet-name>showCookie</servlet-name>
      <servlet-class>showCookie</servlet-class>
</servlet>
<servlet-mapping>
      <servlet-name>showCookie</servlet-name>
      <url>pattern>/servlet/showCookie</url-pattern></url-pattern>
</servlet-mapping>
   7. Wap to demonstrate HttpSession.
```

```
SetSession.java
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.util.*;
public class SetSession extends HttpServlet
       public void doGet(HttpServletRequest req,HttpServletResponse res)throws
       IOException, ServletException
       {
              res.setContentType("text/html");
              PrintWriter out=res.getWriter();
              HttpSession session=req.getSession(true);
              String val="PHP Session Value";
              session.setAttribute("nm",val);
              Date cr=new Date(session.getCreationTime());
              Date acc=new Date(session.getLastAccessedTime());
              out.println("<html><body>");
              out.println("Session Id:"+session.getId()+"<br/>");
              out.println("Session Created:"+cr+"<br/>");
              out.println("Session Accessed:"+acc+"<br/>");
       }
}
GetSession.java
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class GetSession extends HttpServlet
{
       public void doGet(HttpServletRequest req,HttpServletResponse res)throws
       IOException, ServletException
       {
              res.setContentType("text/html");
              PrintWriter out=res.getWriter();
              HttpSession ses=req.getSession(true);
              out.println("<html><body>");
              out.println("Session Id:"+ses.getId()+"<br/>");
              out.println("Name:"+ses.getAttribute("nm")+"<br/>");
Web.xml
<servlet>
```

```
<servlet-name>SetSession/servlet-name>
       <servlet-class>SetSession/servlet-class>
</servlet>
<servlet-mapping>
       <servlet-name>SetSession</servlet-name>
       <url-pattern>/servlet/setsession</url-pattern>
</servlet-mapping>
<servlet>
       <servlet-name>GetSession</servlet-name>
       <servlet-class>GetSession/servlet-class>
</servlet>
<servlet-mapping>
       <servlet-name>GetSession</servlet-name>
       <url-pattern>/servlet/getsession</url-pattern>
</servlet-mapping>
   8. Wap to demonstrate URLRewrite.
exUrlRewrite.java
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class exUrlRewrite extends HttpServlet
       public void doGet(HttpServletRequest req,HttpServletResponse res)throws
       IOException, ServletException
              res.setContentType("text/html");
              PrintWriter out=res.getWriter();
              String contextPath=req.getContextPath();
              String encode=res.encodeURL(contextPath+"/hello.html");
              out.println("<html><head><title>");
              out.println("URL Rewriter</title></head>");
              out.println("<body>go to the Hello Page<a href="+encode+"> Click Here</a>");
              out.println("</body></html>");
Web.xml
<servlet>
       <servlet-name>exUrlRewrite</servlet-name>
       <servlet-class>exUrlRewrite</servlet-class>
</servlet>
<servlet-mapping>
```

```
<servlet-name>exUrlRewrite</servlet-name>
                      <url><url-pattern>/servlet/exurlrewrite</url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url
</servlet-mapping>
Hello.html
<html>
<head>
                      <title>URL Rewriting</title>
</head>
<body>
                      <h1>Hello World</h1>
</body>
</html>
           9. Wap to demonstrate Hidden Form Field.
Hidden.html
<html>
<body>
<form name="f1" action="servlet/hidden">
Enter Your Name:<input type="text" name="t1"/>
<input type="hidden" name="h1" value="Welcome,"/>
<br/>>
<input type="submit"/>
</form>
</body>
</html>
Hidden.java
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class hidden extends HttpServlet
                      public void doGet(HttpServletRequest req,HttpServletResponse res)throws
                      IOException, ServletException
                                             res.setContentType("text/html");
                                             PrintWtirer out=res.getWriter();
                                             String str=req.getQueryString();
                                             String[] qry=str.split("&");
                                             out.println("<html><body>");
                                             out.println("<b>"+qry[1]+" "+qry[0]+"</b>");
                                             out.println("</body></html>");
                      }
```

```
Web.xml
<servlet>
       <servlet-name>hidden/servlet-name>
       <servlet-class>hidden/servlet-class>
</servlet>
<servlet-mapping>
       <servlet-name>hidden</servlet-name>
       <url>url-pattern>/servlet/hidden</url-pattern></ur>
</servlet-mapping>
   10. Wap to demonstrate RequestDispatcher.
DemoForward.java
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class DemoForward extends HttpServlet
{
       public void doGet(HttpServletRequest req,HttpServletResponse res)throws
       IOException, ServletException
       {
              res.setContentType("text/html");
              PrintWriter out=res.getWriter();
              out.println("<h1>Request Dispatcher</h1>");
              try{
                      RequestDispatcher rd=req.getRequestDispatcher("exSetCookie");
                      rd.include(req,res);//rd.forward(req,res);
              }catch(Exception e){}
              finally(){out.close();}
Web.xml
<servlet>
       <servlet-name>DemoForward</servlet-name>
       <servlet-class>DemoForward</servlet-class>
</servlet>
<servlet-mapping>
       <servlet-name>DemoForward</servlet-name>
       <url>pattern>/servlet/DemoForward</url-pattern></url-pattern>
</servlet-mapping>
   11. Wap to demonstrate Configuration Parameter.
import java.io.*;
```

```
import javax.servlet.*;
import javax.servlet.http.*;
public class ConfigParamEx extends HttpServlet
                   int cnt;
                   public void init(ServletConfig conf)throws ServletException
                                       super.init(conf);
                                       cnt=Integer.parseInt(conf.getInitParameter("cnt"));
                   public void doGet(HttpServletRequest req,HttpServletResponse res)throws
                   IOException, ServletException
                    {
                                       res.setContentType("text/html");
                                       PrintWriter out=res.getWriter();
                                       String title="This Page is visited "+cnt+" Time(s)";
                                       out.println("<html><body>");
                                       out.println("<h1 align='center'>"+title+"</h1>");
                                       out.println("</body></html>");
                   }
Web.xml
<servlet>
                   <servlet-name>ConfigParamEx</servlet-name>
                   <servlet-class>ConfigParamEx</servlet-class>
                   <init-param>
                                       <param-name>cnt</param-name>
                                       <param-value>0</param-value>
                   </init-param>
</servlet>
<servlet-mapping>
                   <servlet-name>ConfigParamEx</servlet-name>
                   <url>pattern>/servlet/ConfigParamEx</url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pat
</servlet-mapping>
          12. Wap to demonstrate Parameter values.
ShowParam.html
<html>
<body>
<form name="f1" action="servlet/ShowParam">
Item Name:<input type="text" name="t1"/><br/>
Quantity:<input type="text" name="t2"/><br/>
<input type="submit"/>
</form>
```

```
</body>
</html>
ShowParam.java
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.util.*;
public class ShowParam extends HttpServlet
{
          public void doGet(HttpServletRequest req,HttpServletResponse res)throws
          IOException, ServletException
                    res.setContentType("text/html");
                    PrintWriter out=res.getWriter();
                    out.println("Parameter NameParameter Value");
                    Enumeration paramNm=req.getParameterNames();
                    while(paramNm.hasMoreElements())
                     {
                                         String pnm=(String)paramNm.nextElement();
                                         out.print(""+pnm+"");
                                         String val[]=req.getParameterValues(pnm);
                                         String pVal=val[0];
                                         if(pVal.length()==0)
                                                              out.print("<b>No Values</b>");
                                         else
                                                              out.print(""+pVal+"");
                    out.println("");
Web.xml
<servlet>
                    <servlet-name>ShowParam</servlet-name>
                    <servlet-class>ShowParam/servlet-class>
</servlet>
<servlet-mapping>
                     <servlet-name>ShowParam</servlet-name>
                    <url><url-pattern>/servlet/ShowParam</url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pattern></url-pa
</servlet-mapping>
```

13. Wap to demonstrate DB CRUD operations in servlet.

## NOTE: PLZ. TAKE CARE WHILE ADDING URL-PATTERN IN WEB.XML BECAUSE IT MAY VARY AND EVEN PLZ. TAKE CARE WITH SQL OPERATION USE DRIVER BASED ON WHICH DB ARE YOU USING.

```
Insert.html
<html>
<body>
<form name="f1" action="servlet/InsertData">
<label>Enter Roll No:</label>
      <input type="text" name="rno"/>
<label>Enter Name:</label>
      <input type="text" name="nm"/>
<label>Enter City:</label>
      <input type="text" name="ct"/>
<input type="submit"/>
</form>
</body>
</html>
Insert.java
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.sql.*;
public class InsertData extends HttpServlet
      private Connection con;
      private Statement st;
      //private ResultSet rs;
      public void init(ServletConfig conf)throws ServletException{
            super.init(conf);
            try{
            Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");
            con=DriverManager.getConnection("jdbc:odbc:temp");
```

```
}catch(Exception e){e.printStackTrace();}
       }
       public void doGet(HttpServletRequest req,HttpServletResponse res)throws
       IOException, ServletException
              res.setContentType("text/html");
              PrintWriter out=res.getWriter();
              try{
                      st=con.createStatement();
                      int rno=Integer.parseInt(req.getParameter("rno"));
                      String nm=req.getParameter("nm");
                      String ct=req.getParameter("ct");
                      String qry="insert into stud values("+rno+",""+nm+"",""+ct+"")";
                      st.executeUpdate(qry);
                      res.sendRedirect("SelectData");
               }catch(Exception e){e.printStackTrace();}
              finally {
                      try{
                             st.close();
                             con.close();
                      }catch(Exception e){}
              }
       }
Web.xml
<servlet>
       <servlet-name>InsertData/servlet-name>
       <servlet-class>InsertData/servlet-class>
</servlet>
<servlet-mapping>
       <servlet-name>InsertData/servlet-name>
       <url-pattern>/servlet/InsertData</url-pattern>
</servlet-mapping>
SelectData.java
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.sql.*;
public class SelectData extends HttpServlet
{
       private Connection con;
       private Statement st;
```

```
private ResultSet rs;
      public void init(ServletConfig conf)throws ServletException{
             super.init(conf);
             try{
             Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");
             con=DriverManager.getConnection("jdbc:odbc:temp");
             }catch(Exception e){e.printStackTrace();}
      public void doGet(HttpServletRequest req,HttpServletResponse res)throws
      IOException, ServletException
      {
             res.setContentType("text/html");
             PrintWriter out=res.getWriter();
             out.println("<a href='../insert.html'>Add Records</a><br/>');
             try{
                    st=con.createStatement();
                    rs=st.executeQuery("select *from stud");
                    out.println("<table
      border=2>Roll NoNameCity");
                    while(rs.next())
                    {
                           String rno=rs.getString(1);
                           String nm=rs.getString(2);
                           String ct=rs.getString(3);
                           out.println(""+rno+"");
                           out.println(""+nm+"");
                           out.println(""+ct+"");
                           out.println("<a
      href='update?rno="+rno+"&nm="+nm+"&ct="+ct+"">Update</a>");
                           out.println("<a href=DeleteData?rno="+rno+">Delete</a>");
             }catch(Exception e){e.printStackTrace();}
      }
Web.xml
<servlet>
      <servlet-name>SelectData/servlet-name>
      <servlet-class>SelectData/servlet-class>
</servlet>
<servlet-mapping>
      <servlet-name>SelectData/servlet-name>
      <url>arl-pattern>/servlet/SelectData</url-pattern></url-pattern>
</servlet-mapping>
```

```
update.java
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class update extends HttpServlet{
      public void doGet(HttpServletRequest req,HttpServletResponse res)throws
      IOException, ServletException {
             res.setContentType("text/html");
             PrintWriter out=res.getWriter();
             String rno=req.getParameter("rno");
             String nm=req.getParameter("nm");
             String ct=req.getParameter("ct");
             out.println("<html><body>");
             out.println("<form name='f1' action='UpdateData'>");
      out.println("<label>Enter Roll No:</label><input type='text'
      name='rno'readonly='true' value='"+rno+"'/>");
      out.println("<label>Enter Name:</label><input type='text' name='nm'
      value=""+nm+""/>");
      out.println("<label>Enter City:</label><input type='text' name='ct'
      value=""+ct+""/>");
      out.println("<input type='submit'/>");
out.println("</form></body></html>");
Web.xml
<servlet>
      <servlet-name>update</servlet-name>
      <servlet-class>update/servlet-class>
</servlet>
<servlet-mapping>
      <servlet-name>update</servlet-name>
      <url>pattern>/servlet/update</url-pattern></url-pattern>
</servlet-mapping>
UpdateData.java
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.sql.*;
public class UpdateData extends HttpServlet
      private Connection con;
```

```
private Statement st;
       private ResultSet rs;
       public void init(ServletConfig conf)throws ServletException{
              super.init(conf);
              try{
              Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");
              con=DriverManager.getConnection("jdbc:odbc:temp");
              }catch(Exception e){e.printStackTrace();}
       public void doGet(HttpServletRequest req,HttpServletResponse res)throws
       IOException, ServletException
              res.setContentType("text/html");
              PrintWriter out=res.getWriter();
              try{
                     st=con.createStatement();
                     int rno=Integer.parseInt(req.getParameter("rno"));
                     String nm=req.getParameter("nm");
                     String ct=req.getParameter("ct");
                     String qry="update stud set nm="+nm+",ct="+ct+" where rno="+rno;
                     st.executeUpdate(qry);
                     res.sendRedirect("SelectData");
              }catch(Exception e){e.printStackTrace();}
              finally {
                     try{
                             st.close();
                            con.close();
                     }catch(Exception e){}
              }
       }
Web.xml
<servlet>
       <servlet-name>UpdateData/servlet-name>
       <servlet-class>UpdateData/servlet-class>
</servlet>
<servlet-mapping>
       <servlet-name>UpdateData/servlet-name>
       <url-pattern>/servlet/UpdateData</url-pattern>
</servlet-mapping>
```

DeleteData.java

```
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.sql.*;
public class DeleteData extends HttpServlet
       private Connection con;
       private Statement st;
       public void init(ServletConfig conf)throws ServletException{
              super.init(conf);
              try{
              Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");
              con=DriverManager.getConnection("jdbc:odbc:temp");
              }catch(Exception e){e.printStackTrace();}
       public void doGet(HttpServletRequest req,HttpServletResponse res)throws
       IOException, ServletException
       {
              res.setContentType("text/html");
              PrintWriter out=res.getWriter();
              try{
                      st=con.createStatement();
                      int rno=Integer.parseInt(req.getParameter("rno"));
                      String qry="delete from stud where rno="+rno;
                      st.executeUpdate(qry);
                      res.sendRedirect("SelectData");
              }catch(Exception e){e.printStackTrace();}
              finally {
                      try{
                             st.close();
                             con.close();
                      }catch(Exception e){}
              }
       }
Web.xml
<servlet>
       <servlet-name>DeleteData/servlet-name>
       <servlet-class>DeleteData/servlet-class>
</servlet>
<servlet-mapping>
       <servlet-name>DeleteData/servlet-name>
```

```
<url>url-pattern>/servlet/DeleteData</url-pattern></url
</servlet-mapping>
   14. Wap to demonstrate servlet's lifecycle.
import java.io.*;
import javax.servlet.*;
public class LifeCycle extends GenericServlet
       int cnt;
       public void init(ServletConfig config)throws ServletException{
               super.init(config);
               cnt=1;
       public void service(ServletRequest req,ServletResponse res)throws IOException,ServletException
               res.setContentType("text/html");
               PrintWriter out=res.getWriter();
               out.println("Value cnt:"+(cnt++));
       public void destroy(){
               System.out.println("Destroyed");
Web.xml
<servlet>
       <servlet-name>LifeCycle</servlet-name>
       <servlet-class>LifeCycle</servlet-class>
</servlet>
<servlet-mapping>
       <servlet-name>LifeCycle</servlet-name>
       <url><url-pattern>/servlet/LifeCycle</url-pattern></url-pattern>
</servlet-mapping>
```