

SSN COLLEGE OF ENGINEERING, KALAVAKKAM
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Internet Programming Lab – CS8661
Programming Assignment 7 – CRUD Operations in DatabaseServlet and DatabaseJSP

Develop CRUD Web Application using servlet and JSP to perform the following operations

- List
- InsertNew
- Update
- Delete

Create a table *student* with the fields *Rollno* and *name*. Populate the table with *five* initial records. Create necessary interface to obtain the necessary inputs from the user. **Create a servlet for every operation.**

CODE-CRUD SERVLET

index.html

```
<html>
<body>

<h1>CRUD OPERATIONS USING SERVLET</h1>
<br>
<form action="Insert" method="get">
<fieldset>
    <legend>CREATE</legend>
<label>Enter id
    <input type="text" name="u_id">
</label>
<br>
<label>Enter name
    <input type="text" name="u_name">
</label>
<br>
<input type="submit" value="INSERT">
</fieldset>
</form>

<form action="Delete" method="get">
```

```
<fieldset>
    <legend>REMOVE</legend>
<label>Enter id
    <input type="text" name="u_id">
</label>
<br>
<input type="submit" value="DELETE">
</fieldset>
</form>

<form action="Update" method="get">
<fieldset>
    <legend>UPDATE</legend>
<label>Enter id
    <input type="text" name="u_id">
</label>
<br>
<label>Enter new name
    <input type="text" name="u_name">
</label>
<br>
<input type="submit" value="UPDATE">
</fieldset>
</form>

<form action="Select" method="get">
<fieldset>
    <legend>DISPLAY</legend>
<label>View Database </label>
<input type="submit" value="DISPLAY">
</fieldset>
</form>

</body>
</html>
```

select.java

```
import java.io.*;
import javax.servlet.*;
```

```

import javax.servlet.http.*;
import java.sql.*;

public class select extends HttpServlet {

    public void doGet(HttpServletRequest request, HttpServletResponse
response)
        throws IOException, ServletException {

        response.setContentType("text/html");

        PrintWriter out = response.getWriter();

        Connection con;
        Statement stmt;
        ResultSet rs;

        String url="jdbc:mysql://localhost:3306/test1";
        String user="root";
        String pass="vaishu";

        try{
            Class.forName("com.mysql.jdbc.Driver");
            con=DriverManager.getConnection(url,user,pass);
            //System.out.println("Connected");
            out.println("<html>");
            out.println("<body>");

            String sql;
            sql="select * from student1 ";

            stmt=con.createStatement();
            rs=stmt.executeQuery(sql);
            out.println("<pre>ID  NAME</pre>");
            while(rs.next())
            {
                out.println("<p>" +rs.getInt(1)+ " "+rs.getString(2)+"</p>");
            }
        }catch(ClassNotFoundException ex){
            //System.out.println("sql error"+ex.getMessage());

```

```

    }
    catch(SQLException ex){
        // System.out.println("sql error"+ex.getMessage());
    }

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

```

insert.java

```

import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.sql.*;

public class insert extends HttpServlet {

    public void doGet(HttpServletRequest request, HttpServletResponse
response)
        throws IOException, ServletException {

        response.setContentType("text/html");

        PrintWriter out = response.getWriter();

        Connection con;
        Statement stmt;
        ResultSet rs;

        String url="jdbc:mysql://localhost:3306/test1";
        String user="root";
        String pass="vaishu";

        out.println("<html>");

        out.println("<body>");

        try{

```

```

        Class.forName("com.mysql.jdbc.Driver");
        con=DriverManager.getConnection(url,user,pass);
        //out.println("<p>connected</p>");

        stmt=con.createStatement();
        String sql;
        sql="select * from student1 ";
        out.println("<p>Before insertion: </p>");
        out.println("<pre>ID  NAME</pre>");

        rs=stmt.executeQuery(sql);
        while(rs.next())
        {
            out.println("<p>" +rs.getInt(1)+ " "+rs.getString(2)+"</p>");
        }

        String str=request.getParameter("u_id");
        int id=Integer.parseInt(str);
        String name=request.getParameter("u_name");
        PreparedStatement pstmt= con.prepareStatement("insert into student1
values(?,?)");
        pstmt.setInt(1,id);
        pstmt.setString(2,name);
        int i=pstmt.executeUpdate();
        if(i==1)
            out.println("<p>Record inserted</p>");
        else
            out.println("<p>Record not inserted</p>");

        rs=stmt.executeQuery(sql);

        out.println("<p>After insertion: </p>");
        out.println("<pre>ID  NAME</pre>");
        while(rs.next())
        {
            out.println("<p>" +rs.getInt(1)+ " "+rs.getString(2)+"</p>");
        }
    }catch(ClassNotFoundException ex){
        out.println("<p>class error"+ex.getMessage()+"</p>");
    }
}

```

```

    }
    catch(SQLException ex){
        out.println("<p>sql error"+ex.getMessage()+"</p>");
    }

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

```

update.java

```

import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.sql.*;

public class update extends HttpServlet {

    public void doGet(HttpServletRequest request, HttpServletResponse
response)
        throws IOException, ServletException {

        response.setContentType("text/html");

        PrintWriter out = response.getWriter();

        Connection con;
        Statement stmt;
        ResultSet rs;

        String url="jdbc:mysql://localhost:3306/test1";
        String user="root";
        String pass="vaishu";

        out.println("<html>");

        out.println("<body>");

        try{

```

```

        Class.forName("com.mysql.jdbc.Driver");
        con=DriverManager.getConnection(url,user,pass);
        //out.println("<p>connected</p>");

        String sql;
        sql="select * from student1 ";

        stmt=con.createStatement();

        rs=stmt.executeQuery(sql);
        out.println("<p>Before upadation: </p>");
        out.println("<pre>ID  NAME</pre>");
        while(rs.next())
        {
            out.println("<p>"+rs.getInt(1)+" "+rs.getString(2)+"</p>");
        }

        String str=request.getParameter("u_id");
        int id=Integer.parseInt(str);
        String name=request.getParameter("u_name");

        out.println("<p>got: </p>"+name);

        PreparedStatement pstmt= con.prepareStatement("update student1 set
        name=? where id=?");

        pstmt.setString(1,name);
        pstmt.setInt(2,id);
        int i=pstmt.executeUpdate();

        if(i==1)
            out.println("<p>Record updated</p>");
        else
            out.println("<p>Record not updated</p>");

        rs=stmt.executeQuery(sql);
        out.println("<p>After upadation: </p>");
        out.println("<pre>ID  NAME</pre>");
    
```

```

        while(rs.next())
        {
            out.println("<p>" + rs.getInt(1) + " " + rs.getString(2) + "</p>");
        }

    }catch(ClassNotFoundException ex){
        out.println("<p>class error"+ex.getMessage()+"</p>");
    }
    catch(SQLException ex){
        out.println("<p>sql error"+ex.getMessage()+"</p>");
    }

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

```

delete.java

```

import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.sql.*;

public class delete extends HttpServlet {

    public void doGet(HttpServletRequest request, HttpServletResponse
response)
        throws IOException, ServletException {

        response.setContentType("text/html");

        PrintWriter out = response.getWriter();

        Connection con;
        Statement stmt;
        ResultSet rs;

        String url="jdbc:mysql://localhost:3306/test1";
        String user="root";

```



```

String pass="vaishu";

out.println("<html>");

out.println("<body>");

    try{
        Class.forName("com.mysql.jdbc.Driver");
        con=DriverManager.getConnection(url,user,pass);
        //out.println("<p>connected</p>");

String sql;
sql="select * from student1 ";

        stmt=con.createStatement();
        out.println("<p>Before deletion: </p>");
out.println("<pre>ID  NAME</pre>");
        rs=stmt.executeQuery(sql);
        while(rs.next())
        {
            out.println("<p>"+rs.getInt(1)+" "+rs.getString(2)+"</p>");
        }

String str=request.getParameter("u_id");
int id=Integer.parseInt(str);
        PreparedStatement pstmt= con.prepareStatement("delete from
student1 where id=?");
        pstmt.setInt(1,id);
        int i=pstmt.executeUpdate();

        if(i==1)
            out.println("<p>Record deleted</p>");
        else
            out.println("<p>Record not deleted</p>");

        out.println("<p>After deletion: </p>");
out.println("<pre>ID  NAME</pre>");
        rs=stmt.executeQuery(sql);
        while(rs.next())

```

```

        {
            out.println("<p>" + rs.getInt(1) + " " + rs.getString(2) + "</p>");
        }

    } catch (ClassNotFoundException ex) {
        out.println("<p>class error" + ex.getMessage() + "</p>");
    }
    catch (SQLException ex) {
        out.println("<p>sql error" + ex.getMessage() + "</p>");
    }

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

```

OUTPUT:

CRUD OPERATIONS USING SERVLET

<p>CREATE</p> <p>Enter id <input type="text"/></p> <p>Enter name <input type="text"/></p> <p><input type="button" value="INSERT"/></p>
<p>REMOVE</p> <p>Enter id <input type="text"/></p> <p><input type="button" value="DELETE"/></p>
<p>UPDATE</p> <p>Enter id <input type="text"/></p> <p>Enter new name <input type="text"/></p> <p><input type="button" value="UPDATE"/></p>
<p>DISPLAY</p> <p>View Database <input type="button" value="DISPLAY"/></p>

ID	NAME
----	------

1	vaish
---	-------

2	abi
---	-----

3	aishu
---	-------

4	sneha
---	-------

5	santhi
---	--------

CRUD OPERATIONS USING SERVLET

CREATE

Enter id

Enter name

INSERT

REMOVE

Enter id

DELETE

UPDATE

Enter id

Enter new name

UPDATE

DISPLAY

View Database

DISPLAY

Before insertion:

ID NAME

1 vaish

2 abi

3 aishu

4 sneha

5 santhi

Record inserted

After insertion:

ID NAME

1 vaish

2 abi

3 aishu

4 sneha

5 santhi

10 sharon

CRUD OPERATIONS USING SERVLET

CREATE

Enter id

Enter name

REMOVE

Enter id

UPDATE

Enter id

Enter new name

DISPLAY

View Database

CRUD OPERATIONS USING SERVLET

CREATE

Enter id
Enter name

REMOVE

Enter id

UPDATE

Enter id 4
Enter new name

DISPLAY

View Database

← → ↻ ⓘ localhost:8080/crudServlet/Delete?u_id=3

Before deletion:

ID	NAME
----	------

1	vaish
---	-------

2	abi
---	-----

3	aishu
---	-------

4	sneha
---	-------

5	santhi
---	--------

10	sharon
----	--------

Record deleted

After deletion:

ID	NAME
----	------

1	vaish
---	-------

2	abi
---	-----

4	sneha
---	-------

5	santhi
---	--------

10	sharon
----	--------

CRUD OPERATIONS USING SERVLET

CREATE

Enter id

Enter name

REMOVE

Enter id

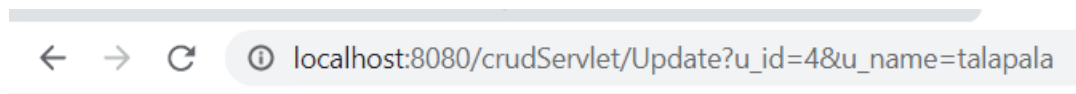
UPDATE

Enter id

Enter new name

DISPLAY

View Database



Before updation:

ID	NAME
----	------

1	vaish
---	-------

2	abi
---	-----

4	sneha
---	-------

5	santhi
---	--------

10	sharon
----	--------

got:

talapala

Record updated

After updation:

ID	NAME
----	------

1	vaish
---	-------

2	abi
---	-----

4	talapala
---	----------

5	santhi
---	--------

10	sharon
----	--------

CODE – CRUD JSP

index.html

```
<html>
```

```
<body>
```

```
<h1>CRUD OPERATIONS USING JSP</h1>
```

```
<br>
```



```
<form action="Insert.jsp" method="get">
<fieldset>
    <legend>CREATE</legend>
<label>Enter id
    <input type="text" name="u_id">
</label>
<br>
<label>Enter name
    <input type="text" name="u_name">
</label>
<br>
<input type="submit" value="INSERT">
</fieldset>
</form>
```

```
<form action="Delete.jsp" method="get">
<fieldset>
    <legend>REMOVE</legend>
<label>Enter id
    <input type="text" name="u_id">
</label>
<br>
<input type="submit" value="DELETE">
</fieldset>
</form>
```

```
<form action="Update.jsp" method="get">
<fieldset>
    <legend>UPDATE</legend>
<label>Enter id
    <input type="text" name="u_id">
</label>
<br>
<label>Enter new name
    <input type="text" name="u_name">
</label>
<br>
<input type="submit" value="UPDATE">
</fieldset>
</form>
```

```

<form action="Select.jsp" method="get">
<fieldset>
    <legend>DISPLAY</legend>
<label>View Database </label>
<input type="submit" value="DISPLAY">
</fieldset>
</form>

</body>
</html>

```

select.jsp

```

<% @ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<% @ taglib uri="http://java.sun.com/jsp/jstl/sql" prefix="sql" %>

<html>
<body>

<sql:setDataSource var="snapshot" driver="com.mysql.jdbc.Driver"
url="jdbc:mysql://localhost/test1" user="root" password="vaishu"/>

<sql:query dataSource="${snapshot}" var="result">
select * from student1;
</sql:query>

<table border="1" cellpadding="5" cellspacing="5">
<tr><th>ID</th><th>NAME</th></tr>

<c:forEach var="row" items="${result.rows}">
    <tr>
        <td><c:out value="${row.id}"/></td>
        <td><c:out value="${row.name}"/></td>
    </tr>
</c:forEach>

</table>
</body>
</html>

```

Insert.jsp

```
<% @ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<% @ taglib uri="http://java.sun.com/jsp/jstl/sql" prefix="sql" %>

<html>
<body>

<sql:setDataSource var="snapshot" driver="com.mysql.jdbc.Driver"
url="jdbc:mysql://localhost/test1" user="root" password="vaishu"/>

<sql:query dataSource="${snapshot}" var="result">
select * from student1;
</sql:query>

<p>Before Insertion</p>
<table border="1" cellspacing="5" cellpadding="5">
<tr><th>ID</th><th>NAME</th></tr>

<c:forEach var="row" items="${result.rows}">
  <tr>
    <td><c:out value="${row.id}"/></td>
    <td><c:out value="${row.name}"/></td>
  </tr>
</c:forEach>

</table>

<sql:update dataSource="${snapshot}" var="count">
INSERT INTO student1 (id,name) VALUES (?, ?);
<sql:param value="${param.u_id}" />
<sql:param value="${param.u_name}" />
</sql:update>

<sql:query dataSource="${snapshot}" var="result">
select * from student1;
</sql:query>

<p>After Insertion</p>
```

```

<table border="1" cellspacing="5" cellpadding="5">
<tr><th>ID</th><th>NAME</th></tr>

<c:forEach var="row" items="${result.rows}">
  <tr>
    <td><c:out value="${row.id}"/></td>
    <td><c:out value="${row.name}"/></td>
  </tr>
</c:forEach>

</table>
</body>
</html>

```

Delete.jsp

```

<% @ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<% @ taglib uri="http://java.sun.com/jsp/jstl/sql" prefix="sql" %>

<html>
<body>
<sql:setDataSource var="snapshot" driver="com.mysql.jdbc.Driver"
url="jdbc:mysql://localhost/test1" user="root" password="vaishu"/>

<sql:query dataSource="${snapshot}" var="result">
select * from student1;
</sql:query>

<p>Before Deletion</p>

<table border="1" cellspacing="5" cellpadding="5">
<tr><th>ID</th><th>NAME</th></tr>

<c:forEach var="row" items="${result.rows}">
  <tr>
    <td><c:out value="${row.id}"/></td>
    <td><c:out value="${row.name}"/></td>
  </tr>
</c:forEach>

```

</table>

<sql:update dataSource="\${ snapshot}" var="count">

Update student1 set name='\${ param.u_name}' where id='\${ param.u_id}';

</sql:update>

<sql:query dataSource="\${ snapshot}" var="result">

select * from student1;

</sql:query>

<p>After Deletion</p>

<table border="1" cellspacing="5" cellpadding="5">

<tr><th>ID</th><th>NAME</th></tr>

<c:forEach var="row" items="\${ result.rows}">

<tr>

<td><c:out value="\${ row.id}" /></td>

<td><c:out value="\${ row.name}" /></td>

</tr>

</c:forEach>

</table>

</body>

</html>

Update.jsp

<% @ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>

<% @ taglib uri="http://java.sun.com/jsp/jstl/sql" prefix="sql" %>

<html>

<body>

<sql:setDataSource var="snapshot" driver="com.mysql.jdbc.Driver"
url="jdbc:mysql://localhost/test1" user="root" password="vaishu"/>

<sql:query dataSource="\${ snapshot}" var="result">

select * from student1;

</sql:query>

<p>Before Updation</p>

<table border="1" cellspacing="5" cellpadding="5">

<tr><th>ID</th><th>NAME</th></tr>

<c:forEach var="row" items="\${result.rows}">

<tr>

<td><c:out value="\${row.id}"/></td>

<td><c:out value="\${row.name}"/></td>

</tr>

</c:forEach>

</table>

<sql:update dataSource="\${snapshot}" var="count">

Update student1 set name='\${param.u_name}' where id='\${param.u_id}';

</sql:update>

<sql:query dataSource="\${snapshot}" var="result">

select * from student1;

</sql:query>

<p>After Updation</p>

<table border="1" cellspacing="5" cellpadding="5">

<tr><th>ID</th><th>NAME</th></tr>

<c:forEach var="row" items="\${result.rows}">

<tr>

<td><c:out value="\${row.id}"/></td>

<td><c:out value="\${row.name}"/></td>

</tr>

</c:forEach>

</table>

</body>

</html>

OUTPUT:

CRUD OPERATIONS USING JSP

CREATE
Enter id
Enter name

REMOVE
Enter id

UPDATE
Enter id
Enter new name

DISPLAY
View Database

ID	NAME
1	vaish
2	abi
4	talapala
5	santhi
10	sharon

CRUD OPERATIONS USING JSP

CREATE

Enter id
Enter name

REMOVE

Enter id

UPDATE

Enter id
Enter new name

DISPLAY

Before Insertion

ID	NAME
1	vaish
2	abi
4	talapala
5	santhi
10	sharon

After Insertion

ID	NAME
1	vaish
2	abi
4	talapala
5	santhi
10	sharon
15	varshini

CRUD OPERATIONS USING JSP

CREATE

Enter id

Enter name

REMOVE

Enter id

UPDATE

Enter id

Enter new name

DISPLAY

View Database

Before Deletion

ID	NAME
1	vaish
2	abi
4	talapala
5	santhi
10	sharon
15	varshini

After Deletion

ID	NAME
1	vaish
2	abi
5	santhi
10	sharon
15	varshini

CRUD OPERATIONS USING JSP

CREATE
Enter id
Enter name

REMOVE
Enter id

UPDATE
Enter id
Enter new name

DISPLAY

← → ↻ ⓘ localhost:8080/crudJSP/Update.jsp?u_id=10&u_name=talapala

Before Updation

ID	NAME
1	vaish
2	abi
5	santhi
10	uma
15	varshini

After Updation

ID	NAME
1	vaish
2	abi
5	santhi
10	talapala
15	varshini