**AngularJS**

**Case Study**

**Develop an application that makes the following communication:**

**JavaScript – AJAX – Servlet – JDBC - JSON**

**What you will learn by doing this case studt:**

How to make AJAX call to server side program

How to make JDBC (database) call to Oracle database

How to convert the data into JSON object

How to convert JSON object into JavaScript object

**Step 1: Form.html**

<html>

<divid=*"test"*style="color:*white*;background-color:*blue*; text-align:*left*;width:*500*;height:*50*" value=*"Test"*>Test

</div>

<divid=*"x"*>&nbsp;</div>

<divid=*"test1"*style="color:*white*;background-color:*red*; text-align:*left*;width:*500*;height:*50*" value=*"Test1"*>Test1

<marquee> This is another division</marquee>

<inputtype=*"submit"*value=*"update List"*onclick="updateFunction();">

</div>

<script>

**function** updateFunction()

{

//alert('updateFunction called');

**var** xmlhttp = **new** XMLHttpRequest();

//var url = "info.txt";

**var** url="http://localhost:8081/JSON-AJAX/SendDataServlet";

xmlhttp.open("GET", url, **true**);

xmlhttp.send();

xmlhttp.onreadystatechange = **function**() {

// status 200 ok

**if** (xmlhttp.readyState == 4 && xmlhttp.status == 200) {

**var** xx=xmlhttp.responseText;// array of JSON objects

//alert(xx);

**var** myArr = JSON.parse(xx);// array of JavaScript objects

**var** out = "<select>";

**var** i;

//alert("Array Length is "+myArr.length);

**for**(i = 0; i < myArr.length; i++) {

//myArr=JSON.parse(xx[i]);

out=out+"<option>"+myArr[i].name+"</option>";

}

out=out+"</select>";

//alert("out is "+out);

document.getElementById("test").innerHTML = out;

alert('successfully updated');

}

}

}

updateFunction();

</script>

</html>

**Step 2: Write the servlet:**

package com.ust\_global;

import java.io.IOException;

import java.io.PrintWriter;

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.ResultSet;

import java.sql.Statement;

import java.util.ArrayList;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

import org.json.simple.JSONObject;

/\*\*

\* Servlet implementation class SendDataServlet

\*/

public class SendDataServlet extends HttpServlet {

private static final long serialVersionUID = 1L;

/\*\*

\* @see HttpServlet#HttpServlet()

\*/

public SendDataServlet() {

super();

// TODO Auto-generated constructor stub

}

/\*\*

\* @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)

\*/

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

doPost(request,response);

}

/\*\*

\* @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)

\*/

protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {

PrintWriter pw=response.getWriter();

Object o[]=new Object[2];

JSONObject obj1=new JSONObject();

ArrayList<String> list=giveMeNames();

String json="[";

// Final output should be sent to AJAX

if (list.size()>0)

System.out.println("Greater than zero");

else

System.out.println("Less than or equal..."+list.size());

System.out.println("List 0 is "+list.get(0));

for (int i=0;i<list.size();i++){

obj1.put("name",(String)list.get(i));

json=json+obj1+",";

}

json=json.substring(0,json.length()-1);

json=json+"]";

pw.println(json);

}

/\*

\* http ready state:

0 Uninitialized - open() has not been called yet.

1 Loading - send() has not been called yet.

2 Loaded - send() has been called, headers and status are available.

3 Interactive - Downloading, responseText holds the partial data.

4 Completed - Finished with all operations.

Status:

200 completed

404 file not found

\*

\*/

public ArrayList<String> giveMeNames()

{

// Should not write here

ArrayList<String> list=new ArrayList<String>();

try {

Class.forName("oracle.jdbc.driver.OracleDriver");

Connection con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe","username","password");

if (con==null)

System.out.println("null connection");

else

System.out.println("not null connection");

Statement stmt=con.createStatement();

ResultSet rs=stmt.executeQuery("select \* from employee");

while(rs.next()) {

// System.out.println("rec..."+rs.getString(2));

list.add(rs.getString(3));

}

}

catch(Exception e)

{

System.out.println("db not connecting");

}

return list;

}

}

**Question:**

Replace JavaScript with AngularJS code in the above case study