# UCS1601-INTERNET PROGRAMMING

**ASSIGNMENT:6**                                                    **NAME: V SREEDHAR**

**DATE :12.04.2021**                                              **REGNO: 185001161**


## Exercise 6: Autocomplete Feature using AJAX


Develop an AJAX program that implements the Autocomplete feature for filling the country names as given below:

For Example, when N is entered all the names of the country starting with "N" should be listed in drop-down list for user's easy selection. When "Na" is typed only "Namibia" and "Nauru" should be listed for selection. Use Servlet for server side scripting. Use MySQL database to store the countries names.

**Program:**

*(HTML file index.html)*

```html
<html>
    <head>
        <meta charset="utf-8">
        <meta name="viewport" content="width=device-width">
        <title>Ajax Assignment</title>
        <link href="style.css" rel="stylesheet" type="text/css"/>
        <script src="index.js"></script>
        <script src="style.js"></script>
        <style>
        </style>
    </head>
    <body>
        <h1 style="color: rgb(5, 5, 5);">Country Names</h1>
        <input type="text" list="select" onkeyup="disp();" id="input" name="countries">
        <!- I used data list since its provides a input searchbox and scrollable drop-down by default.
        Also it provides the filteration of the options(but I used AJAX here for the autocompletion),
        we can also use a <div> and <p> with onclick function to simulate the same by
        displaying the only top 6- options which can be done at the servlet side-->
        <datalist id="select">
        </datalist>
        <br><br><br>
    </body>
</html>
```

*(Java file country.java)*

```java
import java.sql.*;
import java.io.*;
import jakarta.servlet.*;
import jakarta.servlet.http.*;

public class country extends HttpServlet {
    public void doGet(HttpServletRequest request,HttpServletResponse response) throws ServletException, IOException {

        response.setContentType("text");
        PrintWriter pw=response.getWriter();
        Connection con;
        Statement st;
        ResultSet rs;
        try
        {
            Class.forName("com.mysql.cj.jdbc.Driver");
            try
            {
                con =DriverManager.getConnection("jdbc:mysql://localhost:3306/user","sree","sree");

                try
                {
                    String filter = request.getParameter("val");
                    String srch = " SELECT * FROM countries where name regexp '^"+filter+"' order by name asc;";
                    st=con.createStatement();
                    rs=st.executeQuery(srch);

                    while(rs.next() && filter.length()!=0 ){
                        pw.println("<option>"+rs.getString(1)+"</option>");

                    }
                }
                catch(SQLException e)
                {
                    pw.println(e);
                }
            }
            catch (SQLException e)
            {
                pw.println(e);
```

```java
                    }
                }
                catch(ClassNotFoundException e)
                {
                    pw.println(e);
                }
                pw.close();
        }

}
```

*(Javascript file script.js)*

```javascript
function disp() {
    var xhttp = new XMLHttpRequest();
    var url = "country?val="+document.getElementById("input").value;
    xhttp.onreadystatechange = function() {
      if (this.readyState == 4 && this.status == 200) {
          var val = xhttp.responseText;
          document.getElementById("select").innerHTML=val;
      }
    };
    xhttp.open("GET", url, true);
    xhttp.send();
  }
```

*(CSS file Style.css)*

```css
body {
    display: flex;
    flex-direction: column;
    justify-content: center;
    align-items: center;
    height: 50vh;
    background: #da8739;
}
h1 {
    margin: 0 0 0.25em;
}
input[type=text] {
    background-position: 10px 10px;
}
input[type=text] {
    background-color: #e3ebe8;
    color: rgb(6, 46, 70);
}
```

*(XML file web.xml)*

```xml
<web-app>
<servlet>
<servlet-name>country</servlet-name>
<servlet-class>country</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>country</servlet-name>
<url-pattern>/country</url-pattern>
</servlet-mapping>
</web-app>
```

## SNAPSHOT OF THE OUTPUT: