

INTERNET PROGRAMMING LAB

Ex6

Autocomplete Feature using AJAX

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Learning Objective:

To develop an AJAX program that implements the Autocomplete feature for filling the country names.

Specifications:

- Use Servlet for server-side scripting.
- Use MySQL database to store the countries names.

Code:

index.html

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link rel="stylesheet" href="style.css">
    <title>Auto Complete</title>
  </head>

  <body>
    <br>
    <center><div id="country"><br>
      <label for="cname" style="color:#9B1B30;font-size:30px;font-weight:bold">Country</label><br><br>
      <input type="text" name="cname" id="cname" value="" size="30"
placeholder="Enter country name" oninput="display_list()">
    </div>
    <br>
    <div id="choice" style="color:snow;font-size:20px;font-weight:bold"></div>
    <div id="list"><div>
    </center>
```

```

<script>
    function display_list(){
        document.getElementById("choice").style.display="none";
        document.getElementById("list").style.display="none";
        console.log(document.getElementById("cname").value);
        var xhttp;
        var v=document.getElementById("cname").value;
        var url="List?val="+v;
        xhttp= new XMLHttpRequest();
        xhttp.onreadystatechange= function() {
            if(this.readyState==4 && this.status==200) {
                var val=xhttp.responseText;
                document.getElementById("list").innerHTML=val;
                if(document.getElementById("cname").value!="")
                    document.getElementById("list").style.display="block";
            }
        };
        xhttp.open("GET",url,true);
        xhttp.send();
    }

    function select(a){
        console.log(a.innerHTML);
        document.getElementById("cname").value=a.innerHTML;
        document.getElementById("list").style.display="none";
        document.getElementById("choice").innerHTML="You have selected "+a.innerHTML;
        document.getElementById("choice").style.display="block";
    }
</script>
</body>
</html>

```

style.css

```

input{
    font-size:17px;
    font-family:arial;
    padding: 12px 20px;
    margin: 8px 0;
}

input[type=submit]:hover{
    color:blue;
}

p{
    font-size:18px;
    border:1px solid black;
    border-radius: 5px;
    width:20%;
    height:auto;
}

p:hover{
    color:snow;
    background-color:#5B5EA6;
    cursor:pointer;
}

```

```

body {
    height: auto;
    background-image: linear-gradient(to right,#0072B5,#009B77);
}

```

List.java

```

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

public class List extends HttpServlet
{
    public void doGet(HttpServletRequest request, HttpServletResponse
response) throws ServletException, IOException
    {
        String JDBC_DRIVER = "com.mysql.jdbc.Driver";
        String DB_URL="jdbc:mysql://localhost/country_name";

        String USER = "root";
        String PASS = "9500";

        response.setContentType("text/html");
        PrintWriter out = response.getWriter();

        String cname=request.getParameter("val");
        try {
            // Register JDBC driver
            Class.forName("com.mysql.jdbc.Driver");

            // Open a connection
            Connection conn = DriverManager.getConnection(DB_URL, USER, PASS);

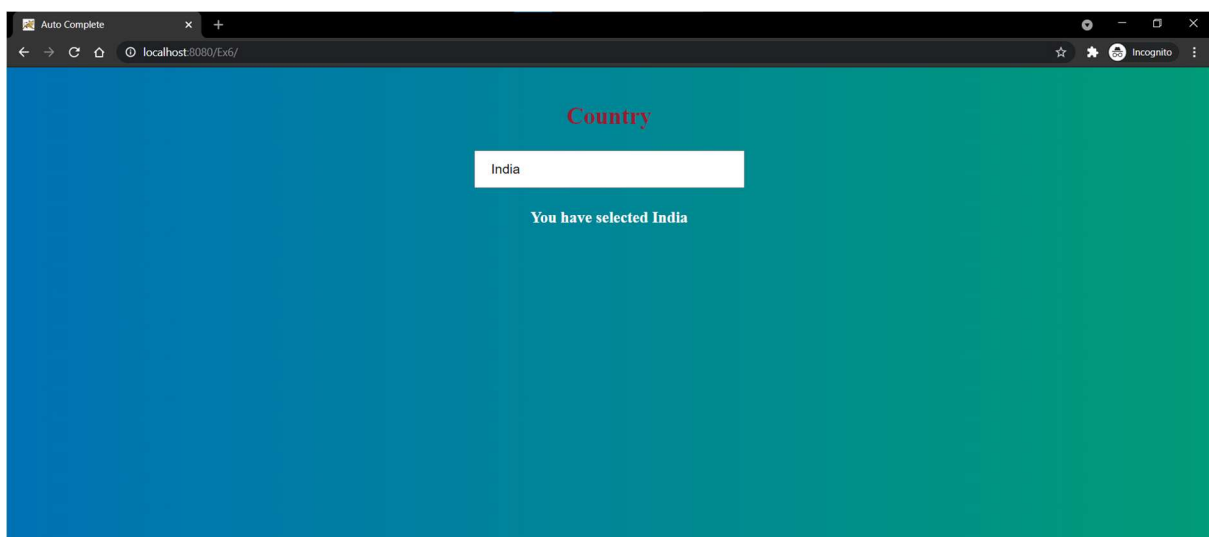
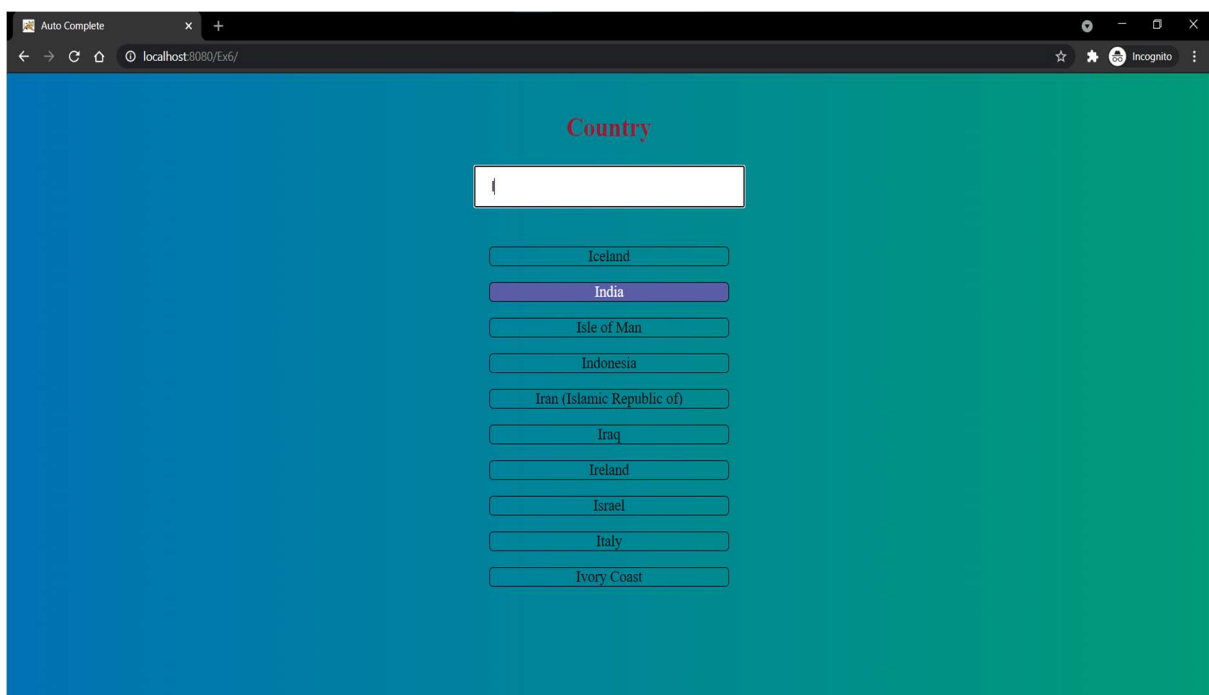
            // Execute SQL query
            Statement stmt = conn.createStatement();
            String sql="SELECT name FROM countries WHERE name LIKE
'"+cname+"%'";
            ResultSet rs = stmt.executeQuery(sql);
            while(rs.next())
            {
                out.println("<p
onclick='select(this) '>"+rs.getString("name")+"</p>");
            }
            // Clean-up environment
            rs.close();
            stmt.close();
            conn.close();
        } catch(SQLException se) {
            //Handle errors for JDBC
            se.printStackTrace();
        } catch(Exception e) {
            //Handle errors for Class.forName
            e.printStackTrace();
        }
    }
}

```

web.xml

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

Screenshots:



Learning Outcomes:

- I have understood the working of ajax with servlet.
- I have learnt how to generate dynamic html response using ajax.
- I have learnt about onreadystatechange property and asynchronous request in ajax.
- I have learnt the database operations in MySQL and using % for pattern matching in sql query.
- I have understood the code for connecting database and servlet part with ajax.