



AJAX Application



Agenda

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AJAX Application

Objectives

At the end of this module, you will be able to:

- Learn to develop a simple Suggest Application using AJAX

Ajax Application



Prerequisites for running Ajax Application

- AJAX does not have huge API requirements compared to other technologies
- For an AJAX Application to execute, the browser must support AJAX
- For Microsoft Internet Explorer, IE 6.0 or above is recommended, as the earlier versions does not support AJAX
- As we are going to fetch response from the server, a web server at least is required
- Since the request and response are carried out simultaneously, it is preferable that the RAM is at least 512MB or more

Suggest Application

Case Study :

Create an application that takes city names as input from the user.

- While taking the input, for each key press it is going to provide a list of city names starting with the entered keywords, as suggestion
- Use AJAX to generate the suggestion from a servlet having an array of city names

Steps to follow

- For creating the application we have to follow the following steps:
 1. Create a **HTML file** with a **text box** and suggestion **div**
 2. Create a **Javascript file** with AJAX code
 3. Create a **Server-Side code (Servlet)** for processing the application request and generating the response

Step 1- CitySuggest.html

```
<html>
  <head>
    <title>City Suggest</title>
    <script src="CityApps.js">
    </script>
  </head>
  <body>
    <!-- Text box to type city names -->
    Enter City <input type="text" name="city_name"
onkeyup="sendRequest(this.value)"/>
    <p><strong>Suggestions:</strong></p>
    <!-- Div where the application response shall be
displayed -->
    <div id="city_suggest"></div>
  </body>
</html>
```


Step 2- CityApps.js (Javascript)

```
var req;//global variable
//function to get the keyword and generate request object
function sendRequest (cname)
{
//for firefox/safari/opera/google chrome
if (window.XMLHttpRequest) {
req = new XMLHttpRequest( );
}
else if (window.ActiveXObject)//for IE
{req = new ActiveXObject("Microsoft.XMLHTTP");}
//concatenate the city name as parameter value to url
var url = "NameSuggest?city_n="+cname;
//check server request state and invoke getResponse()
req.onreadystatechange = getResponse;
req.open("GET", url, true);//send request to server
req.send(null);
}
```

Step 2- CityApps.js (Javascript) (Contd.).

```
//function to get the response and display in the specific
area
function getResponse()
{
if (req.readyState==4) //if request is complete
{
if (req.status == 200) //if target page is found
{
//write the response text in the div area
document.getElementById("city_suggest").innerHTML =
    req.responseText;;
}
}
}
```

Step 3- NameSuggest.java (Servlet)

```
/*
 * Servlet Class to process a keyword
 * and return matching city names as suggestion
 * from a list of city names
 */
package com.wipro;

import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
```

Step 3- NameSuggest.java (Servlet) (Contd.).

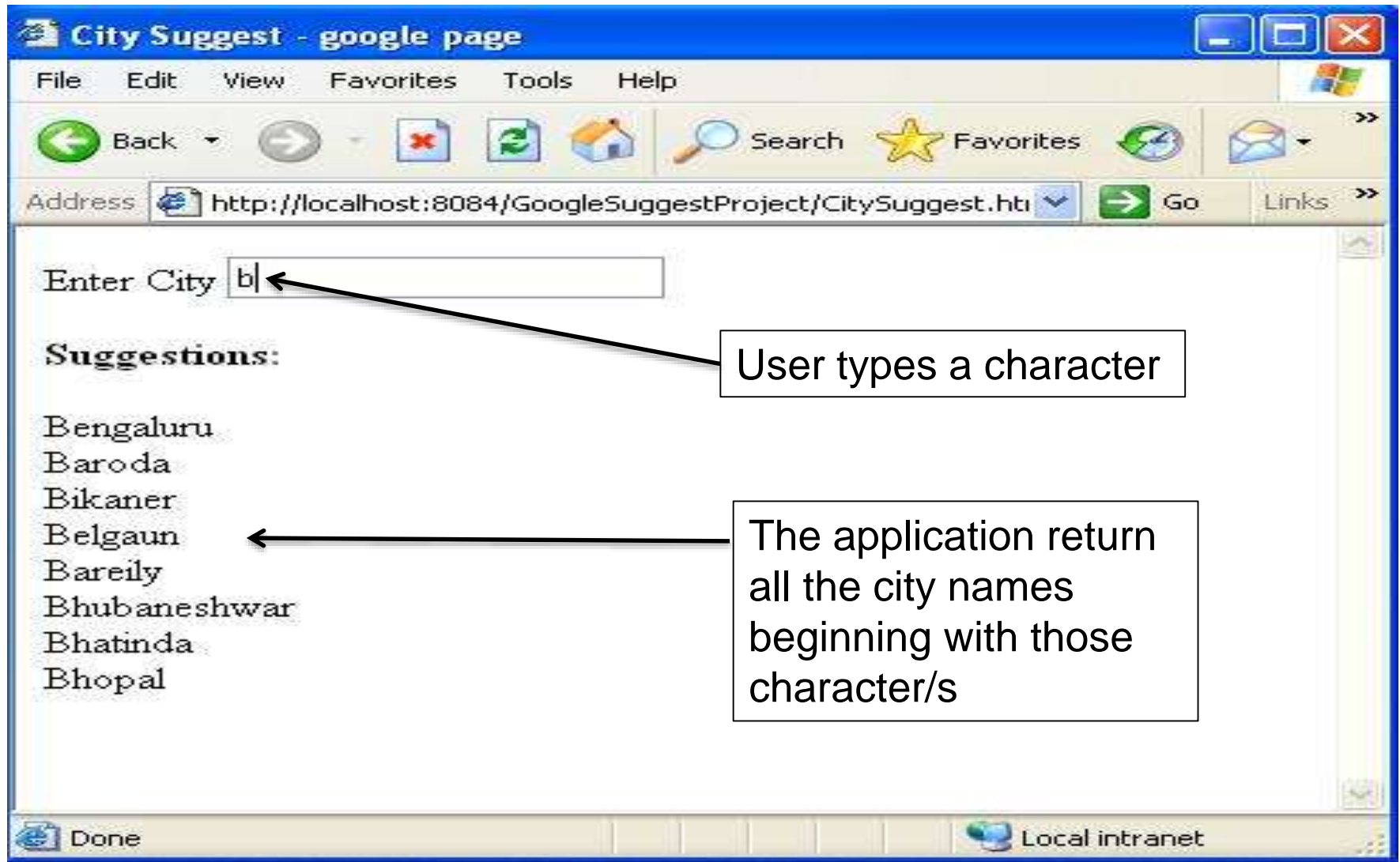
```
public class NameSuggest extends HttpServlet {
    @Override
    protected void doGet(HttpServletRequest request,
        HttpServletResponse response) throws ServletException,
        IOException {
        try {
            response.setContentType("text/html;charset=UTF-8");
            PrintWriter out = response.getWriter();
            String suggestion="";
            //Array containing city names
            String cities[]={***see declaration from notes***}
            //fetch the city name from application request
            String city_name=request.getParameter("city_n");
            if(city_name.length()>0)
            {
                for(int i=0;i<cities.length;i++)
                {
```

Step 3- NameSuggest.java (Servlet) (Contd.).

```
/*convert the array index value and the request parameter  
value to uppercase and then check if the array index  
value(city name) is prefixed with the supplied string */
```

```
        if(cities[i].toUpperCase().startsWith  
            (city_name.toUpperCase()))  
        {  
            suggestion=suggestion+cities[i]+"<br>";  
        }  
    }  
}  
out.println(suggestion);  
}  
catch(Exception e)  
{e.printStackTrace();}  
}  
}
```

Suggest Application Output



Summary

In this module, you were able to:

- Develop simple suggest application using AJAX

References

- w3schools.com (2012). AJAX Introduction. Retrieved April 30, 2012, from, <http://www.w3schools.com/ajax/default.asp>
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- Adaptive path (2012). Ajax: A New Approach to Web Applications. Retrieved May 2, 2012, from, <http://www.adaptivepath.com/ideas/ajax-new-approach-web-applications>



Thank You

