How to use JsonPowerDB in Web pages

Difference between HTTP and XMLHTTP requests

HttpRequest is a server side object that represents a request to the server.

XMLHttpRequest in a standard javascript object that allows you to make HTTP Requests from the browser in javascript.

In summary - one works in the browser, the other in the web server. They also have completely different roles. XMLHttpRequest is for fetching web resources within the browser. HttpRequest represents an incoming request.

The XMLHttpRequest object can be used to request data from a web server.

- Update a web page without reloading the page
- Request data from a server - after the page has loaded
- Receive data from a server - after the page has loaded
- Send data to a server - in the background

Difference between type “SUBMIT” vs type “BUTTON”

<input type="button"> can be used anywhere, not just within form and they do not submit form if they are in one. Much better suited with Javascript.

<input type="submit"> should be used in forms only and they will send a request (either GET or POST) to specified URL. They should not be put in any HTML place.

What is AJAX

- AJAX = Asynchronous JavaScript And XML.
- AJAX is not a programming language.
- AJAX just uses a combination of:
    - A browser built-in XMLHttpRequest object (to request data from a web server)
    - JavaScript and HTML DOM (to display or use the data)

Example form page:

```
<!DOCTYPE html>
<!--
To change this license header, choose License Headers in Project Properties.
To change this template file, choose Tools | Templates
and open the template in the editor.
-->
<html lang="en">
       <head>
       <title>Bootstrap Example</title>
       <meta charset="utf-8">
       <meta name="viewport" content="width=device-width, initial-scale=1">
       <link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/css/bootstrap.min.css">
       <script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>
       <script
src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/bootstrap.min.js"></script>
       </head>
       <body>
       <div class="container">
              <h2>Vertical (basic) form</h2>
              <form id="empForm" method="post">
              <div class="form-group">
                     <span><label for="empId">Employee ID:</label> <label id="empIdMsg">
</label></span>
                     <input type="text" class="form-control" name="empId" id="empId"
                            placeholder="Enter Employee ID" required>
              </div>
              <div class="form-group">
                     <label for="empName">Employee Name:</label>
                     <input type="text" class="form-control" id="empName"
placeholder="Enter Employee Name" name="empName">
              </div>
              <div class="form-group">
                     <label for="empEmail">Email:</label>
                     <input type="email" class="form-control" id="empEmail"
placeholder="Enter Employee Email" name="empEmail">
              </div>
              <input type="button" class="btn btn-primary" id="empSave" value="Save"
onclick="saveEmployee();">
              </form>
       </div>

       <script>
              $("#empId").focus();
```

```
function validateAndGetFormData() {
var empIdVar = $("#empId").val();
if (empIdVar === "") {
       alert("Employee ID Required Value");
       $("#empId").focus();
       return "";
}

var empNameVar = $("#empName").val();
if (empNameVar === "") {
       alert("Employee Name is Required Value");
       $("#empName").focus();
       return "";
}

var empEmailVar = $("#empEmail").val();
if (empEmailVar === "") {
       alert("Employee Email is Required Value");
       $("#empEmail").focus();
       return "";
}
var jsonStrObj = {
       empId: empIdVar,
       empName: empNameVar,
       empEmail: empEmailVar,
};

return JSON.stringify(jsonStrObj);
}

// This method is used to create PUT Json request.
function createPUTRequest(connToken, jsonObj, dbName, relName) {
var putRequest = "{\n"
             + "\"token\" : \""
             + connToken
             + "\","
             + "\"dbName\": \""
             + dbName
             + "\",\n" + "\"cmd\" : \"PUT\",\n"
             + "\"rel\" : \""
             + relName + "\","
             + "\"jsonStr\": \n"
             + jsonObj
             + "\n"
             + "}";
return putRequest;
}

function executeCommand(reqString, dbBaseUrl, apiEndPointUrl) {
var url = dbBaseUrl + apiEndPointUrl;
var jsonObj;
$.post(url, reqString, function (result) {
       jsonObj = JSON.parse(result);
}).fail(function (result) {
       var dataJsonObj = result.responseText;
       jsonObj = JSON.parse(dataJsonObj);
});
return jsonObj;
}

function resetForm() {
$("#empId").val("")
$("#empName").val("");
$("#empEmail").val("");
$("#empId").focus();
}


function saveEmployee() {
```

```
              var jsonStr = validateAndGetFormData();
              if (jsonStr === "") {
                     return;
              }

              var putReqStr = createPUTRequest("90936861|-31948784479254024|90932362",
                            jsonStr, "SAMPLE", "EMP-REL");

              alert(putReqStr);
              jQuery.ajaxSetup({async: false});
              var resultObj = executeCommand(putReqStr,
"http://api.login2explore.com:5577", "/api/iml");
              alert(JSON.stringify(resultObj));
              jQuery.ajaxSetup({async: true});

              resetForm();
              }


       </script>

       </body>
</html>
```

Example form page (Modified):

We have a javascript library jpdb-commons.js that is used to create requests and do ajax calls and help programmers to focus mainly on their page logic.

# And remove following two functions from the page:

- `createPUTRequest()`
- `executeCommand()`

# Use following javascript at the beginning below the other javascripts.

```
<script src="http://login2explore.com/jpdb/resources/js/0.0.3/jpdb-commons.js"></script>
```

# Rename the method call **executeCommand()** in saveEmployee() method to **executeCommandAtGivenBaseUrl()**