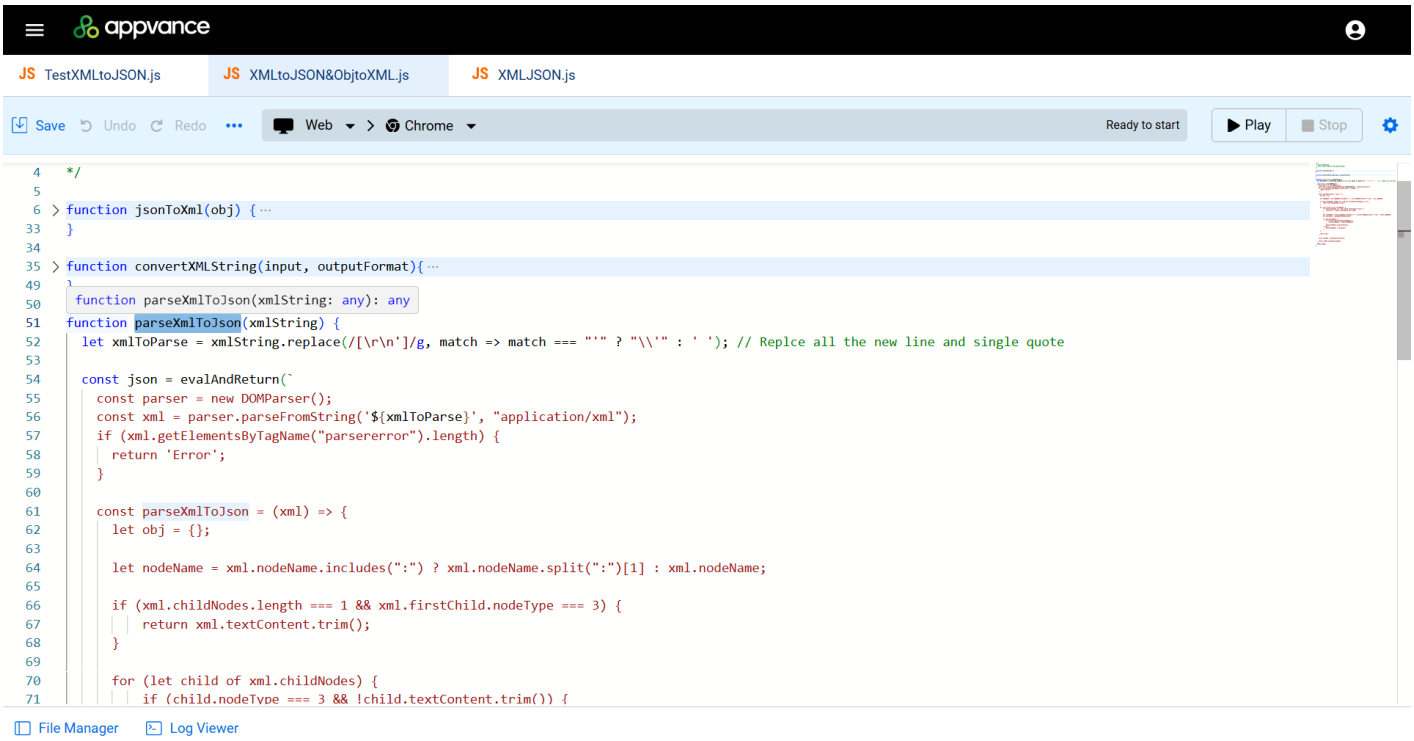
Convert XML Request to JSON

This example details how to convert XML responses generated from a Services Workbench script to JSON and then back to XML using Designer `.js` scripts.

- Custom `.js` functions are written for the conversion of XML to JSON and JSON to XML. in javascript (.js) file.
- In a Services Workbench script, the response data is stored in locker so that it can be retrieved and used in Designer `.js` script.
- The Designer `.js` script includes the previous two files, and once the data is retrieved from locker, uses the custom `.js` function to parse the XML back to JSON and perform the required validations.

XML to JSON Function

Converts XML to JSON and JSON to XML.



Sample Script

XMLtoJSON&ObjtoXML.js

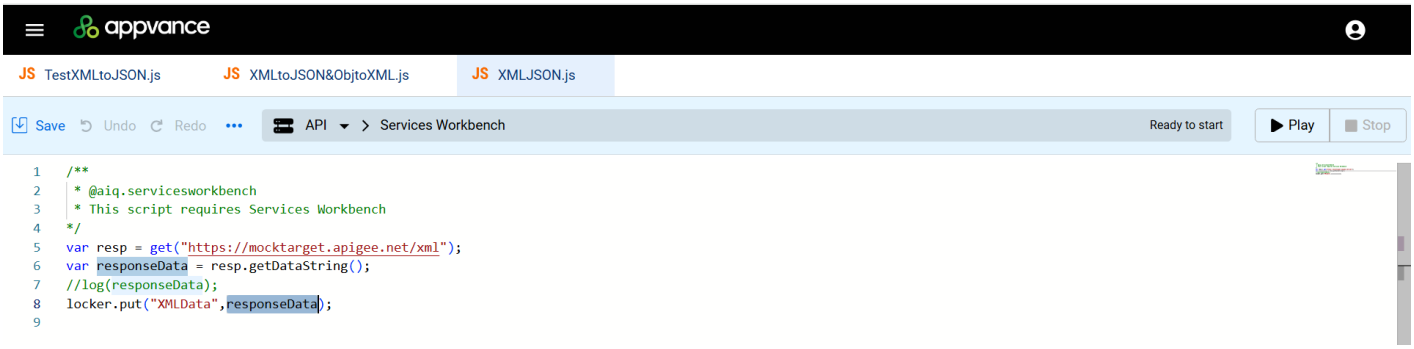
```
/**
 * @aiq.webdesigner
 * This script requires AIQ Web Designer
*/
function jsonToXml(obj) {
    // create xml string
    var xml = '';//'<?xml version="1.0" encoding="UTF-8"?>';
    //loop through and add each property as a an xml tag as well as sub properties
    for (var prop in obj) {
        if (!obj.hasOwnProperty(prop)) {
            continue;
        }
        if (obj[prop] == undefined)
            continue;
        xml += "<" + prop + ">";
        if (typeof obj[prop] == "object")
            xml += jsonToXml(new Object(obj[prop]));
        else
            xml += convertXMLString(obj[prop], 'xml');
        xml += "</" + prop + ">";
    }
    // searches the string for numbers surrounded by underscores and removes them; used for
multiple properties in the json that are set up an an object instead of an array
    let reducedXML = xml.replace(/([_]\d)\w+/g, '');
    return reducedXML;
}
function convertXMLString(input, outputFormat){
  if(typeof input === 'string'){
    if(outputFormat === 'xml'){
      return input.replace(/(&)/g, '&amp;').replace(/(<)/g, '&lt;').replace(/(>)/g,
'&gt;').replace(/(')/g, '&apos;')
    } else if(outputFormat === 'string'){
      return input.replace(/(&lt;)/g, '<').replace(/(&gt;)/g, '>').replace(/(&apos;)/g,
"'").replace(/(&amp;)/g, '&')
    } else {
      // invalid outputFormat
      return input;
    }
```

```
  } else {
    // not a stringF
    return input;
  }
}
function parseXmlToJson(xmlString) {
  let xmlToParse = xmlString.replace(/[\r\n']/g, match => match === "'" ? "\\'" : ' '); //
Replce all the new line and single quote
  const json = evalAndReturn(`
    const parser = new DOMParser();
    const xml = parser.parseFromString('${xmlToParse}', "application/xml");
    if (xml.getElementsByTagName("parsererror").length) {
      return 'Error';
    }
    const parseXmlToJson = (xml) => {
      let obj = {};
      let nodeName = xml.nodeName.includes(":") ? xml.nodeName.split(":")[1] : xml.nodeName;
      if (xml.childNodes.length === 1 && xml.firstChild.nodeType === 3) {
          return xml.textContent.trim();
      }
      for (let child of xml.childNodes) {
          if (child.nodeType === 3 && !child.textContent.trim()) {
              continue; // Ignore whitespace text nodes
          }
          let childName = child.nodeName.includes(":") ? child.nodeName.split(":")[1] :
child.nodeName;
          let childJson = parseXmlToJson(child);
          if (obj[childName]) {
              if (!Array.isArray(obj[childName])) {
                  obj[childName] = [obj[childName]];
              }
              obj[childName].push(childJson);
          } else {
              obj[childName] = childJson;
          }
      }
      return obj;
    }
    const jsonObj = parseXmlToJson(xml);
```

```
    return JSON.stringify(jsonObj);
  `)
  return json;
}
```

Services Workbench Script

The response data is stored in locker so that it can be retrieved and used in a Designer `.js` script.



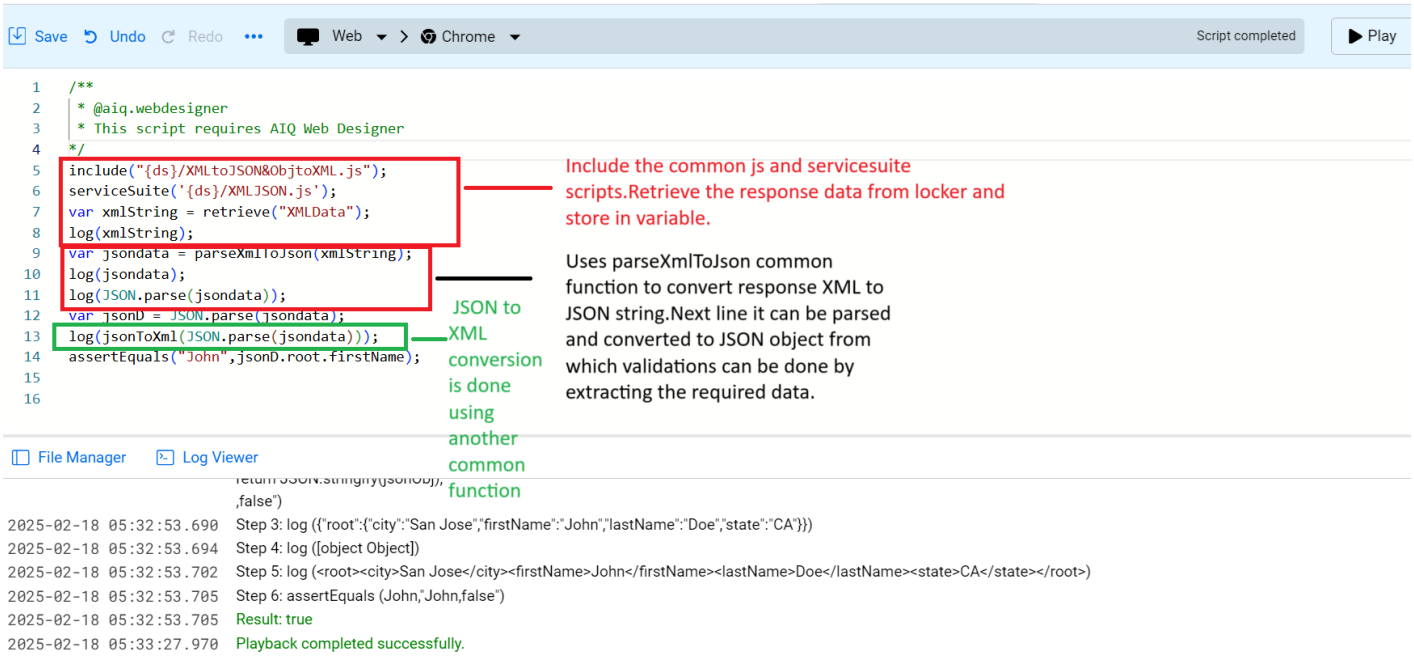
Sample Script

XMLJSON.js

```
/**
 * @aiq.servicesworkbench
 * This script requires Services Workbench
*/
var resp = get("https://mocktarget.apigee.net/xml");
var responseData = resp.getDataString();
//log(responseData);
locker.put("XMLData",responseData);
```

Designer Script

Includes the previous two scripts, and once the data is retrieved from locker, uses the custom `.js` function to parse the XML back to JSON and perform the required validations.



Sample Script

TestXMLtoJSON.js

```
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14
/**
 * @aiq.webdesigner
 * This script requires AIQ Web Designer
*/
include("{ds}/XMLtoJSON&ObjtoXML.js");
serviceSuite('{ds}/XMLJSON.js');
var xmlString = retrieve("XMLData");
log(xmlString);
var jsondata = parseXmlToJson(xmlString);
log(jsondata);
log(JSON.parse(jsondata));
var jsonD = JSON.parse(jsondata);
```

```
log(jsonToXml(JSON.parse(jsondata)));
assertEquals("John",jsonD.root.firstName);
```

- Lines 5 through 8 : Includes the common JavaScript and Service Workbench scripts. Retrieves the data from the locker and store in a variable.
- Lines 9 through 11 : Uses the `parseXmlToJson` function to convert the response XML to JSON string. Next line it can be parsed and converted to JSON object, from which validations can be performed by extracting the required data.
- Line 13 : JSON to XML conversion is done using the `JsonToXml` function.

Resources : Sample Scripts

You can download the sample scripts from these links.

- XMLtoJSON&ObjtoXML.js
- XMLJSON.js
- TestXMLtoJSON.js

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If you have any feedback on this topic, please contact us at documentation@appvance.ai

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