

Assignment 9: JSON Song List

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url

html: <https://yuehandai.github.io/Comp20-Web/Assignment9/songList.html>

json: <https://yuehandai.github.io/Comp20-Web/Assignment9/songs.json>

Question

Which do you prefer: XML or JSON? And why?

I prefer JSON because JSON is closer to the classes or the objects in c++ and it has a lot of flexibility to work on. Also, JSON is compatible with HTML which I like a lot for formatting, and compared with JSON, XML is not compatible with HTML and also less convenient for the styling.

Code

Html

```
<!doctype html>
<html>
<head>
<meta charset="utf-8">
<title>Song List</title>
<script src="https://code.jquery.com/jquery-3.1.1.min.js" integrity="sha256-
hVVnYaiADRT02PzUGmuLJr8BLUSjGIZSDYGMlJLv2b8=" crossorigin="anonymous">
</script>
<link rel="stylesheet" href="style.css">
<script language = "javascript">
    var jsondata = [];
    var list = [];
    var filterSong = [];

    function write(){
        $.get( "https://raw.githubusercontent.com/YuehanDai/Comp20-
web/main/Assignment9/songs.json",
        function( data ) {
            jsondata = JSON.parse(data);
            writeRaw();
            writeList();
            writeFilter();
        })
    }

    function writeRaw(){
        str = JSON.stringify(jsondata) + "</div>";
        e = document.getElementById("raw");
```

```

        e.innerHTML = str;
    }

    function writeList(){
        var strHTML = "" ;
        jsonData.forEach(function(song) {
            strHTML += "<div id = 'oneSong'><h3>"
                + song.name + "</h3>"
                + "<strong>Artist: </strong>"
                + song.artist + "<br>"
                + "<strong>Genre: </strong>";
            for (i = 0; i < song.genre.length; i++){
                if (i == 0){
                    strHTML += song.genre[i];
                } else {
                    strHTML += ", " + song.genre[i];
                }
            }
            strHTML += "<br>"
                + "<strong>Year Released: </strong>"
                + song.year + "<br>"
                + "<strong>Link: </strong><a href='"
                + song.link + "'">"
                + song.link
                + "</a> <br>"
            strHTML += "</div>";
        })
        e = document.getElementById("songs");
        e.innerHTML = strHTML;
    }

    function writeFilter(){
        readGenre();
        writeSelect();
    }

    function readGenre(){
        jsonData.forEach(function(song){
            song.genre.forEach(function(genres){
                if(!inList(genres)){
                    list.push(genres);
                }
            });
        });
    }

    function inList(genreName){
        var result = false;
        list.forEach(function(genreInList){
            if (genreInList == genreName){
                result = true;
            }
        })
        return result;
    }

    function writeSelect(){
        list.sort();
    }

```

```

    str = "<select name='genre' id = 'genre' size='1'>";
    list.forEach(function(genres){
        str += "<option>" + genres + "</option>";
    })
    str += "</select>"
        + "</form>";
    e = document.getElementById("selections");
    e.innerHTML = str;
}

function filter(){
    filterSong = [];
    userchoice = readChoice();
    jsondata.forEach(function(song){
        song.genre.forEach(function(genres){
            if (genres == userchoice){
                filterSong.push(song.name);
            }
        })
    })
    writeSongs();
}

function readChoice(){
    tag = $('#genre').find(":selected").text();
    return tag;
}

function writeSongs(){
    str = "<ul>";
    filterSong.forEach(function(songName){
        str += "<li>"
            + songName
            + "</li>";
    })
    str += "</ul>";
    e = document.getElementById("result");
    e.innerHTML = str;
}
</script>
</head>

<body>
    <h1>Assignment 9: JSON Song List</h1>
    <h2>Raw String</h2>
    <div id = "raw">&nbsp;</div>

    <h2>Song List</h2>
    <div id = "songs">&nbsp;</div>

    <h2>View by Filter: </h2>
    <div>
        <form>
            <div id = 'selections'>&nbsp;</div>
            <input type='button' value='Search by Genre' onclick = "filter()">
        </form>
    </div>

```

```
<div id = 'result'>&nbsp;</div>

<script language = "javascript">write()</script>

</body>
</html>
```

Json

```
[
{
  "name" : "Merry Christmas, Mr. Lawrence",
  "artist" : "Ryuichi Sakamoto(坂本龍一)",
  "genre" : ["Instrumental"],
  "year" : 1983,
  "link" : "https://www.youtube.com/watch?v=LGS_vGt0MY8"
},
{
  "name" : "Rain",
  "artist" : "Ryuichi Sakamoto(坂本龍一)",
  "genre" : ["Instrumental"],
  "year" : 1996,
  "link" : "https://www.youtube.com/watch?v=8tKfYwc4zxA"
},
{
  "name" : "Lemon",
  "artist" : "Yonezu Kenshi(米津玄師)",
  "genre" : ["J-pop", "Japanese"],
  "year" : 2018,
  "link" : "https://www.youtube.com/watch?v=7PowTFw-jAA"
},
{
  "name" : "Shape of My Heart",
  "artist" : "Sting",
  "genre" : ["Pop rock", "English"],
  "year" : 1993,
  "link" : "https://www.youtube.com/watch?v=QK-Z1K67uaA"
},
{
  "name" : "Explosive",
  "artist" : "David Garrett",
  "genre" : ["Classical", "Instrumental"],
  "year" : 2015,
  "link" : "https://www.youtube.com/watch?v=vZvwg1p20I4"
},
{
  "name" : "Faded",
  "artist" : "Alan walker",
  "genre" : ["EDM", "English"],
  "year" : 2015,
  "link" : "https://www.youtube.com/watch?v=60ItHLz5WEA"
},
{
  "name" : "Libertango",
  "artist" : "Yoyo Ma",
  "genre" : ["Classical", "Instrumental"],
```

```

    "year" : 1997,
    "link" : "https://www.youtube.com/watch?v=wdoHeJBbNs0"
  },
  {
    "name" : "Anatani Deawanakereba Kasetstoutouka",
    "artist" : "Aimer",
    "genre" : ["J-pop", "Japanese"],
    "year" : 2012,
    "link" : "https://www.youtube.com/watch?v=iA9Ctaqo3Zc"
  },
  {
    "name" : "The Humming",
    "artist" : "Enya",
    "genre" : ["Celtic", "English"],
    "year" : 2015,
    "link" : "https://www.youtube.com/watch?v=FOP_PPavOLA"
  },
  {
    "name" : "Echoes in Rain",
    "artist" : "Enya",
    "genre" : ["New-age", "English"],
    "year" : 2015,
    "link" : "https://www.youtube.com/watch?v=8DDHu1o485k"
  }
]

```

CSS

```

@charset "utf-8";
/* CSS Document */

*{
  font-family: Gotham, "Helvetica Neue", Helvetica, Arial, "sans-serif";
}

body {
  display: block;
  border: 5px solid #000;
  width: 70%;
  margin: 5%;
}

h1 {
  display: block;
  border: 5px solid #000;
  font-size: 40px;
  padding: 2%;
  margin: 1%;
  font-weight: bold;
}

h2 {
  display: block;
  border: 5px solid #000;
  font-size: 25px;
  padding: 1%;
}

```

```
    margin: 1%;

}

input {
    display: inline-block;
}

li {
    display: inline-block;
    border: 2px solid #000;
    margin: 1%;
    padding: 0.5%;
}

a {
    text-decoration: none;
    color: #000;
}

a:hover {
    text-decoration: underline;
}

#raw {
    display: block;
    border: 5px solid #000;
    font-size: 15px;
    padding: 1%;
    margin: 1%;
    font-family: Georgia, serif;
}

#selections {
    display: inline-block;
}

#oneSong {
    border: 5px solid #000;
    font-size: 15px;
    padding: 1%;
    margin: 1%;
}

#oneSong h3 {
    text-decoration: underline;
}

form {
    border: 5px solid #000;
    padding: 1%;
    margin: 1%;
}

#result {
    border: 5px solid #000;
    margin: 1%;
    padding: 0%;
}
```

```
}  
  
ul {  
  padding: 0;  
  margin: 0;  
}
```