IPI International

Working with Web SQL

Name : IPI Media Player Web SQL
Type : HTML
Designer : Paul I Ighofose
Date Created : 29/08/2017
Date Updated : 20/10/2017
Requirements : Google Chrome, iPhone / iPad Browser, WebSQL enabled Browser
Function : SQLite Database and Media Player

Introduction

Determined to achieve data storage functionality with my original Media Player App, I am happy to have embraced the Web SQL environment. Utilization of the Web SQL API I have found that some asynchronous quirks can be overcome.

Package Structure

The main documents needed to run this package are all included in the ZIP file. The HTML file is encoded as UTF 8 and the HTM as Widows 1252. The additional files Radio Db.htm and YouTube Db.htm can be used to load sample entries in to the default table IPI Media.

Operational Guide

Save either the HTM or HTML file to either of the following:

- Disk drive / Flash disk containing media that is available over Bluetooth or Wi-Fi networks
- IOS App with Browser and file storage functions
- Intranet or Internet folder

1. Open the file using either Google chrome or your device browser

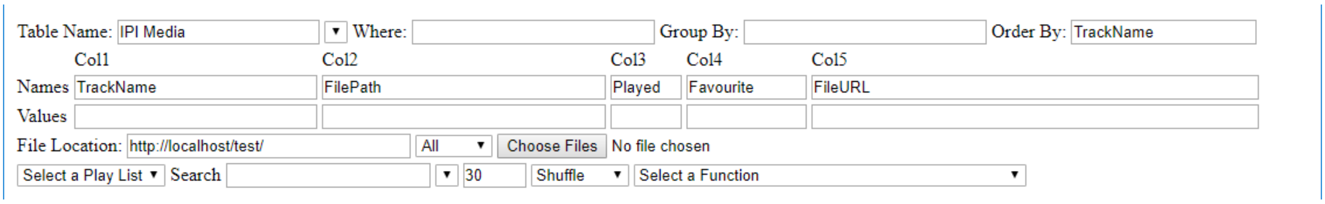


Table Name: IPI Media ▾ Where: Group By: Order By: TrackName

	Col1	Col2	Col3	Col4	Col5
Names	TrackName	FilePath	Played	Favourite	FileURL
Values					

File Location: http://localhost/test/ All ▾ Choose Files No file chosen

Select a Play List ▾ Search ▾ 30 Shuffle ▾ Select a Function ▾

2. The default **Table Name** is IPI Media. Using different Table Names will allow you to split your data in to smaller data sets should you require speedier results table updates. It can also act as creating favourite lists. Only file URL/URI links are stored. When no table has been created or all tables have been dropped the **selector** next to the table name will have no entries in it. Any existing table can be selected in the selector which in turn will update the text of the file name.
3. To build a default table select the **Build Db Table** option from the Select a Function selector

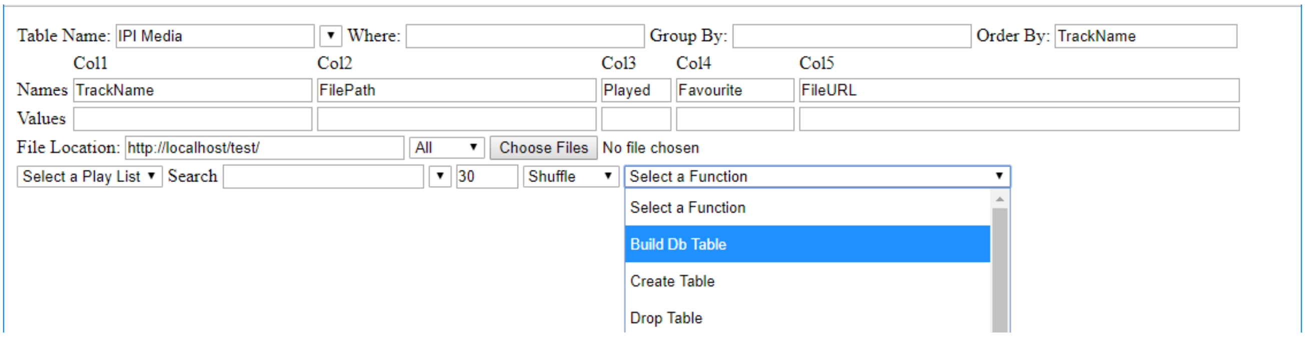


Table Name: IPI Media ▾ Where: Group By: Order By: TrackName

	Col1	Col2	Col3	Col4	Col5
Names	TrackName	FilePath	Played	Favourite	FileURL
Values					

File Location: http://localhost/test/ All ▾ Choose Files No file chosen

Select a Play List ▾ Search ▾ 30 Shuffle ▾ Select a Function ▾

4. This will expose the editor text area with the default table design. Then select the **Create Table** option from the Select a Function selector shown in 3. above

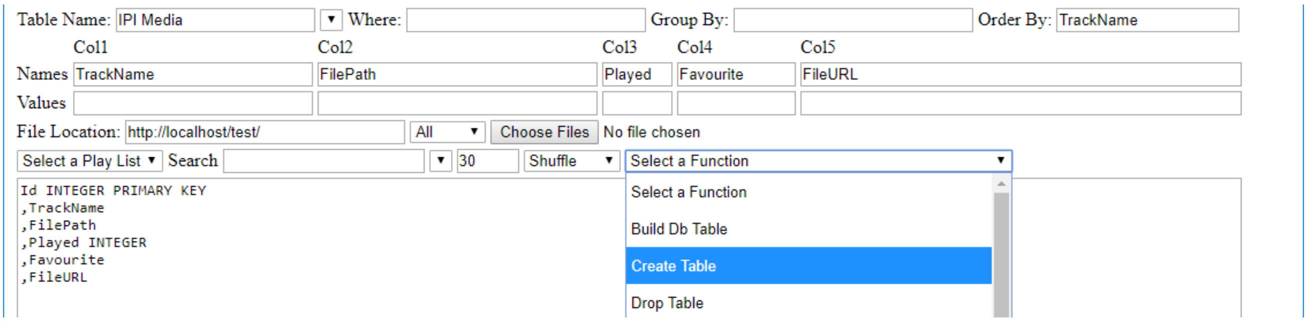


Table Name: IPI Media Where: Group By: Order By: TrackName

Names TrackName FilePath Played Favourite FileURL

File Location: http://localhost/test/ All No file chosen

Search 30 Shuffle

```
Id INTEGER PRIMARY KEY
,TrackName
,FilePath
,Played INTEGER
,Favourite
,FileURL
```

5. As you can see, the default columns are present in the input boxes for the line beginning with **Names.** Making these editable allows you more choice on the design of your tables. Use the input boxes on the line beginning with **Values** to enter your row entries followed by selecting the **Insert Row** option from the Select a Function selector. Also note below, that you can use the results of the populated table to create insert statements. Creating as HTML will include Table, TR and TD element tags around each statement so that it can be copied and saved as a HTML document that can be accessed by other devices to populate their own databases. By changing the Table Name before creation will populate the insert statements with the Name currently displayed. Hence creating the inserts as a Table will allow you to upload you filtered/non filtered results in to another table.

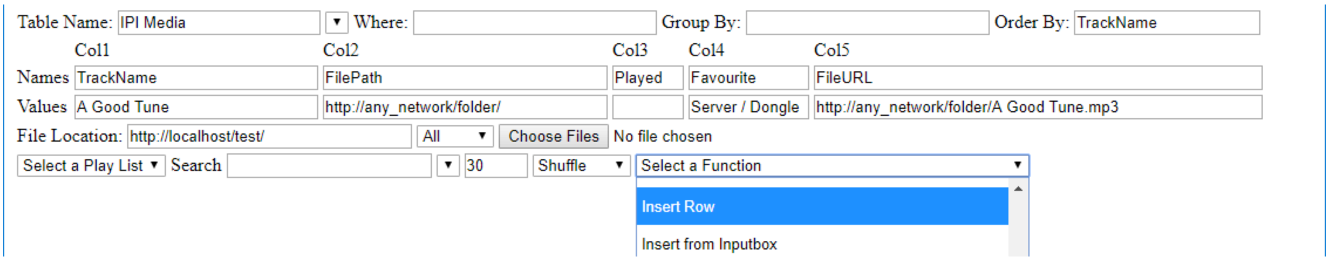


Table Name: IPI Media Where: Group By: Order By: TrackName

Names TrackName FilePath Played Favourite FileURL

Values A Good Tune http://any_network/folder/ Server / Dongle http://any_network/folder/A Good Tune.mp3

File Location: http://localhost/test/ All No file chosen

Search 30 Shuffle

6. To refresh or view the results table select the **View/Refresh Results Table** option. The results displayed can be filtered using the **Where** condition input, grouped using the **Group By** input and ordered using the **Order By** input.

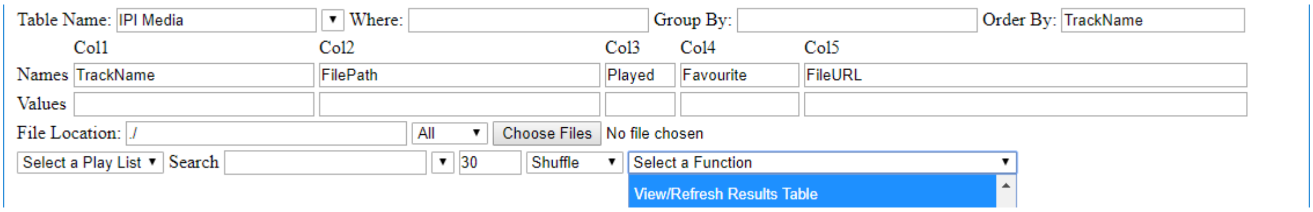


Table Name: IPI Media Where: Group By: Order By: TrackName

Names TrackName FilePath Played Favourite FileURL

File Location: ./ All No file chosen

Search 30 Shuffle

7. Mistakes happen! The **Delete Row** option will prompt you with a Where Statement but will only affect the current Table Name and if exists Where filter. The **Delete All** will not prompt but again will be determined by the current table and where filter. The **Reset All** like above will only affect the filtered records setting their Played Value to 0. The **Replace Text** will be restricted to the current Table but will prompt you for 2 errors, 2 replacements and the column number to carry out those replacements in.

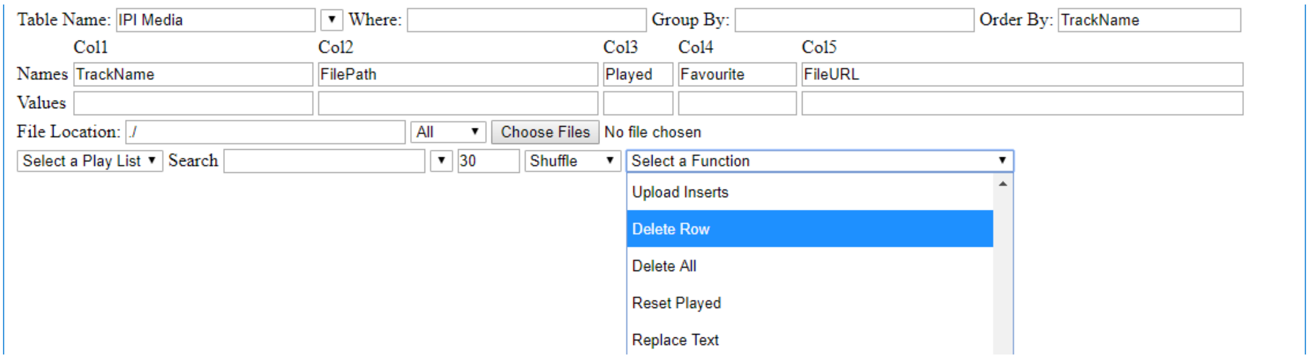


Table Name: IPI Media Where: Group By: Order By: TrackName

Names TrackName FilePath Played Favourite FileURL

File Location: ./ All No file chosen

Search 30 Shuffle

8. The iFrame is used to display web pages, the video element and reformatted tables to use in uploads. You can display it by selecting the **Show/Hide iFrame** option. The Copy iFrame option will provide a prompt containing the inner text of the iFrame as a single line string. This sometimes avoid resettling with IOS's rejigging display. Get Document Location, Get iFrame Location and Get iFrame Video Source will populate the FilePath value input. Copying the returned value of the Get Document Location function in to the File Location will then cause the iFrame to load the parent page in on itself. Couple this with the Upload from Database Results in iFrame option will allow you to drop a table currently displayed in both the parent and iFrame. Change column structure renaming or adding columns then load back the results being held in the iFrame (no need for temp db)

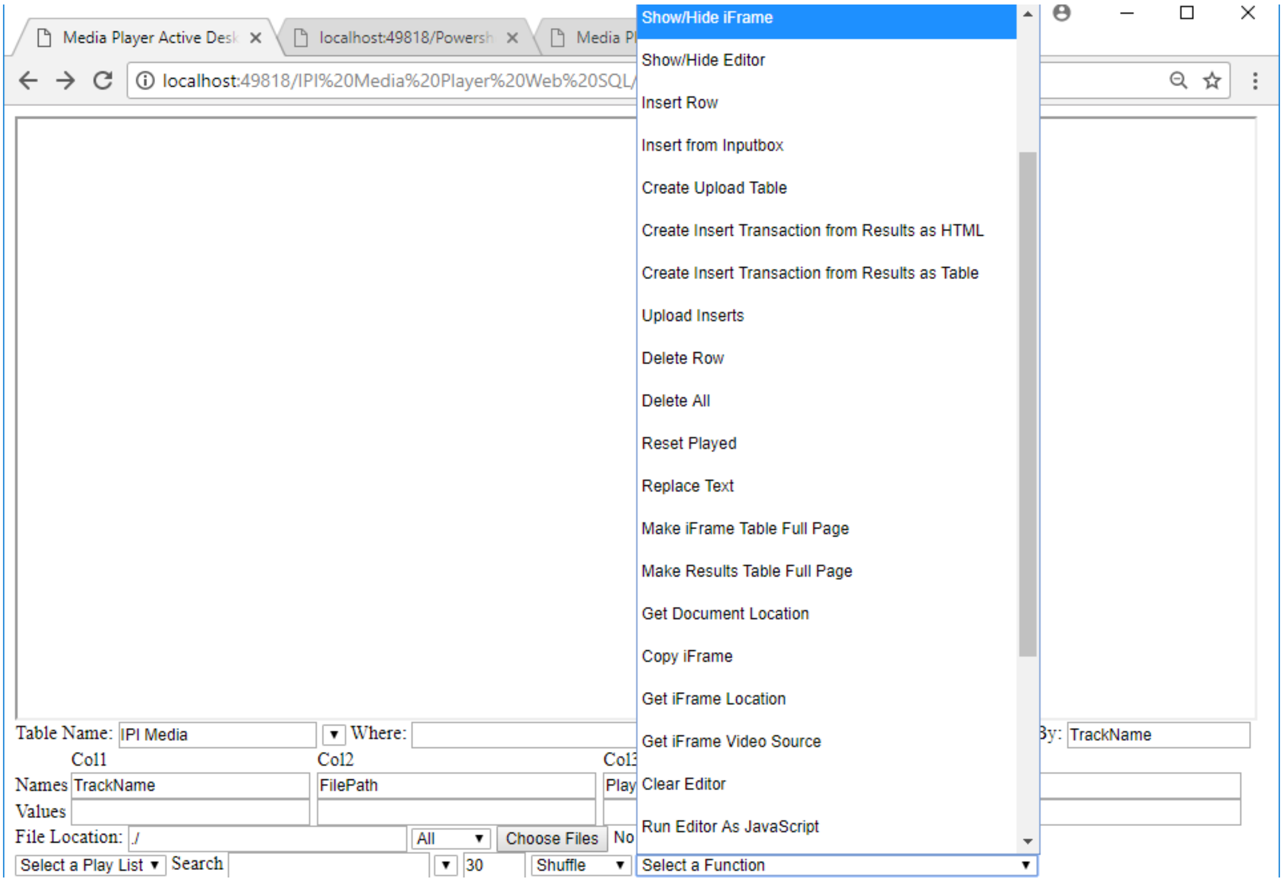


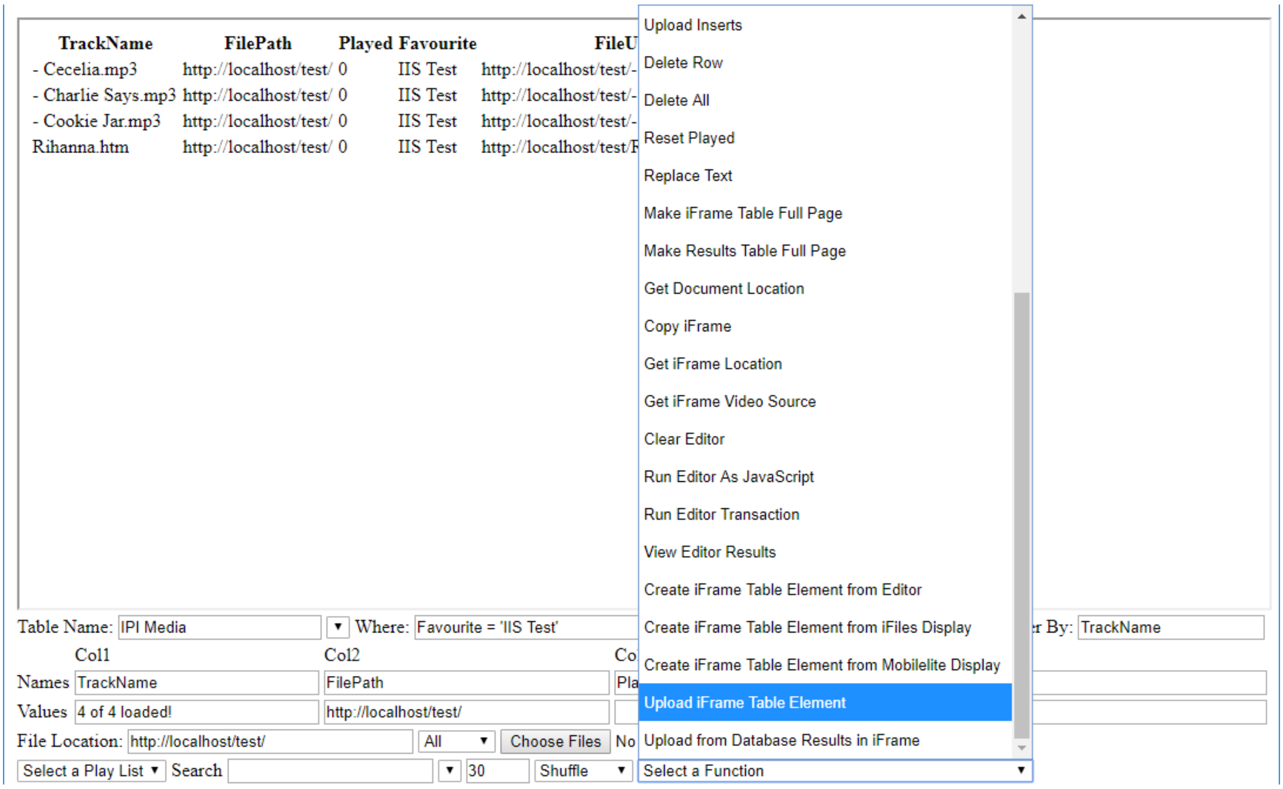
Table Name: IPI Media Where:

By: TrackName

	Col1	Col2	Col3
Names	TrackName	FilePath	Play
Values			

File Location: ./ All

Select a Play List Search 30


Upload Inserts
Delete Row
Delete All
Reset Played
Replace Text
Make iFrame Table Full Page
Make Results Table Full Page
Get Document Location
Copy iFrame
Get iFrame Location
Get iFrame Video Source
Clear Editor
Run Editor As JavaScript
Run Editor Transaction
View Editor Results
Create iFrame Table Element from Editor
Create iFrame Table Element from iFiles Display
Create iFrame Table Element from Mobilelite Display
Upload iFrame Table Element
Upload from Database Results in iFrame
Choose Files
No
Shuffle
Select a Function

TrackName	FilePath	Played	Favourite	FileU
- Cecelia.mp3	http://localhost/test/	0	IIS Test	http://localhost/test/-
- Charlie Says.mp3	http://localhost/test/	0	IIS Test	http://localhost/test/-
- Cookie Jar.mp3	http://localhost/test/	0	IIS Test	http://localhost/test/-
Rihanna.htm	http://localhost/test/	0	IIS Test	http://localhost/test/R

Table Name: IPI Media Where: Favourite = 'IIS Test'

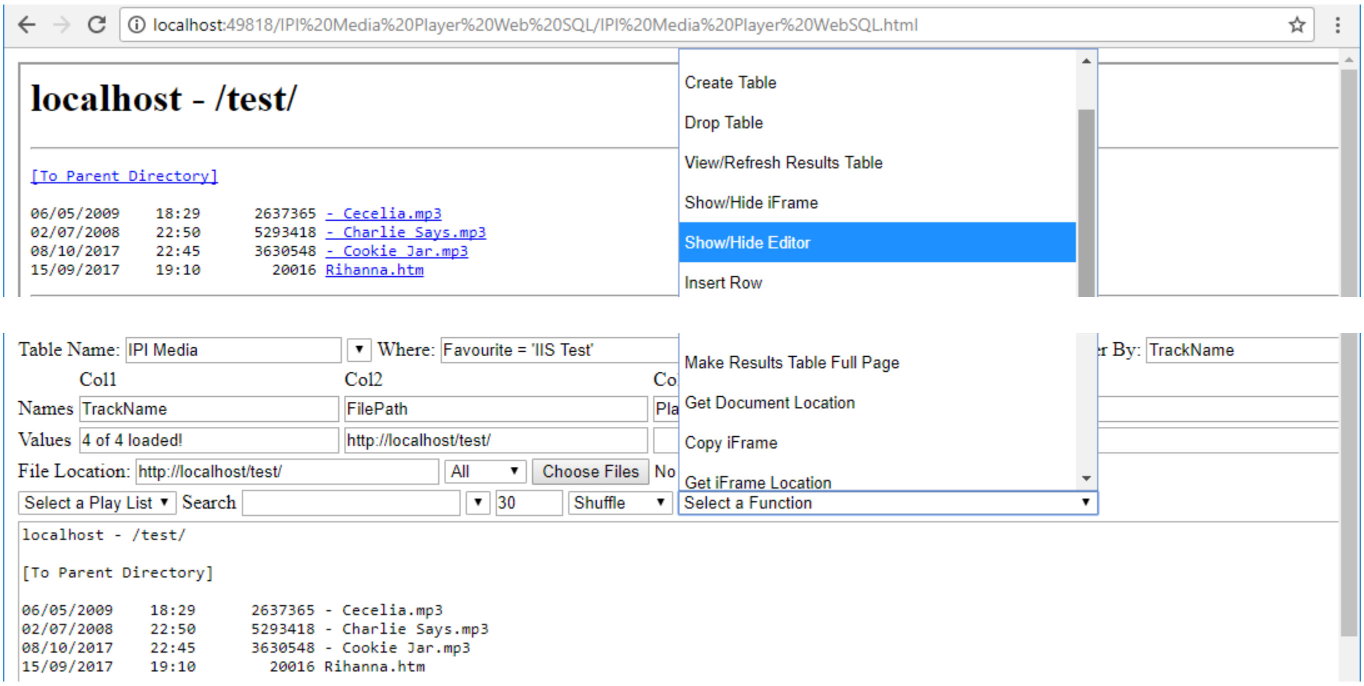
r By: TrackName

	Col1	Col2	Co
Names	TrackName	FilePath	Pla
Values	4 of 4 loaded!	http://localhost/test/	

File Location: http://localhost/test/ All

Select a Play List Search 30

9. Overcoming browser restrictions means copying the results of a web page display of files on the web server displayed in the iFrame to the Editor Text Area then selecting the **Create iFrame Table Element from Editor**. You can make the Editor visible by selecting the **Show/Hide Editor** option. Then after creating the reformatted table element in the iFrame select the **Upload iFrame Table Element** to load the displayed rows in to the database. If using the iFiles App on your iPhone or iPad there is no need to copy the results to the editor as the **Create iFrame Table Element from iFiles Display** will do it all. The same goes for the results given by a Mobilelite Dongle file listing using the **Create Table Element from Mobilelite Display**. Leaving the File Type selector as **All** will upload all entries in the iFrame



localhost:49818/IPI%20Media%20Player%20Web%20SQL/IPI%20Media%20Player%20WebSQL.html

localhost - /test/

```
[To Parent Directory]

06/05/2009    18:29     2637365 - Cecelia.mp3
02/07/2008    22:50     5293418 - Charlie Says.mp3
08/10/2017    22:45     3630548 - Cookie Jar.mp3
15/09/2017    19:10       20016 Rihanna.htm
```

Table Name: IPI Media Where: Favourite = 'IIS Test' r By: TrackName

Col1 Col2 Co

Names TrackName FilePath Pla

Values 4 of 4 loaded! http://localhost/test/

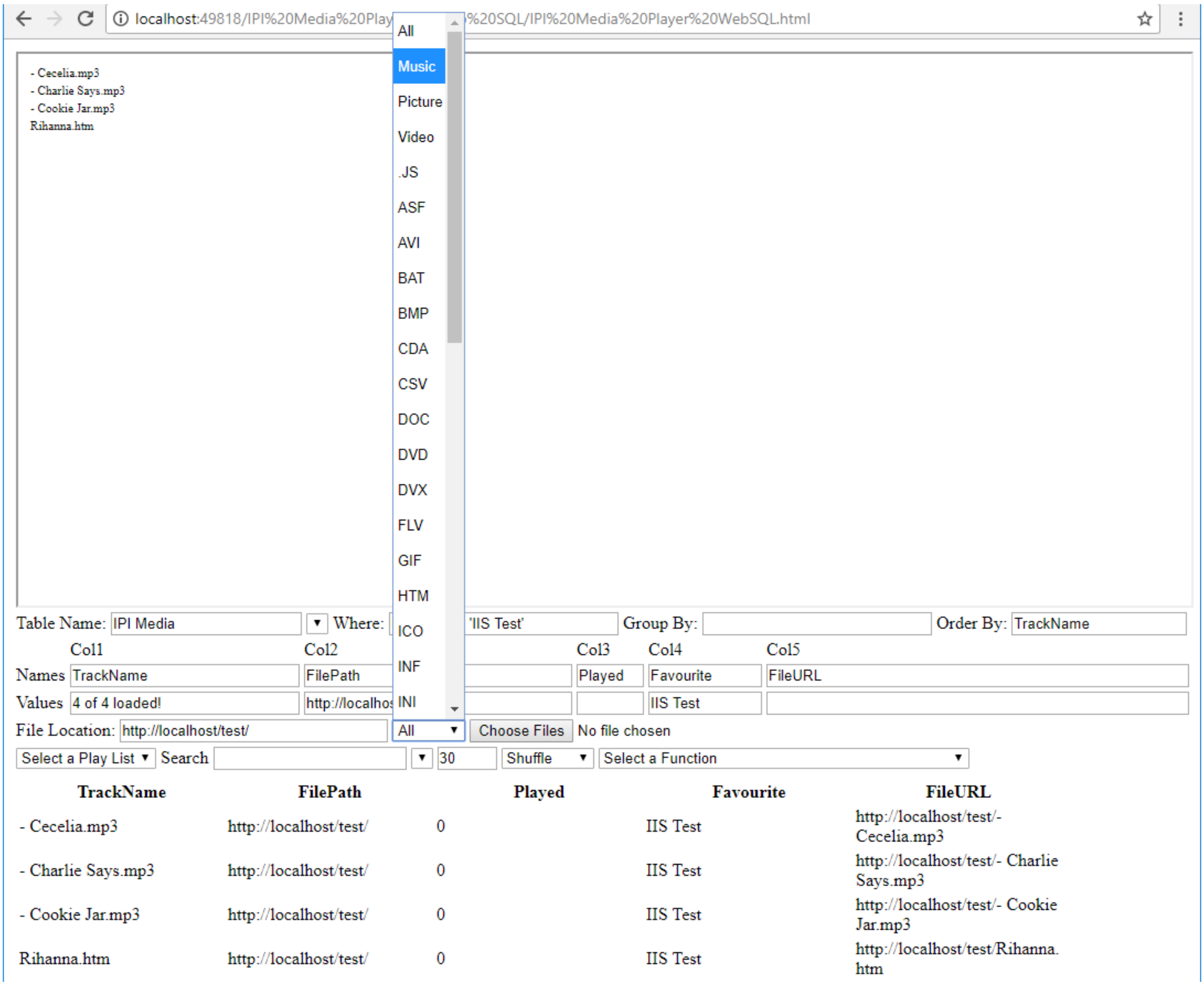
File Location: http://localhost/test/ All Choose Files No

Select a Play List Search 30 Shuffle

```
localhost - /test/

[To Parent Directory]

06/05/2009    18:29     2637365 - Cecelia.mp3
02/07/2008    22:50     5293418 - Charlie Says.mp3
08/10/2017    22:45     3630548 - Cookie Jar.mp3
15/09/2017    19:10       20016 Rihanna.htm
```



localhost:49818/IPI%20Media%20Play %20SQL/IPI%20Media%20Player%20WebSQL.html

- Cecelia.mp3
- Charlie Says.mp3
- Cookie Jar.mp3
Rihanna.htm

Table Name: IPI Media Where: 'IIS Test' Group By: Order By: TrackName

Col1 Col2 Col3 Col4 Col5

Names TrackName FilePath Played Favourite FileURL

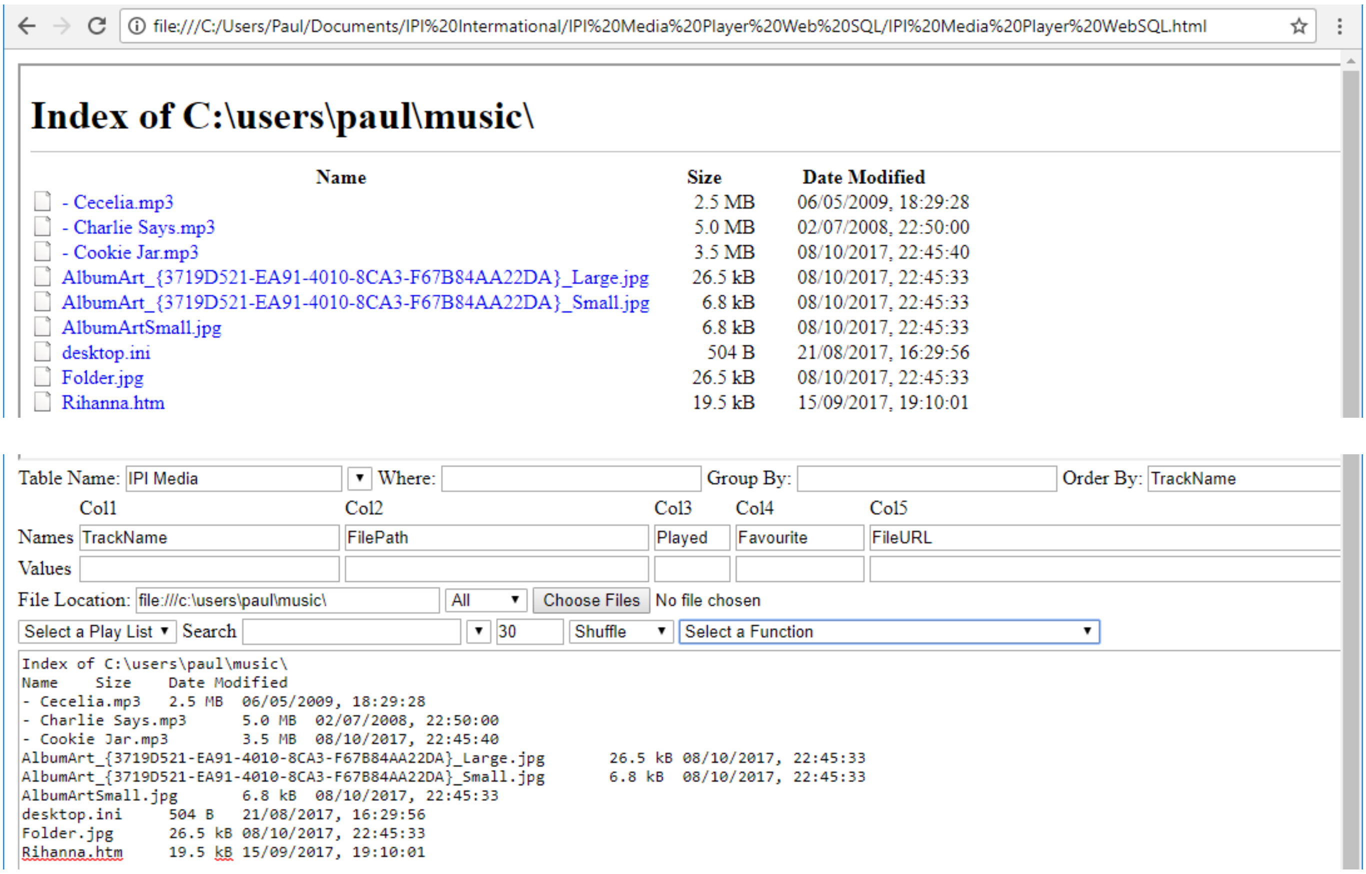
Values 4 of 4 loaded! http://localhos IIS Test

File Location: http://localhost/test/ All Choose Files No file chosen

Select a Play List Search 30 Shuffle Select a Function

TrackName	FilePath	Played	Favourite	FileURL
- Cecelia.mp3	http://localhost/test/	0	IIS Test	http://localhost/test/- Cecelia.mp3
- Charlie Says.mp3	http://localhost/test/	0	IIS Test	http://localhost/test/- Charlie Says.mp3
- Cookie Jar.mp3	http://localhost/test/	0	IIS Test	http://localhost/test/- Cookie Jar.mp3
Rihanna.htm	http://localhost/test/	0	IIS Test	http://localhost/test/Rihanna.htm

10. Although loading the file from the local file system will allow you to browse the file system; create a local database; play all local links; if a network file is played chrome will deny access to any further locally linked files. Also, if you try tricking Chrome and copy the iFrame file listing in to the Editor text area of another tab where the App is loaded from a network resource, you will get an Access Denied error when trying to play the link from that database record



file:///C:/Users/Paul/Documents/IPI%20International/IPI%20Media%20Player%20Web%20SQL/IPI%20Media%20Player%20WebSQL.html

Index of C:\users\paul\music\

Name	Size	Date Modified
- Cecelia.mp3	2.5 MB	06/05/2009, 18:29:28
- Charlie Says.mp3	5.0 MB	02/07/2008, 22:50:00
- Cookie Jar.mp3	3.5 MB	08/10/2017, 22:45:40
AlbumArt_{3719D521-EA91-4010-8CA3-F67B84AA22DA}_Large.jpg	26.5 kB	08/10/2017, 22:45:33
AlbumArt_{3719D521-EA91-4010-8CA3-F67B84AA22DA}_Small.jpg	6.8 kB	08/10/2017, 22:45:33
AlbumArtSmall.jpg	6.8 kB	08/10/2017, 22:45:33
desktop.ini	504 B	21/08/2017, 16:29:56
Folder.jpg	26.5 kB	08/10/2017, 22:45:33
Rihanna.htm	19.5 kB	15/09/2017, 19:10:01

Table Name: IPI Media ▾ Where: Group By: Order By: TrackName

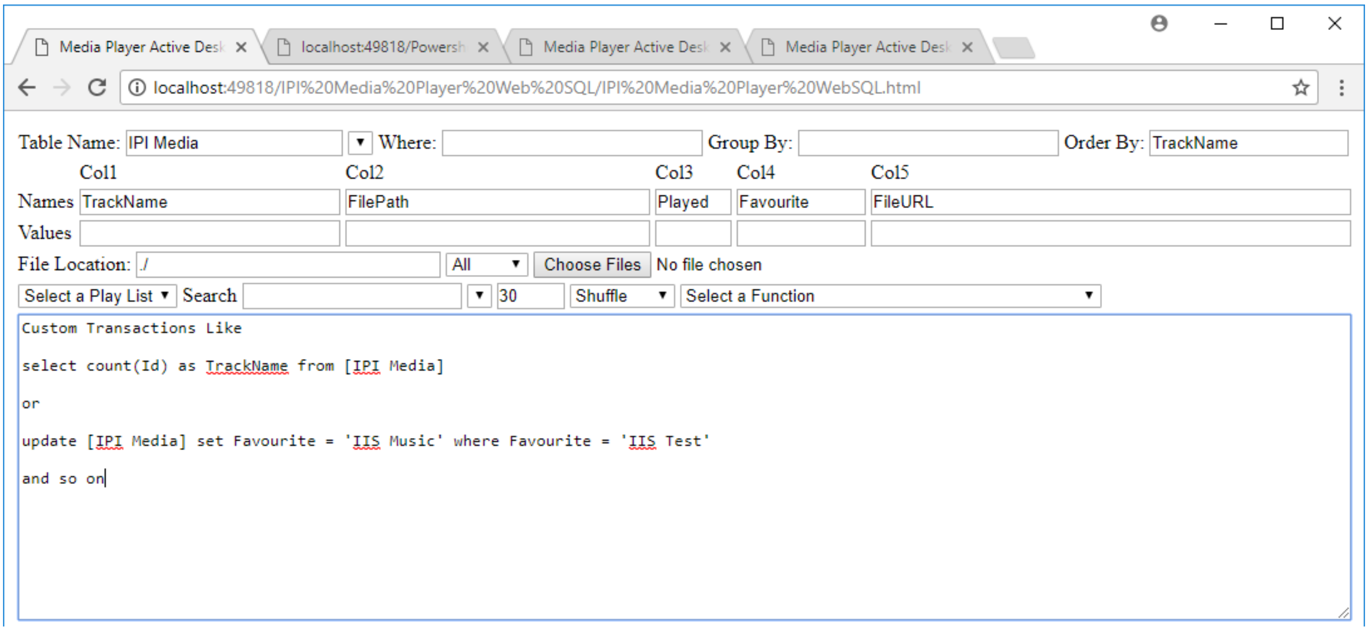
	Col1	Col2	Col3	Col4	Col5
Names	TrackName	FilePath	Played	Favourite	FileURL
Values					

File Location: file:///c:\users\paul\music\ All ▾ Choose Files No file chosen

Select a Play List ▾ Search ▾ 30 Shuffle ▾ Select a Function ▾

```
Index of C:\users\paul\music\
Name     Size    Date Modified
- Cecelia.mp3   2.5 MB  06/05/2009, 18:29:28
- Charlie Says.mp3      5.0 MB  02/07/2008, 22:50:00
- Cookie Jar.mp3        3.5 MB  08/10/2017, 22:45:40
AlbumArt_{3719D521-EA91-4010-8CA3-F67B84AA22DA}_Large.jpg       26.5 kB 08/10/2017, 22:45:33
AlbumArt_{3719D521-EA91-4010-8CA3-F67B84AA22DA}_Small.jpg       6.8 kB  08/10/2017, 22:45:33
AlbumArtSmall.jpg       6.8 kB  08/10/2017, 22:45:33
desktop.ini     504 B   21/08/2017, 16:29:56
Folder.jpg      26.5 kB 08/10/2017, 22:45:33
Rihanna.htm     19.5 kB 15/09/2017, 19:10:01
```

11. The Editor can also be used to create custom Transactions. You must have at least one column that uses the same Name as the value given in Col1 value input. Hence when doing restructures you can give you custom transaction any column name you want and combine/omit columns as you choose then ensure the same column names as displayed in the inputs on the **Names** line. When ready, select the **View Editor Results** option for Select statements and **Run Editor Transaction** for Update statements. To manipulate the document within the iFrame the function Run Eitor As Javascript appends **javascript:** to your entry then calls a **document location** function on the iFrame document using the resulting script.



localhost:49818/IPI%20Media%20Player%20Web%20SQL/IPI%20Media%20Player%20WebSQL.html

Table Name: IPI Media ▾ Where: Group By: Order By: TrackName

	Col1	Col2	Col3	Col4	Col5
Names	TrackName	FilePath	Played	Favourite	FileURL
Values					

File Location: ./ All ▾ Choose Files No file chosen

Select a Play List ▾ Search ▾ 30 Shuffle ▾ Select a Function ▾

```
Custom Transactions Like

select count(Id) as TrackName from [IPI Media]

or

update [IPI Media] set Favourite = 'IIS Music' where Favourite = 'IIS Test'

and so on
```

12. I have provided some sample YouTube and Radio station links that can be loaded by selecting either in the **Select a Play List** selector.
13. Choose Files will be further developed, but for now will populate the iFrame with the 1st item selected.
14. Search will populate it's selector with the results of items found in the Results Table containing your string entry. Select an item to scroll it into view.
15. There are different Play Modes determined by the entry in the **Favourite** column
    a. Radio will not initiate a Set Interval timer and with IOS will need the 1st link visited clicked to begin Play Back on the iFrame video element
    b. YouTube will initiate the Set Interval timer but disable the video autoplay on the iFrame video element. The **timer delay** defaulting at **30** can be change to allow for slower networks/devices
    c. All others (e.g IIS Music) will initiate the timer and should a track fail to load after 30 seconds it will then attempt to load the next track. Only the 1st Track needs to be clicked, auto play will take over
        i. Increment will play each track incrementally as long as the Played column value is not **1** and as long as you do not use **and not Played = 1** in the where filter, because after each track the results table will update
        ii. Once will play the current track then reload the page clearing all
        iii. Repeat will play the same track over and over until Stop or one of the other play modes is selected. It will also not change the Played value to 1
        iv. Shuffle (the default) will shuffle each track. Together with a where clause containing **and not Played = 1** will ensure quicker movement through all tracks and playing your entire list once
        v. Stop will wait the default 30 seconds after a track comes to an end or is stopped before reloading the page
16. If you are like me and have all your media on a hefty MicroSD that can be made available on any Wi-Fi or Bluetooth network you may need to put the different network location in the FilePath input. This will allow the play mode to replace the FilePath of the displayed record with the input value.

    The **Upload iFrame Table Element** option will also have its values in the **FilePath** and **Favourite** columns changed to any values given in the inputs on the values line.

So I sit here enjoying what **WEB SQL** is doing for me whilst realising how much more potential it has and wondering why?

Why is it depracted?????

Do I really want to learn IndexedDB?

What do I have to learn to get a multiplatform web page that needs no server and gives me a sqlite.db file to do with as I please?