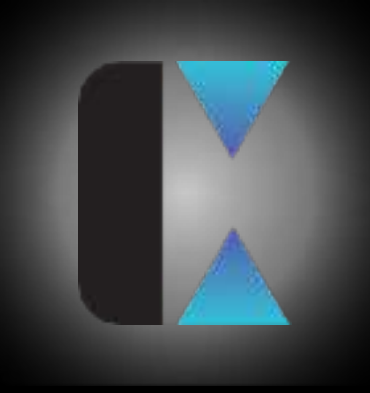


Search & JSON

```
claris.training  
{  
  "presentation": "JSON",  
}
```

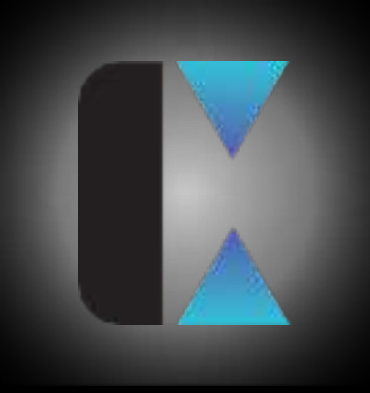


About Matt



- **Passionate FileMaker trainer**
- **Expert FileMaker developer**
- **Certified in FM versions 7-19**
- **Founded 3 companies**
- **FBA Awards, conferences, podcasts, Meetups**

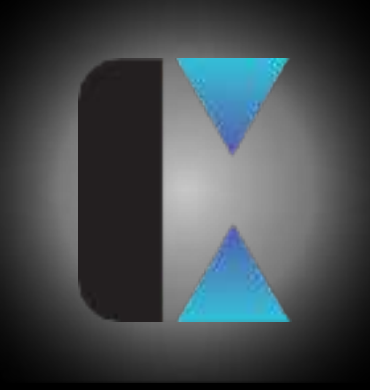
Hey, nice suit ^



SearchResults 7

One Killer Feature:

- Search multiple tables and show results on one page
- Watch it work
 - Company name like ABC Tech
 - Person like Bob Smith, then Robert Smith
 - Phone number like 503-123-4567; or 123-4567 or 5031234567
 - Currency like \$1200
 - Date or date range like 6/1/2023 or 5/1/2023..6/1/2023



Pieces and Parts

How do you make it go?

- A few Layouts
- One table with 4 fields
- A folder of scripts
 - One 'Perform Find' line 179

Layouts

- Results display layout
- Preferences layout
- Layouts for each table searched

Layout: SR_SearchResults View As: Preview

Home

Search Results

People | Showing 2 records

Robert Smitherton • 804-648-2844 • Stusser Electric Company

Robert Smith • 973-575-6473 • TNT Express Worldwide

[...List 2 results](#)

People | Showing 1 record [search method: Name Substitution]

Bob Smith • 503-989-1111 • Dewey Cheatham & Howe

Invoice | Showing 2 records

Robert P. Smith Signature Model Fender Strat • 0 • 1280 • F S Linn Jones Services Inc

Home **SearchResults Settings** Save Changes

General Settings

Show Search History: On
Show Tooltips: Off
Run Server-side: On

Settings for table 1: Client

[← Previous Table](#) [Next Table →](#)

Table Name: Client
Search this table: On
Lines to show: 8
Name Substitution: [Not Set]
Quickfind: [Not Set]
Phone Area Code: [Not Set]
Unformatted Phone: [Not Set]

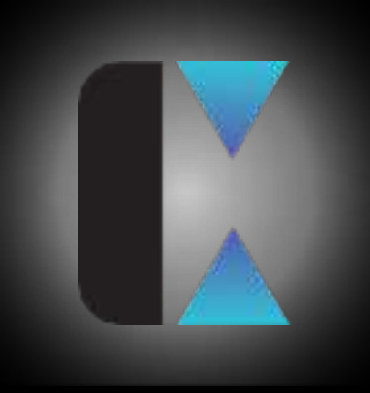
[Table Name]

Primary Key field for this table

Fields to search Formatted fields Display Fields Tooltips

Text fields

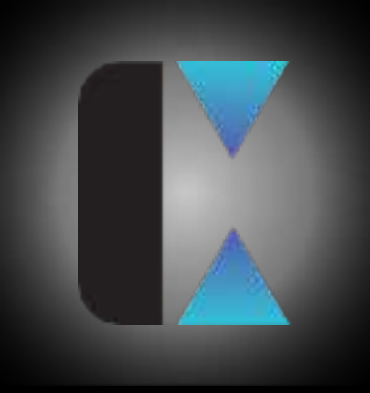
Date fields



Table

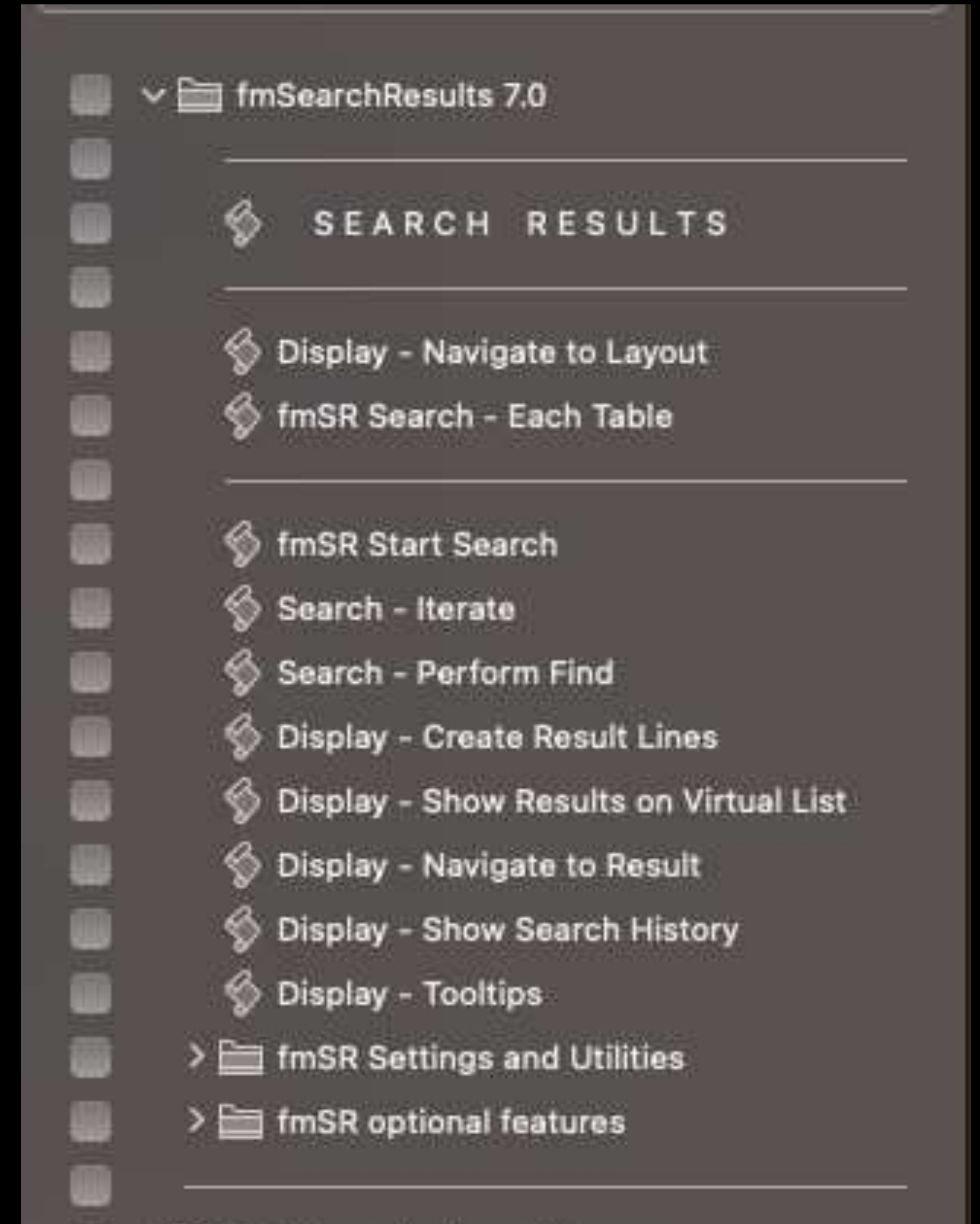
- Data table with 4 fields

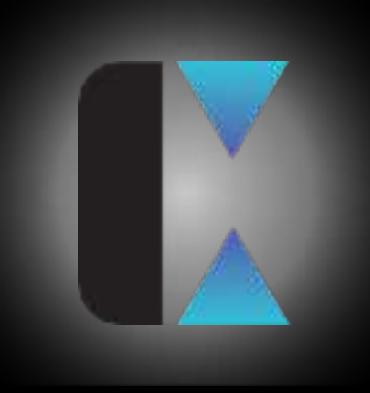
Tables Fields Relationsl			
Table:	SR_SearchResults	4 fields	
Field Name	Type	Options / Comments (Click to toggle)	
✚ SR_SearchString	Text	Global	
✚ SR_Serial	Text		
✚ SR_Virtual	Calculation	Unstored, = JSONGetElement (\$\$sr_JSON ; "results[" & SR_Serial & "].text")	
✚ Prefs	Text		



Scripts

At it's core, SearchResults is a series of scripts

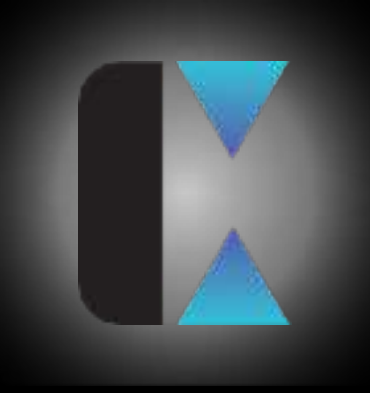




How?

The Process:

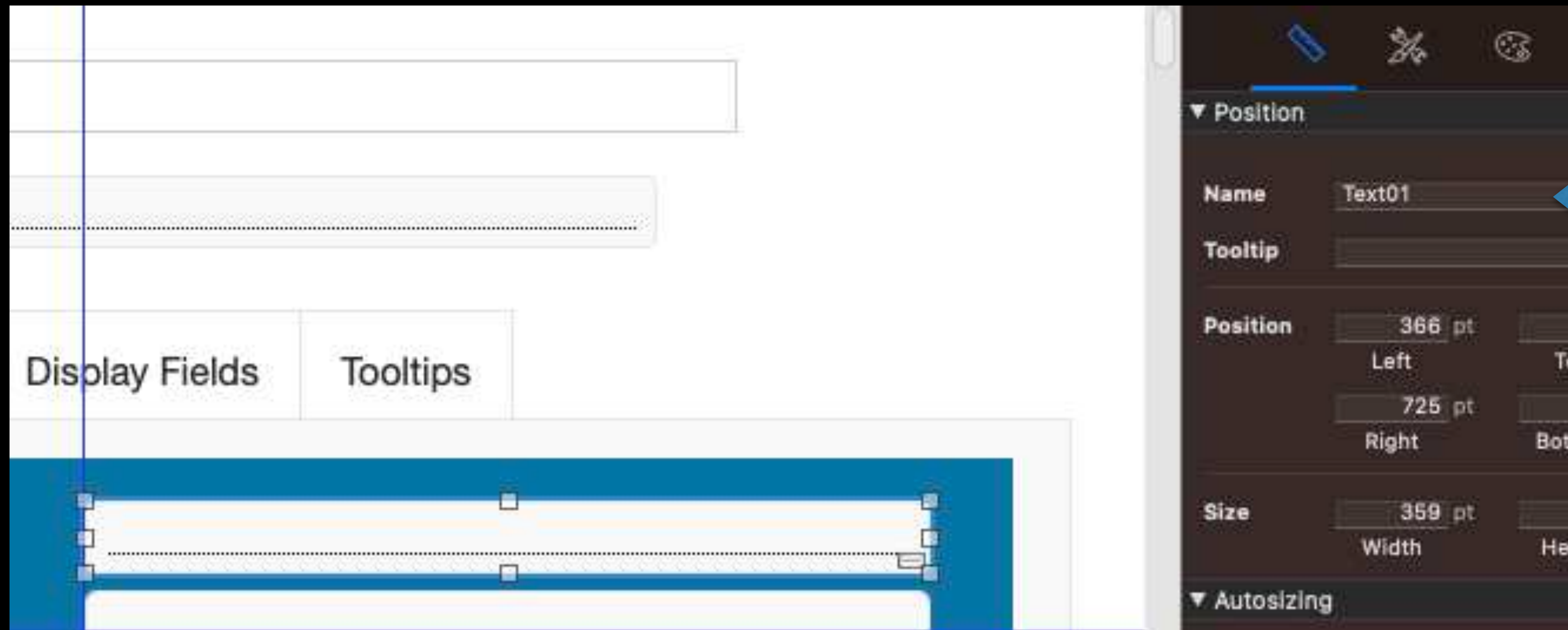
- Global text field for user entry
- Determine what type of data user entered (date, number, person's name, currency, etc.)
- Search only fields that match datatype in each table
- Iterates
- Gather results from each search in JSON blob
 - Each line displays data, has primary key, table, and tooltip data
- Display results with Virtual List
 - Change layout, card window, popover button, etc.



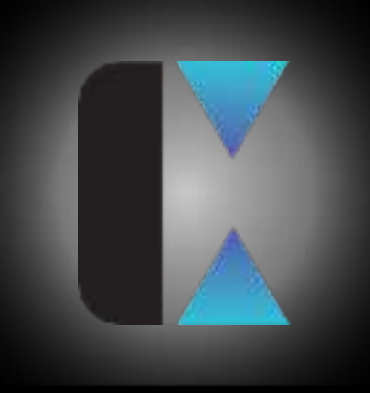
Metadata

Metadata about the database is stored in two places:

- JSON stored in a record in the SearchResults table
- Layout objects, using the 'name' feature to link contents of a field
 - (I'd love to find another way to do this)

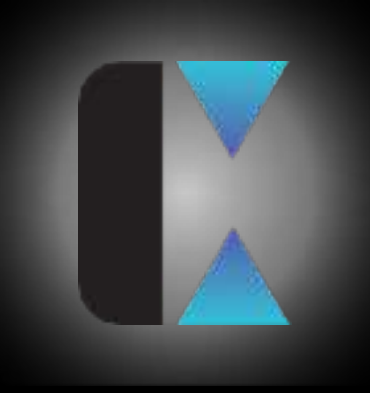


Demo

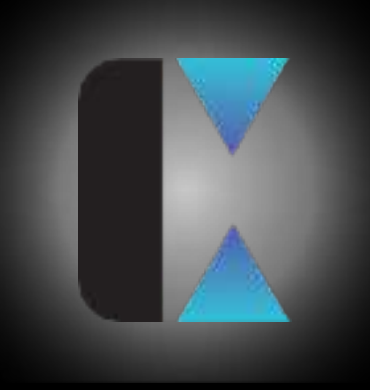


Let's go play with those features

JSON



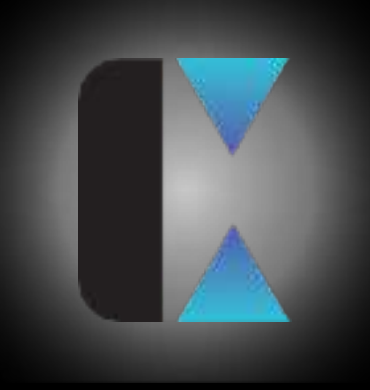
That's all well and good. But how does JSON come into this?



Key Calls

The two key JSON functions

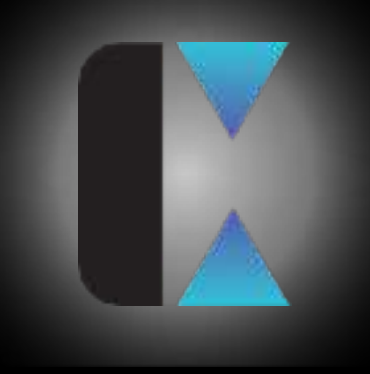
- JSONGetElement ()
 - Two parts: name and value
- JSONSetElement ()
 - Four parts
 - JSONSetElement (json ; keyOrIndexPath ; value ; type)
 - JSONSetElement ("" ; "name" ; "value" ; JSONstring)
 - An existing JSON blob. This part does not repeat
 - This feature can be very useful



SearchResults and JSON

All JSON. All the time.

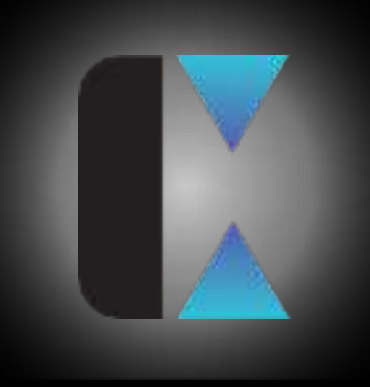
- Prefs
- Script to script communication
- Results



Prefs

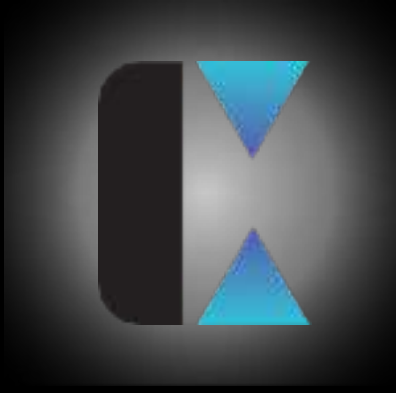
Preferences

```
{
  "general" :
  {
    "current_table" : "4",
    "psos" : "Off",
    "show_history" : "Off",
    "show_tooltips" : "On"
  },
  "table_01" :
  {
    "lines_to_show" : "8",
    "search_enabled" : "On",
    "table_name" : "Client"
  },
  "table_02" :
  {
    "lines_to_show" : "10",
    "name_sub" : "On",
    "quickfind" : "Off",
    "search_enabled" : "On",
    "table_name" : "People"
  },
  ....}
```



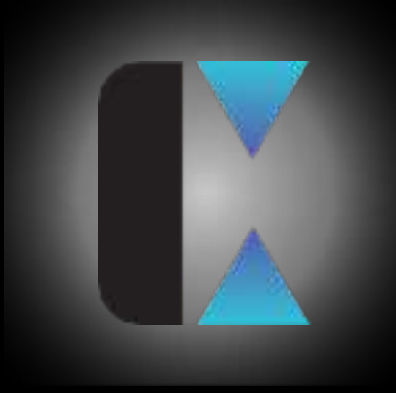
Results

```
{
  "results": [
    {
      "link": "",
      "text": "People | Showing 2 records",
      "type": "header"
    },
    {
      "link": "XWKUW TAANS DQPER HTI4T",
      "table": "02",
      "text": "Robert Smitherton • 804-648-2844 • Stusser Electric Company"
    },
    {
      "link": "XWKUW TAANS EZ9GJ OBTVP",
      "table": "02",
      "text": "Robert Smith • 973-575-6473 • TNT Express Worldwide"
    },
    {
      "count": 2,
      "link": "",
      "search": "robert smith",
      "table": "02",
      "text": "...List 2 results",
      "type": "footer"
    }
  ],
}
```



Title Text

```
{
  "display" :
  {
    "result_layout" : "? * Line l, Column l\r A valid JSON document must be either an array or an object value.",
    "separator" : " • "
  },
  "general" :
  {
    "current_table" : "4",
    "psos" : "Off",
    "show_history" : "Off",
    "show_tooltips" : "Off"
  },
  "search" :
  {
    "action" : "Search",
    "datatype" : "text",
    "operator" : "",
    "profile_list" : "",
    "string" : "robert smith",
    "table_name" : "Client",
    "table_number" : "01"
  },
  "table_01" :
```



Title Text

```
{
  "display" :
  {
    "result_layout" : "? * Line l, Column l\r A valid JSON document must be either an array or an object value.",
    "separator" : " • "
  },
  "general" :
  {
    "current_table" : "4",
    "psos" : "Off",
    "show_history" : "Off",
    "show_tooltips" : "Off"
  },
  "search" :
  {
    "action" : "Search",
    "datatype" : "text",
    "operator" : "",
    "profile_list" : "",
    "string" : "robert smith",
    "table_name" : "Client",
    "table_number" : "01"
  },
  "table_01" :
```