Validation Option #1

Left panel (search/list view):

🔍 (search bar)

① ☐ Record 1	Sub C
Sub A	Sub A
① Sub B	① Sub B
Sub C	

Right panel (detail view):

① Record 1
① └ Subrecord B

Errors (highlighted)
- Choice 1: Cannot be left blank

Include: ☑

choice 1: _____
Choice is Required

Choice 2: Answer

Validation Option #2

Record 1	Sub C	Record 1
Sub A	Sub A	└ Subrecord B
Sub B	Sub B	
Sub C		

Include: ☑

Choice 1: _____

Choice is Required

Choice 2: Answer _____

Validation Option #3

Q

(!) ⊟ Record 1
    Sub A
(!) Sub B
    Sub C

Sub C
Sub A
(!) Sub B

Record 1
└ Subrecord B

(1)

Include: ☑

choice 1: _____
Choice is Required

Choice 2: Answer

Filtering Menu Example

☰ _____ 🔍

⊟ Record 1	Sub B
Sub A	Sub A
Sub B	Sub C
⊟ Record 2	
Sub C	

Filtering Menu Example

Text Filters ▶

🔍

☐ Select All

☐ Record 1
   ☐ Sub A
   ☐ Sub B
☐ Record 2
   ☐ Sub C

CANCEL   ACCEPT

Sub B
Sub A
Sub C

2

Basic Multi-Select Behavior: 2 Items

	Rank	Inc.
⊟ Record 1		
Sub AA	↓↑	☑
Sub AB		
Sub AC	↓50↑	☑
Sub AD		
Sub AE		
⊟ Record 2		
Sub BA		
Sub BB		
Sub BC		
Sub BD		
Sub BE		
⊟ Record 3		
Sub CA		
Sub CB		
Sub CC		
⊞ Record 4		
⊞ Record 5		
⊟ Record 6		
Sub A		
Sub B		
Sub C		

	Rank
Sub AA	1
Sub D	
Sub E	
Sub F	
Sub J	
Sub K	
Sub L	
Sub M	
Sub N	
Sub O	
Sub ...	
Sub Z	...
Sub AC	50
Sub G	
Sub H	
Sub I	
Sub Q	
Sub R	
Sub S	
Sub T	
Sub U	
Sub V	
Sub W	

−50%

- Line break is at 50%
- Equal number of items above and below line break
- Selected items are at the top of each section

1

Basic Multi-Select Behavior: 3 Items

Left panel (with Rank, Inc. columns):

- ⊟ Record 1
  - Sub AA ↓1↑ ☑
  - Sub AB
  - Sub AC ↓50↑ ☑
  - Sub AD
  - Sub AE
- ⊟ Record 2
  - Sub BA
  - Sub BB ↓100↑ ☑
  - Sub BC
  - Sub BD
  - Sub BE
- ⊟ Record 3
  - Sub CA
  - Sub CB
  - Sub CC
- ⊞ Record 4
- ⊞ Record 5
- ⊟ Record 6
  - Sub A
  - Sub B
  - Sub C

Right panel (with Rank column):

	Rank
Sub AA	1
Sub D	
Sub E	
Sub F	
Sub J	
Sub K	
Sub L	
...	
Sub ZA	−33%
Sub AC	50
Sub G	
Sub H	
Sub I	
Sub Q	
Sub R	
Sub S	
...	
Sub ZB	−66%
Sub BB	100
Sub ZC	
Sub ZD	
Sub ZE	
Sub ZF	
Sub ZG	

Basic Multi-Select Behavior: 4 Items

Left panel:

	Rank	Inc.
⊟ Record 1		
Sub AA	↓1↑	☑
Sub AB		
Sub AC	↓50↑	☑
Sub AD		
Sub AE		
⊟ Record 2		
Sub BA		
Sub BB	↓100↑	☑
Sub BC		
Sub BD		
Sub BE		
⊟ Record 3		
Sub CA		
Sub CB		
Sub CC	↓75↑	☑
⊞ Record 4		
⊞ Record 5		
⊟ Record 6		
Sub A		
Sub B		
Sub C		

Right panel:

	Rank
Sub AA	1
Sub D	
Sub E	
Sub F	
Sub ZA	...
	−25%
Sub AC	50
Sub G	
Sub H	
Sub I	
Sub ZW	...
	−50%
Sub CC	75
Sub ZX	
Sub ZY	
Sub ZZ	
Sub ZB	...
	−75%
Sub BB	100
Sub L	
Sub M	
Sub N	

3

Basic Multi-Select Behavior: 5+ Items

Left panel (Rank Inc.):
- ☐ Record 1
  - Sub AA ↓↑ ☑
  - Sub AB
  - Sub AC ↓50↑ ☑
  - Sub AD
  - Sub AE
- ☐ Record 2
  - Sub BA
  - Sub BB ↓100↑ ☑
  - Sub BC ↓25↑ ☑
  - Sub BD
  - Sub BE
- ☐ Record 3
  - Sub CA
  - Sub CB
  - Sub CC ↓75↑ ☑
- ☐ Record 4
- ☐ Record 5
- ☐ Record 6
  - Sub A
  - Sub B
  - Sub C

Right panel (Rank):

Item	Rank
Sub AA	1
Sub BC	25
Sub AC	50
Sub CC	75
Sub BB	100

- Upon selection of 5 or more items, all break points and other items fall away, leaving only the selected items.

4

Tree Column	Ranked Column	:	Non-Editable Data	Editable Data

50%	50%		50%	50%

Title

16px

33%

66%
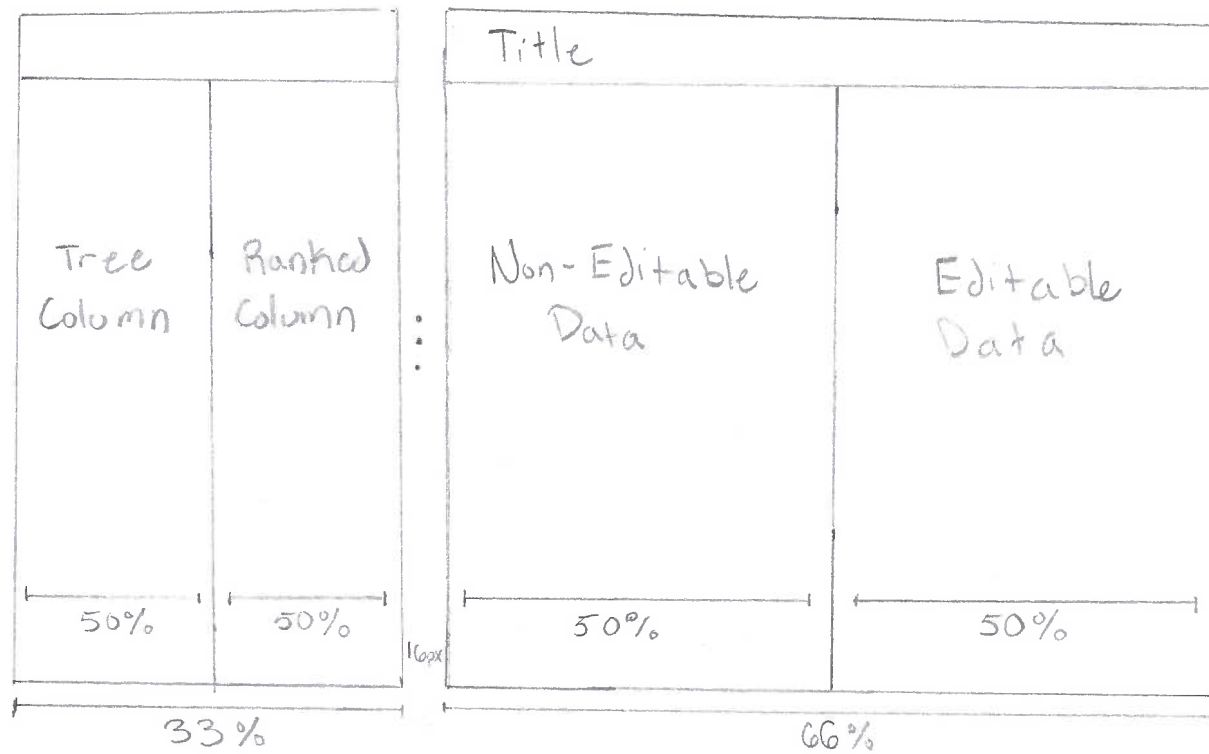
Defined Dimensions & Customizable Layout

- Users can click and drag the ":" between cards left or right to change the above card size ratios

Ranked List Accordion Behavior

⊟ Record 1	Sub A
Sub X	Sub B
Sub Y	Sub C
Sub Z	Sub D
⊟ Record 2	Sub E
Sub G	Sub F
Sub I	Sub G
Sub AM	Sub H
Sub BG	Sub I
Sub K	Sub J
Sub AA	Sub K
⊞ Record 3	Sub L
⊞ Record 4	Sub M
⊟ Record 5	Sub N
Sub BD	Sub O
Sub J	Sub P
Sub AK	Sub Q
Sub E	Sub R
⊟ Record 6	Sub AA
Sub AB	Sub AB
	Sub BA
	Sub BB

1

```
┌──────────────────────────────────────────────┐
│                                        ___  Q  │
│                                                │
├────────────────────────┬───────────────────────┤
│ ⊟ Record 1             │  Sub S                 │
│    Sub X               │  Sub T                 │
│    Sub Y               │  Sub U                 │
│    Sub Z               │  Sub V                 │
│ ⊟ Record 2             │  Sub W                 │
│    Sub G               │  Sub X                 │
│    Sub I               │  Sub Y                 │
│    Sub AM              │  Sub Z                 │
│    Sub BG              │  Sub AA                │
│    Sub K               │  Sub AB                │
│    Sub AA              │  Sub AC                │
│ ⊞ Record 3            │  Sub AD                 │
│ ⊞ Record 4            │  Sub AE                 │
│ ⊟ Record 5            │  Sub AF                 │
│    Sub BD              │  Sub AG                │
│    Sub J               │  Sub AH                │
│    Sub AK              │  Sub AI                │
│    Sub E               │  Sub AJ                │
│ ⊟ Record 6            │  Sub AK                 │
│    Sub AB              │  Sub AL                │
│                        │  Sub BA                │
│                        │  Sub BB                │
└────────────────────────┴───────────────────────┘
```

Left panel:
- ⊟ Record 1
  - Sub X
  - Sub Y
  - Sub Z
- ⊟ Record 2
  - Sub G
  - Sub I
  - Sub AM
  - Sub BG
  - Sub K
  - Sub AA
- ⊞ Record 3
- ⊞ Record 4
- ⊟ Record 5
  - Sub BD
  - Sub J
  - Sub AK
  - Sub E
- ⊟ Record 6
  - Sub AB

Right panel:
- Sub Y
- Sub Z
- Sub AT
- Sub AU
- Sub AV
- Sub AW
- Sub AX
- Sub AY
- Sub AZ
- Sub BA
- Sub BB
- Sub BC
- Sub BD
- Sub BE
- Sub BF
- Sub BG
- Sub BH
- Sub BI
- Sub BJ
- Sub BK
- Sub BL

3

	Rank	Include
⊟ Record 1		
Sub A	4	
Sub B	↓ 8 ↑	☑
Sub C	12	
⊟ Record 2		
Sub D	1	
Sub E	13	
⊟ Record 3		
Sub F	5	
Sub G	3	
Sub H	9	
Sub I	↓ 10 ↑	☑
⊟ Record 4		
Sub J	11	
⊟ Record 5		
Sub K	2	
Sub L	7	
Sub M	6	

	Rank
Sub D (Rec 2)	1
Sub A (Rec 1)	4
Sub F (Rec 3)	5
Sub M (Rec 5)	6
Sub B (Rec 1)	8
Sub H (Rec 3)	9
Sub I (Rec 3)	10
Sub J (Rec 4)	11
Sub E (Rec 2)	13
Sub K (Rec 5)	2
Sub G (Rec 3)	3
Sub L (Rec 5)	7
Sub C (Rec 1)	12

Rank Number always visable.

Check box and arrows only appear on Mouse-over or Selected

| Q |

Left column:
- ☐ Record 1   rank Include
  - Sub A
  - Sub B ↓8↑ ☑
  - Sub C
- ☐ Record 2
  - Sub D
  - Sub E
- ☐ Record 3
  - Sub F
  - Sub G
  - Sub H
  - Sub I ↓10↑ ☑
- ☐ Record 4
  - Sub J
- ☐ Record 5
  - Sub K
  - Sub L
  - Sub M

Right column: Rank
- Sub D (Rec2)
- Sub A (Rec1)
- Sub F (Rec3)
- Sub M (Rec5)
- Sub B (Rec1) 8
- Sub H (Rec3)
- Sub I (Rec3)
- Sub J (Rec4)
- Sub E (Rec2)
- Sub K (Rec5)
- Sub G (Rec3)
- Sub L (Rec5)
- Sub C (Rec1)

Both rank number
with arrows and
include check box
appear on mouse over
or selected.

- Invalid Field with Long Error Message

Choice

Wrong Choice| (?)

① Invalid

Error: ～～～～～～～～
～～～～～～～～
～～～～～～～
～～～～～～～～

(On hover)
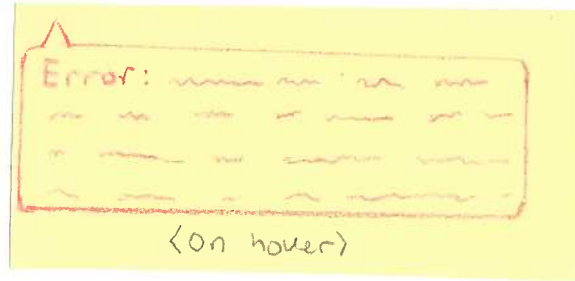
- Text Input Format (from CDK)

Favorite food
_____

↳ Inactive & Empty

→

Favorite food
Sushi|
_____

↳ Active with Entry
  • Label floats up above field
  Showing cursor

Validation : Option #4 A

Left Panel

Q

_____

- ② ☑ Record 1
  - Sub A
  - ① Sub B
  - Sub C

- Sub C
- Sub A
- ① Sub B

Right Panel

Record 1
└ Sub B

Subrecord ID: Sub B

Color : Blue

Shape: Circle

☑ Include

Choice 1
Wrong Choice   ?
① Invalid

Choice 2
Right Choice

Validation : option #4 B

Q

② ⊟ Record 1

∧

Errors:
- Record 1 : choice 2

- Subrecord B : choice 1

Sub C
Sub A
① Sub B

Record 1
└ Sub B

Subrecord ID: Sub B

Color : Blue

Shape: Circle

☑ Include

choice 1
Wrong Choice   ⑦
① Invalid

choice 2
Right Choice

Full Layout

Left Panel

Search bar (🔍)

Rank Inc.

- ② ⊟ **Record 1**
  - Sub A
  - ① Sub B ↓31 ☑
  - Sub C
- ⊟ Record 2
  - Sub D
  - Sub E
  - Sub F
  - Sub G
  - Sub H
- ⊞ Record 3
- ⊞ Record 4
  - Sub K
  - Sub L
  - Sub M
- ⊟ Record 5
  - Sub N
  - Sub O
  - Sub P
  - Sub Q
  - Sub R
  - Sub S
  - Sub T

Middle List (Rank)

- Sub C
- Sub A
- ① Sub B   3
- Sub G
- Sub H
- Sub E
- Sub N
- Sub I
- Sub M
- Sub D
- Sub Q
- Sub L
- Sub R
- Sub K
- Sub F
- Sub P
- Sub T
- Sub V
- Sub J
- Sub O
- Sub U
- Sub S

Right Panel

Record 1
└ Sub B

Subrecord ID: Sub B

Color: Blue

Shape: Circle

☑ Include

choice
Wrong Choice   ⑦

① Invalid

choice
Right Choice