

FF_CONTAINER_MAP_DISPLAY Examples

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This is the example vignette for function: `ff_container_map_display` from the [MEconTools Package](#). This function summarizes statistics of matrixes stored in a container map, as well as scalar, string, function and other values stored in container maps.

Test FF_CONTAINER_MAP_DISPLAY Defaults

Call the function with defaults.

```
ff_container_map_display();
```

```
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xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx  
ND Array (Matrix etc)  
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

	i	idx	ndim	numel	rowN	colN	sum	mean	std	coefvari	m
	—	—	—	—	—	—	—	—	—	—	—
mat_1	1	7	2	12	3	4	6.5142	0.54285	0.2232	0.41115	0
mat_2	2	8	2	2650	50	53	1313.3	0.49559	0.29232	0.58985	6.78
mat_2_boolean	3	9	2	2650	50	53	1361	0.51358	0.49991	0.97337	
mat_3	4	10	2	4	2	2	1.8111	0.45277	0.45111	0.99635	0.00
tensor_1	5	15	3	16	2	8	7.3043	0.45652	0.27787	0.60867	0
tensor_2	6	16	3	75	3	25	40.195	0.53593	0.29044	0.54194	0.0
tensor_3	7	17	2	4	1	4	1.6926	0.42315	0.37389	0.88359	
tesseract_1	8	18	4	72	3	24	34.321	0.47669	0.26374	0.55327	0
tesseract_2	9	19	4	20	2	10	8.4191	0.42096	0.28981	0.68846	0
tesseract_bl_3	10	20	4	10	1	10	3	0.3	0.48305	1.6102	

```
xxx TABLE:mat_1 xxxxxxxxxxxxxxxxxxxxxxx
```

	c1	c2	c3	c4
	—	—	—	—
r1	0.69647	0.55131	0.98076	0.39212
r2	0.28614	0.71947	0.68483	0.34318
r3	0.22685	0.42311	0.48093	0.72905

```
xxx TABLE:mat_2 xxxxxxxxxxxxxxxxxxxxxxx
```

	c1	c2	c3	c4	c50	c51	c52	c53
	—	—	—	—	—	—	—	—
r1	0.43857	0.6249	0.17108	0.56564	0.072152	0.67855	0.61667	0.54002
r2	0.059678	0.67469	0.82911	0.084904	0.63289	0.27236	0.32528	0.24957
r3	0.39804	0.84234	0.33867	0.58267	0.046367	0.44513	0.075047	0.7839
r4	0.738	0.083195	0.55237	0.81484	0.50561	0.11117	0.59532	0.35603
r5	0.18249	0.76368	0.57855	0.33707	0.10653	0.028681	0.7435	0.91869
r46	0.6813	0.55326	0.88786	0.69983	0.83758	0.16382	0.74191	0.065638
r47	0.87546	0.85445	0.69631	0.66117	0.97069	0.79092	0.42466	0.78725
r48	0.51042	0.38484	0.44033	0.049097	0.017768	0.33302	0.24401	0.97956
r49	0.66931	0.31679	0.43821	0.7923	0.12979	0.75311	0.79466	0.079086
r50	0.58594	0.35426	0.7651	0.51872	0.86415	0.58281	0.84795	0.4579

```
xxx TABLE:mat_2_boolean xxxxxxxxxxxxxxxxxxxxxxx
```

	c1	c2	c3	c4	c50	c51	c52	c53
	—	—	—	—	—	—	—	—
r1	true	false	false	true	true	false	true	true
r2	true	false	true	true	false	false	true	true

r3	false	true	false	true	false	true	false	true
r4	false	true	false	false	false	true	true	true
r5	true	true	true	false	true	false	false	true
r46	false	true	true	false	true	true	true	true
r47	true	true	true	true	true	true	false	false
r48	true	false	false	false	true	true	false	true
r49	true	true	false	true	true	true	false	false
r50	false	false	false	false	false	false	false	false

xxx TABLE:mat_3 xxxxxxxxxxxxxxxxxxxx

	c1	c2
r1	0.00012471	0.13253
r2	0.88615	0.79226

xxx TABLE:tensor_1 xxxxxxxxxxxxxxxxxxxx

	c1	c2	c3	c4	c5	c6	c7	c8
r1	0.019363	0.34271	0.52167	0.53703	0.75756	0.68839	0.8345	0.26597
r2	0.018091	0.33355	0.11738	0.77857	0.81933	0.28644	0.6157	0.368

xxx TABLE:tensor_2 xxxxxxxxxxxxxxxxxxxx

	c1	c2	c3	c4	c22	c23	c24	c25
r1	0.51866	0.40495	0.48278	0.99731	0.46584	0.62976	0.035924	0.10505
r2	0.028692	0.37408	0.24149	0.35201	0.66054	0.87243	0.0024293	0.81088
r3	0.87339	0.19457	0.83212	0.15315	0.77859	0.96663	0.2501	0.8056

xxx TABLE:tensor_3 xxxxxxxxxxxxxxxxxxxx

	c1	c2	c3	c4
r1	0.1219	0.5119	0.91553	0.14329

xxx TABLE:tesseract_1 xxxxxxxxxxxxxxxxxxxx

	c1	c2	c3	c4	c21	c22	c23	c24
r1	0.64531	0.59299	0.32115	0.67653	0.90328	0.56911	0.52562	0.12014
r2	0.74558	0.5007	0.46142	0.21384	0.35564	0.13732	0.155	0.23786
r3	0.91137	0.46403	0.18118	0.049919	0.46246	0.46842	0.75348	0.64547

xxx TABLE:tesseract_2 xxxxxxxxxxxxxxxxxxxx

	c1	c2	c3	c4	c7	c8	c9	c10
r1	0.28898	0.48211	0.44359	0.97146	0.61782	0.65121	0.80715	0.11605
r2	0.094493	0.34941	0.17595	0.14192	0.16754	0.57097	0.043114	0.70518

xxx TABLE:tesseract_bl_3 xxxxxxxxxxxxxxxxxxxx

	c1	c2	c3	c4	c7	c8	c9	c10
r1	false	false	true	true	false	true	false	false

xx
Scalars

xx

i	idx	value
-	-	-

```

boolean_1      1      1      1
empty          2      2      NaN
mat_4          3     11     0.74898
string_float_1 4     13     1021.1
string_int_1   5     14     1021

```

```

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
String
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

```

	i	idx	string
list_string_1	"1"	"5"	"col1;col2;col3;col4"
list_string_2	"2"	"6"	"row1;row2;row3;row4"
string_1	"3"	"12"	"Table Name"

```

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
Functions
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

```

	i	idx	functionString
func1	"1"	"3"	"@(x)1+2+x"
func2	"2"	"4"	"@(x,y)x*1+sqrt(y)"

Test FF_CONTAINER_MAP_DISPLAY summarize Matrix Only

Three large matrixes, show summaries

```

% Create Container
mp_container_map = containers.Map('KeyType','char','ValueType','any');
rng(123);
mp_container_map('mat_1') = rand(100,100);
mp_container_map('mat_2') = rand(100,100)*2 + 1;
mp_container_map('mat_2_boolean') = (rand(100,100) > 0.5);
% Will only print
ff_container_map_display(mp_container_map);

```

```

-----
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
CONTAINER NAME: mp_container_map ND Array (Matrix etc)
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

```

	i	idx	ndim	numel	rowN	colN	sum	mean	std	coefvari	min
mat_1	1	1	2	10000	100	100	4982.3	0.49823	0.28829	0.57863	6.7838
mat_2	2	2	2	10000	100	100	20029	2.0029	0.57632	0.28774	1.0000
mat_2_boolean	3	3	2	10000	100	100	4995	0.4995	0.50002	1.0011	0.0000

Test FF_CONTAINER_MAP_DISPLAY Show Matrix Subset

A container map with three small matrixes, print only only 2 rows and 3 columns.

```

% Create Container
mp_container_map = containers.Map('KeyType','char','ValueType','any');
rng(789);
mp_container_map('mat_1') = rand(3,4);

```

```

mp_container_map('mat_2') = rand(50,53);
mp_container_map('mat_2_boolean') = (rand(50,53) > 0.5);
% Will only print
ff_container_map_display(mp_container_map, 2, 3);

```

```

-----
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
CONTAINER NAME: mp_container_map ND Array (Matrix etc)
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

```

	i	idx	ndim	numel	rowN	colN	sum	mean	std	coefvari	min
	—	—	—	—	—	—	—	—	—	—	—
mat_1	1	1	2	12	3	4	4.9876	0.41564	0.33586	0.80805	0.00000
mat_2	2	2	2	2650	50	53	1324.3	0.49973	0.28834	0.57699	0.00000
mat_2_boolean	3	3	2	2650	50	53	1350	0.50943	0.50001	0.98149	0.00000

```

xxx TABLE:mat_1 XXXXXXXXXXXXXXXXXXXXXXX

```

	c1	c2	c3	c4
	—	—	—	—
r1	0.32333	0.62442	0.01062	0.53815
r3	0.79378	0.75889	0.11104	0.55157

```

xxx TABLE:mat_2 XXXXXXXXXXXXXXXXXXXXXXX

```

	c1	c2	c52	c53
	—	—	—	—
r1	0.72837	0.20976	0.74583	0.22321
r50	0.52812	0.545	0.49521	0.29826

```

xxx TABLE:mat_2_boolean XXXXXXXXXXXXXXXXXXXXXXX

```

	c1	c2	c52	c53
	—	—	—	—
r1	false	true	true	true
r50	true	false	false	true