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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xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
 ND Array (Matrix etc)
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

	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 xxxxxxxxxxxxxxxxx
```

	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 xxxxxxxxxxxxxxxxx
```

	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 xxxxxxxxxxxxxxxxx
```

	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 xxxxxxxxxxxxxxxxx

	c1	**c2**
r1	0.00012471	0.13253
r2	0.88615	0.79226

xxx TABLE:tensor_1 xxxxxxxxxxxxxxxxx

	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 xxxxxxxxxxxxxxxxx

	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 xxxxxxxxxxxxxxxxx

	c1	**c2**	**c3**	**c4**
r1	0.1219	0.5119	0.91553	0.14329

xxx TABLE:tesseract_1 xxxxxxxxxxxxxxxxx

	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 xxxxxxxxxxxxxxxxx

	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 xxxxxxxxxxxxxxxxx

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

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xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
Scalars
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

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

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xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
 String
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                       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"

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xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
 Functions
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                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);
```

```
----------------------------------------
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
CONTAINER NAME: mp_container_map ND Array (Matrix etc)
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                       i     idx     ndim     numel     rowN     colN      sum       mean        std       coefvari        mi
                       _     ___     ____     _____     ____     ____     ______     _______     _______     ________     ____

    mat_1              1      1       2       10000     100      100      4982.3     0.49823     0.28829     0.57863      6.783
    mat_2              2      2       2       10000     100      100       20029      2.0029     0.57632     0.28774         1.
    mat_2_boolean      3      3       2       10000     100      100        4995      0.4995     0.50002      1.0011
```

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);
```

```
----------------------------------------
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
CONTAINER NAME: mp_container_map ND Array (Matrix etc)
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

	i	idx	ndim	numel	rowN	colN	sum	mean	std	coefvari	mir
mat_1	1	1	2	12	3	4	4.9876	0.41564	0.33586	0.80805	0.0
mat_2	2	2	2	2650	50	53	1324.3	0.49973	0.28834	0.57699	0.0004
mat_2_boolean	3	3	2	2650	50	53	1350	0.50943	0.50001	0.98149	

```
xxx TABLE:mat_1 xxxxxxxxxxxxxxxxx
```

	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 xxxxxxxxxxxxxxxxx
```

	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 xxxxxxxxxxxxxxxxx
```

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