FF_CONTAINER_MAP_DISPLAY Examples

back to Fan's Intro Math for Econ, Matlab Examples, or Dynamic Asset Repositories

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();
```

```
----------------------------------------
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
 ND Array (Matrix etc)
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                     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 xxxxxxxxxxxxxxxxxxx
           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 xxxxxxxxxxxxxxxxxxx
            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 xxxxxxxxxxxxxxxxxxx
            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 xxxxxxxxxxxxxxxxxx

	c1	c2
	_____	_____
r1	0.00012471	0.13253
r2	0.88615	0.79226

xxx TABLE:tensor_1 xxxxxxxxxxxxxxxxxx

	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 xxxxxxxxxxxxxxxxxx

	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 xxxxxxxxxxxxxxxxxx

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

xxx TABLE:tesseract_1 xxxxxxxxxxxxxxxxxx

	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 xxxxxxxxxxxxxxxxxx

	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 xxxxxxxxxxxxxxxxxx

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

```
-----------------------------------------
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
 Scalars
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

	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


    ----------------------------------------
    xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
     String
    xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                      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"


    ----------------------------------------
    xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
     Functions
    xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                   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);
```

```
    ----------------------------------------
    xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
    CONTAINER NAME: mp_container_map ND Array (Matrix etc)
    xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                      i    idx    ndim    numel    rowN    colN     sum       mean      std      coefvari     min
```

	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.
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);
```

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

	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 xxxxxxxxxxxxxxxxxxx
```

	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 xxxxxxxxxxxxxxxxxxx
```

	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 xxxxxxxxxxxxxxxxxxx
```

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