```
. clear

.
. /*
>   Back to Fan's Stata4Econ or other repositories:
>   - http://fanwangecon.github.io
>   - http://fanwangecon.github.io/Stata4Econ
>   - http://fanwangecon.github.io/R4Econ
>   - http://fanwangecon.github.io/M4Econ
>   - http://fanwangecon.github.io/CodeDynaAsset/
>   - http://fanwangecon.github.io/Math4Econ/
>   - http://fanwangecon.github.io/Stat4Econ/
>   - http://fanwangecon.github.io/Tex4Econ
>
>   1. Generate Matrix
>   2. Replace single cell values from matrix
>   3. Replace subset of matrix by row or column array
>   4. Row and Column Names
>   5. Retrieve matrix row and column values
> */
.
. ///--- Start log
> set more off

. capture log close

.
. cd "${root_log}"
C:\Users\fan\Documents\Dropbox (UH-ECON)\Profile Paper\Paper Profile April 2016\img\DataDescriptive\test

. global curlogfile "~\Stata4Econ\matrix\define\basic"

. log using "${curlogfile}" , replace
(note: file C:\Users\fan\Stata4Econ\matrix\define\basic.smcl not found)
-------------------------------------------------------------------------------------------------------------------------------
      name:  <unnamed>
       log:  C:\Users\fan\Stata4Econ\matrix\define\basic.smcl
  log type:  smcl
 opened on:  12 Aug 2019, 17:01:36

. log on
(log already on)

.
. ///--- Generate matrix with all 0
>         scalar it_rowcnt = 4

.         scalar it_colcnt = 6

.         scalar bl_fillval = 0

.         matrix mt_bl_estd = J(it_rowcnt, it_colcnt, bl_fillval)

.
. ///--- Give Matrix Row and Column Names
>         matrix rownames mt_bl_estd = hhfe vilfe provfe morecontrols

.         matrix colnames mt_bl_estd = reg1 reg2 reg3 reg4 reg5 reg6

.
. ///--- Assign value to matrix cell single
>         matrix mt_bl_estd[rownumb(mt_bl_estd, "hhfe"), colnumb(mt_bl_estd, "reg1")] = 1

.         matrix mt_bl_estd[2,2] = 3

.
. ///--- Assign value to 4th row, 3nd to 6th
>         matrix mt_bl_estd[4,3] = (9,8,7,6)

.
. ///--- Assign value to 4th column, 2nd 3rd values
>         matrix mt_bl_estd[2,4] = (-3\-44.3)

.
. ///--- Obtain value from matrix
>         scalar bl_hhfe_reg1 = mt_bl_estd[rownumb(mt_bl_estd, "hhfe"), colnumb(mt_bl_estd, "reg1")]

.         di bl_hhfe_reg1
1

.         di el(mt_bl_estd, rownumb(mt_bl_estd, "hhfe"), colnumb(mt_bl_estd, "reg1"))
1
```

```
.
. ///--- Select a column from matrix
>         matrix mt_bl_estd_colreg1 = mt_bl_estd[1..., colnumb(mt_bl_estd, "reg1")]

.         matrix list mt_bl_estd_colreg1

mt_bl_estd_colreg1[4,1]
              reg1
        hhfe     1
       vilfe     0
      provfe     0
morecontrols     0

.
. ///--- Get Row and Column Names
>         global st_colnames : colnames mt_bl_estd

.         di "${st_colnames}"
reg1 reg2 reg3 reg4 reg5 reg6

.         global st_rownames : rownames mt_bl_estd

.         di "${st_rownames}"
hhfe vilfe provfe morecontrols

.
. ///--- Show Matrix
>         matrix list mt_bl_estd

mt_bl_estd[4,6]
               reg1   reg2   reg3   reg4   reg5   reg6
        hhfe      1      0      0      0      0      0
       vilfe      0      3      0     -3      0      0
      provfe      0      0      0  -44.3      0      0
morecontrols      0      0      9      8      7      6

.
. ///--- End Log and to HTML
> log close
      name:  <unnamed>
       log:  C:\Users\fan\Stata4Econ\matrix\define\basic.smcl
  log type:  smcl
 closed on:  12 Aug 2019, 17:01:36
```

```
. capture noisily {
.   log2html "${curlogfile}", replace

HTML log file ~\Stata4Econ\matrix\define\basic.html created
. }

. ///--- to PDF
> capture noisily {
.         // translator query smcl2pdf
.         translator set smcl2pdf logo off
.         translator set smcl2pdf fontsize 8
.         translator set Results2pdf pagesize letter
.         translator set smcl2pdf lmargin 0.4
.         translator set smcl2pdf rmargin 0.4
.         translator set smcl2pdf tmargin 0.4
.         translator set smcl2pdf bmargin 0.4
.         translate "${curlogfile}.smcl" "${curlogfile}_smcllog.pdf", replace translator(smcl2pdf)
(file C:\Users\fan\Stata4Econ\matrix\define\basic_smcllog.pdf written in PDF format)
.
.         // translator query Results2pdf
.         translator set Results2pdf logo off
.         translator set Results2pdf fontsize 8
.         translator set Results2pdf pagesize letter
.         translator set Results2pdf lmargin 0.2
.         translator set Results2pdf rmargin 0.2
.         translator set Results2pdf tmargin 0.2
.         translator set Results2pdf bmargin 0.2
.         translate @Results "${curlogfile}_results.pdf", replace translator(Results2pdf)
```