KEEP DROP RENAME

Order of Execution?

John Lam
February 9, 2018

```
 data test1;
   a = 6; b=7; c=3; d=1; output;
   a= 8; b=9;  c=4; d=2; output;
   a= 0; b=10; c=5; d=3;  output;
run;
```

```
data test2;
  set test1(rename=(d=x) keep=a b c x);
run;

proc print; run;

Obs      a        b      c


 1       6        7      3
 2       8        9      4
 3       0       10      5


/* KEEP is executed before RENAME */
/* variable x does not exist in KEEP */
```

```
data test2;
  set test1(rename=(d=x) keep=a b c d);
run;

Obs      a       b      c      x


  1       6       7      3      1
  2       8       9      4      2
  3       0      10      5      3


  /* rewrite the previous data step with a change:
*/
/* variable d is in KEEP */
/* Result: renamed variable is kept   */
/* Conclusion:  KEEP is executed before RENAME
*/
```

```
data test2;
   set test1(keep=a b c d  drop=d);
run;

Obs      a       b       c

  1       6       7       3
  2       8       9       4
  3       0      10       5
```

/* KEEP & DROP the same variable 'd' */
/* Unclear which one executes first in this example
*/
/* but variable 'd' in KEEP is dropped!!!   -
Unexpected result? */

```
data test2;
    set test1(rename=(d=x c=z) keep=a b c d  drop=z);
 run;

Obs      a        b        z        x


  1       6        7        3        1
  2       8        9        4        2
  3       0       10        5        3


 /* drop a renamed variable ('z') – result: not dropped */
/* keep a variable ('d') to be renamed – result: renamed variable ('x')
kept */
/* Conclusion: RENAME is executed last */
```

Keep, drop & rename, order of execution?
1) DROP
2) KEEP
3) RENAME

Tips:
1) Easy way to remember the order: alphabetically (this was a tip from someone in a previous TASS meeting)

2) Try not to use KEEP & DROP of the same variable(s) within the same data step