```
1  ************************************************************;
2  *  Creating an Accumulating Column within Groups           *;
3  ************************************************************;
4  *  Syntax and Example                                      *;
5  *                                                          *;
6  *    Subsetting IF statement:                              *;
7  *        IF expression;                                    *;
8  *    FIRST.bycol                                           *;
9  *    LAST.bycol                                            *;
10 ************************************************************;
11
12 proc sort data=pg2.storm_2017 out=storm2017_sort;
13     by Basin;
14 run;
15
16 data storm2017_max;
17     set storm2017_sort;
18     by Basin;
19     if last.Basin=1;
20     StormLength=EndDate-StartDate;
21     MaxWindKM=MaxWindMPH*1.60934;
22 run;
23
24 ************************************************************;
25 *  Demo                                                    *;
26 *  1) Highlight the DATA step and run the selected code.   *;
27 *     Notice that YTDRain is an accumulating column that   *;
28 *     creates a running total of DailyRain. Also notice    *;
29 *     that the data is sorted by Month and Date.           *;
30 *  2) Add a BY statement to process the rows by groups     *;
31 *     based on the values of Month.                        *;
32 *  3) Change the new accumulating column to MTDRain in     *;
33 *     the KEEP and sum statements.                         *;
34 *  4) Reset MTDRain to 0 each time that SAS reaches the    *;
35 *     first row within a new Month group. Highlight the    *;
36 *     DATA step and run the selected code.                 *;
37 ************************************************************;
38
39 data houston_monthly;
40     set pg2.weather_houston;
41     keep Date Month DailyRain YTDRain;
42     by Month;
43     if first.Month=1 then YTDRain=0;
44     YTDRain+DailyRain;
45 run;
46
47
```