```
1  ************************************************************;
2  *  Using Character Functions to Extract Words              *;
3  *  from a String                                           *;
4  ************************************************************;
5  *  Syntax                                                  *;
6  *                                                          *;
7  *    SCAN (string, n <, 'delimiters'>)                     *;
8  *    PROPCASE (string, <, 'delimiters'>)                   *;
9  ************************************************************;
10
11 ************************************************************;
12 *  Demo                                                    *;
13 *  1) Notice that the DATA step creates the City and       *;
14 *     Prefecture columns by extracting the first or        *;
15 *     second word from Location. Highlight the step and    *;
16 *     run the selected code.                               *;
17 *  2) Examine row 8 in the output data. Notice that the    *;
18 *     city name should be MIYAKE-JIMA. However, the        *;
19 *     hyphen is a default delimiter, so MIYAKE is          *;
20 *     assigned to City and JIMA is assigned to             *;
21 *     Prefecture.                                          *;
22 *  3) In both SCAN functions, add a third argument to      *;
23 *     specify that the only delimiter is a comma.          *;
24 *     Highlight the step and run the selected code.        *;
25 *  4) Add an additional assignment statement to create a   *;
26 *     column named Country that reads the last word in     *;
27 *     Location.                                            *;
28 *  5) Use the PROPCASE function in the City assignment     *;
29 *     statement to capitalize the first letter of each     *;
30 *     word and convert the remaining letters to            *;
31 *     lowercase. Highlight the step and run the selected   *;
32 *     code.                                                *;
33 *  6) Examine row 8 again in the output data. Because the  *;
34 *     hyphen is a delimiter, both Miyake and Jima are      *;
35 *     capitalized. The proper casing for this city name    *;
36 *     should be Miyake-jima. Use the optional second       *;
37 *     argument to specify that the only delimiter should   *;
38 *     be a space. Highlight the step and run the selected  *;
39 *     code.                                                *;
40 ************************************************************;
41
42
43 data weather_japan_clean;
44     set pg2.weather_japan;
45     Location=compbl(Location);
46     City=propcase(scan(Location, 1,','),' ');
47     Prefecture=scan(Location, 2,',');
48     Country=scan(Location,-1);
49
50 run;
```