### Example 1

#### Listing Selected Observations

**Featured Tools:**
- PRINT procedure
- SORT procedure
- FORMAT procedure, VALUE statement
- WHERE statement
- FORMAT and LABEL statements

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#### Overview

This report shows a partial listing of a data set that describes houses for sale. The listing contains information about houses within a certain price range.

#### Method

PROC SORT sorts the data set by the descending order of the sale price. PROC FORMAT creates a format that assigns a meaningful name for the geographic region of each house. PROC PRINT selects and prints observations based on the price of the house.

#### Key Steps

- Sort the data by the descending order of PRICE.
- Create a format that assigns a meaningful description for each value of ZONE.
- Select the observations to print.
- Print only selected variables.
The Program

Set options.

Create the HOUSING data set.
HOUSING contains descriptive data about homes currently for sale. The INPUT statement reads two records to create each observation. Each value for ZONE represents a geographic area. The complete DATA step is in the appendix.

```latex
options nodate number pageno=1 linesize=132 pagesize=60;

data housing;
  input zone $1. +1 type : $8. bedr bath sqfeet age
    schools : $15. / address & $25. price;
  cards;
    4 two story 4 2.5 2538 6 920:340/400/368
    1 Whitehall Way 154900
    1 two story 4 2.5 2700 7 920:470/360/552
    1800 Bridgeport 169900
    3 twnhouse 2 2 1595 6 320:332/366/312
    154 Montrose 102000
    ...
    . more data lines
    1 twostory 3 2.5 2416 6 920:568/356/318
    6008 Brass Lantern Ct. 144500
    4 ranch 3 2.5 2441 1 920:540/512/436
    9356 Sauls Rd. 197000
    1 twostory 5 3.5 4850 3 920:540/512/436
    9317 Sauls Rd. 339950
    4 split 3 1.5 1225 18 920:328/312/316
    6424 Old Jenks Rd. 81900;

sort the data values by the descending values of PRICE.

proc sort data=housing;
  by descending price;
run;

Create a format for ZONE that provides meaningful descriptions for geographic regions.

proc format;
  value $zonefmt '1'='North Ridge'
    '2'='Inside Beltline'
    '3'='Southside'
    '4'='East Lake'
    '5'='Westend'
    '6'='Roebuck';
r
run;

Print the sorted data set. UNIFORM formats all pages of a multipage report uniformly. LABEL uses variable labels as column headers. NOOBS suppresses the observation numbers.

proc print data=housing uniform label noobs;
Specify the observations and variables to print. The WHERE statement prints only those observations where PRICE is between 100000 and 250000, inclusive. The VAR statement specifies the variables to print and the order in which to print them.

WHERE price between 100000 and 250000;
VAR zone type address price bedr bath sqfeet age;

Associate formats and labels with variables.

format sqfeet comma5. price dollar9. zone $zonefmt.;
label bedr='BEDROOM';

Specify titles.

title 'Selected Listing of Local Residential Properties';
title2 'Price Range $100,000 to $250,000';
RUN;

Where to Go from Here


- **Reading multiple records to create one observation.** For more information, see Chapter 3, “Starting with Raw Data,” in SAS Language and Procedures: Usage.

- **Routing output.** For more information on routing SAS output, see the SAS companion for your operating system. You can use the following tools in SAS software: PROC PRINTTO or the display manager FILE command. You can also use operating system commands, options, and statements.