



## Solution

SP4R02s05.sas

### 1. Labeling, Formatting, and Conditional Printing

Open **SP4R02e05.sas** and modify the DATA step, shown below, to complete the exercises. This DATA step generates the **Class** data table with 20 observations and four variables.

```
data sp4r.class;
  input student $ country $ grade bd @@;
  datalines;
John Spain 95 12000 Mary Spain 82 12121 Alison France 98 12026
Nadine Spain 77 12222 Josh Italy 61 12095 James France 45 12301
William France 92 12284 Susan Italy 95 12079
Charlie France 88 12234 Alice Italy 89 12014 Robert Italy 92 12025
Emily Spain 87 12148 Arthur Italy 99 12052 Nancy France 70 12238
Kristin France 65 12084 Sara Italy 49 12322 Ashley Spain 96 12299
Aaron France 95 12052 Sean France 87 12254 Phil Italy 86 12036
  ;
run;
```

- a. Use PROC FORMAT to create a format for the **grade** variable.

Grade	GradeFormat
0-59	F
60-69	D
70-79	C
80-89	B
90-100	A

```
proc format;
  value gradesformat 0-59='F' 60-69='D' 70-79='C' 80-89='B'
                    90-100='A';
run;
```

- b. Use the DATA step above to read in the **Class** data set. In the DATA step label the variable **bd** as “Birthday” and apply the GradeFormat created in part a. In addition, use the SAS format WORDDATE for the **bd** variable.

```
data sp4r.class;
  input student $ country $ grade bd @@;
  label bd='Birthday';
  format grade gradesformat. bd worddate.;
  datalines;
John Spain 95 12000 Mary Spain 82 12121 Alison France 98 12026
Nadine Spain 77 12222 Josh Italy 61 12095 James France 45 12301
William France 92 12284 Susan Italy 95 12079
Charlie France 88 12234 Alice Italy 89 12014 Robert Italy 92 12025
Emily Spain 87 12148 Arthur Italy 99 12052 Nancy France 70 12238
Kristin France 65 12084 Sara Italy 49 12322 Ashley Spain 96 12299
Aaron France 95 12052 Sean France 87 12254 Phil Italy 86 12036
;
run;
```

- c. Print the **Class** data table. (Remember to use the LABEL option in the PRINT statement.)

```
proc print data= sp4r.class label;
run;
```

Obs	student	country	grade	Birthday
1	John	Spain	A	November 8, 1992
2	Mary	Spain	B	March 9, 1993
3	Alison	France	A	December 4, 1992
4	Nadine	Spain	C	June 18, 1993
5	Josh	Italy	D	February 11, 1993
6	James	France	F	September 5, 1993
7	William	France	A	August 19, 1993
8	Susan	Italy	A	January 26, 1993
9	Charlie	France	B	June 30, 1993
10	Alice	Italy	B	November 22, 1992
11	Robert	Italy	A	December 3, 1992
12	Emily	Spain	B	April 5, 1993
13	Arthur	Italy	A	December 30, 1992
14	Nancy	France	C	July 4, 1993
15	Kristin	France	D	January 31, 1993
16	Sara	Italy	F	September 26, 1993
17	Ashley	Spain	A	September 3, 1993
18	Aaron	France	A	December 30, 1992
19	Sean	France	B	July 20, 1993
20	Phil	Italy	B	December 14, 1992

- d. Use PROC SQL to print the unique levels of the **country** variable.

```
proc sql;
  select unique country from sp4r.class;
quit;
```

country
France
Italy
Spain

- e. Conditionally print the variable **student**, **country**, and **grade** for people with a grade above 79 and from France only.

```
proc print data= sp4r.class;
  var student country grade;
  where grade>79 and country='France';
run;
```

Obs	student	country	grade
3	Alison	France	A
7	William	France	A
9	Charlie	France	B
18	Aaron	France	A
19	Sean	France	B