

How to Add Row Numbers in SAS (With Examples)

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Adding row numbers in SAS is a simple and straightforward process. To do this, you can use the ROW_NUMBER() function, which assigns a unique integer value to each row. This can be used to create a new variable that contains row numbers or to assign the row number to an existing variable. For example, the statement ROW_NUMBER() OVER (ORDER BY variable_name) can be used to assign a row number to each observation in the data sorted by the specified variable.

You can use the following methods to add row numbers to a dataset in SAS:

Method 1: Add Row Number

```
data my_data2;  
row_number = _N_;  
set my_data1;  
run;
```

Method 2: Add Row Number by Group

```
/*sort original dataset by var1*/  
proc sort data=my_data1;  
by var1;  
run;  
  
/*create new dataset that shows row number by var1*/  
data my_data2;  
set my_data1;  
by var1;  
if first.var1 then row_number=0;  
row_number+1;  
run;
```

The following examples show how to use each method with the following dataset in SAS:

```
/*create dataset*/  
data my_data1;  
input team $ points;  
datalines;  
Mavs 22  
Mavs 40  
Rockets 41  
Rockets 29
```

```
Rockets 30  
Spurs 18  
Spurs 22  
Spurs 27  
Warriors 13  
Warriors 19
```

```
;  
run;
```

```
/*view dataset*/  
proc print data=my_data1;
```

Obs	team	points
1	Mavs	22
2	Mavs	40
3	Rockets	41
4	Rockets	29
5	Rockets	30
6	Spurs	18
7	Spurs	22
8	Spurs	27
9	Warriors	13
10	Warriors	19

Example 1: Add Row Number

The following code shows how to add a new column called **row_number** that contains the row number for each observation:

```
/*create new dataset with column for row numbers*/  
data my_data2;  
row_number = _N_;  
set my_data1;  
run;
```

Obs	row_number	team	points
1	1	Mavs	22
2	2	Mavs	40
3	3	Rockets	41
4	4	Rockets	29
5	5	Rockets	30
6	6	Spurs	18
7	7	Spurs	22
8	8	Spurs	27
9	9	Warriors	13
10	10	Warriors	19

Notice that a new column called **row_number** has been added that contains the row number for each observation in the dataset.

Example 2: Add Row Number by Group

The following code shows how to add a row number by group:

```
/*sort original dataset by team*/
```

```
proc sort data=my_data1;
```

```
by var1;
```

```
run;
```

```
/*create new dataset that shows row number by team*/
```

```
data my_data2;
```

```
set my_data1;
```

```
by var1;
```

```
if first.var1 then row_number=0;
```

```
row_number+1;
```

```
run;
```

Obs	team	points	row_number
1	Mavs	22	1
2	Mavs	40	2
3	Rockets	41	1
4	Rockets	29	2
5	Rockets	30	3
6	Spurs	18	1
7	Spurs	22	2
8	Spurs	27	3
9	Warriors	13	1
10	Warriors	19	2

Notice that the row numbers start over for each new team.

The following tutorials explain how to perform other common tasks in SAS: