

How can I perform a one-to-many merge in SAS?

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A one-to-many merge in SAS is a data manipulation technique used to combine two datasets based on a one-to-many relationship between a common variable. This allows for the creation of a single merged dataset containing information from both datasets, with repeated values from one dataset matched to corresponding values in the other dataset. This merge can be performed by using the MERGE statement in the DATA step or by using the PROC SQL procedure in SAS. The resulting merged dataset can be used for further analysis and reporting purposes.

Perform One-to-Many Merge in SAS

You can use the following syntax to perform a one-to-many merge in SAS:

```
data final_data;  
merge data_one data_many;  
by ID;  
run;
```

This particular example creates a new dataset called `final_data` by merging the datasets called `data_one` and `data_many` on the variable called `ID`.

In the `data_one` dataset, each unique `ID` value only appears once.

In the `data_many` dataset, each unique `ID` value occurs multiple times.

This is known as a one-to-many merge.

The following example shows how to use this syntax in practice.

Example: One-to-Many Merge in SAS

Suppose we have the following dataset called `data_one` that contains information about sales personnel at some company:

```
/*create dataset*/  
data data_one;  
input ID Gender $;  
datalines;  
1 Male  
2 Male  
3 Female  
4 Male  
5 Female  
;  
run;  
  
/*view dataset*/ proc printdata = data_one;
```

Obs	ID	Gender
1	1	Male
2	2	Male
3	3	Female
4	4	Male
5	5	Female

Notice that each unique ID value only occurs once in the dataset.

Now suppose we have another dataset called `data_many` that contains information about sales made by each sales person at various locations:

```
/*create dataset*/  
data data_many;  
input ID Store $ Sales;  
datalines;  
1 A 22  
1 B 25  
1 C 20  
2 A 14  
2 B 23  
3 A 10  
4 A 15
```

4 B 29

5 A 16

5 C 22

;

run;

/*view dataset*/ proc printdata = data_many;

Obs	ID	Store	Sales
1	1	A	22
2	1	B	25
3	1	C	20
4	2	A	14
5	2	B	23
6	3	A	10
7	4	A	15
8	4	B	29
9	5	A	16
10	5	C	22

Notice that each unique ID value occurs multiple times.

We can use the following syntax to perform a one-to-many merge using these datasets:

/*create new dataset using one-to-many merge*/

data final_data;

```
merge data_one data_many;  
by ID;  
run;
```

```
/*view new dataset*/  
proc printdata=final_data;
```

Obs	ID	Gender	Store	Sales
1	1	Male	A	22
2	1	Male	B	25
3	1	Male	C	20
4	2	Male	A	14
5	2	Male	B	23
6	3	Female	A	10
7	4	Male	A	15
8	4	Male	B	29
9	5	Female	A	16
10	5	Female	C	22

The one-to-many merge produced a new dataset that contains all information from both datasets.

Note: You can find the complete documentation for the SAS merge statement .

The following tutorials explain how to perform other

common tasks in SAS:

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