

How to Recreate SAS PROC FREQ Tables in R

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SAS PROC FREQ and R both provide statistical analysis tools, but they have different programming languages. The equivalent of SAS PROC FREQ in R is the "table" function, which allows for the calculation of frequency tables and related statistics such as Chi-square tests and odds ratios. Like PROC FREQ, the table function provides a comprehensive breakdown of the frequencies and percentages of each category within a variable, making it a useful tool for data exploration and analysis in R.

In SAS, you can use **PROC FREQ** to calculate frequencies for variables.

The easiest way to replicate this functionality in the R programming language is by using the **table** function.

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

Example: How to Use Equivalent of SAS PROC FREQ in R

Suppose we have the following data frame in R that contains information about points scored by basketball players on various teams and positions:

#create data frame

```
df <- data.frame(team=c('A', 'A', 'A', 'A', 'B', 'B', 'B', 'B'),  
position=c('G', 'G', 'G', 'F', 'G', 'F', 'F', 'C'),  
points=c(23, 18, 14, 14, 13, 19, 34, 28))
```

#view data frame

df

team position points

1 A G 23

2 A G 18

3 A G 14

4 A F 14

5 B G 13

6 B F 19

7 B F 34

8 B C 28

We can use the following code to calculate the frequency of each unique value in the **position** column:

#calculate frequency of each unique value in 'position' column

```
table(df$position)
```

```
C F G
1 3 4
```

The output shows the frequency of each unique value in the **position** column.

For example, we can see:

The value **C** occurs 1 time.

The value **F** occurs 3 times.

The value **G** occurs 4 times.

If you would like to view the frequencies as percentages, you can use the **prop.table** function as follows:

```
#calculate frequency percentage of each unique value in 'position' column  
prop.table(table(df$position))
```

```
C F G
0.125 0.375 0.500
```

The output shows the frequency percentage of each unique value in the **position** column.

For example, we can see:

The value **C** represents 12.5% of all values in the position column.

The value **F** represents 37.5% of all values in the position column.

The value **G** represents 50% of all values in the position column.

Lastly, if you'd like to create a two-way frequency table in R then you can include the names of two columns in the **table** function as follows:

```
#calculate frequencies of values in team and position columns  
table(df$team, df$position)
```

```
C F G
A 0 1 3
B 1 2 1
```

The output shows the frequency of each unique combination of values in the **team** and **position**

columns.

For example, we can see:

There were **0** occurrences of position C on team A.

There was **1** occurrence of position F on team A.

There were **3** occurrences of position G on team A.

And so on.

How to Create Tables in R

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