

How can the INDEXW function be used in SAS?

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The INDEXW function in SAS is a useful tool for searching and extracting specific words or phrases from a given string. It works by identifying the position of the first occurrence of the specified word or phrase within the string, making it particularly useful for data manipulation and analysis. This function can be used in a variety of ways, such as identifying key words in text data, creating new variables based on specific criteria, and performing conditional logic. Its versatility and efficiency make it a valuable tool for SAS users in various industries and applications.

Use the INDEXW Function in SAS

You can use the INDEXW function in SAS to return the position of the first character of a word that occurs within a string.

This function uses the following basic syntax:

INDEXW(source, excerpt)

where:

source: The string to analyze
excerpt: The word to search for within *source*

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

Example: Using the INDEXW Function in SAS

Suppose we have the following dataset in SAS that contains a column of phrases:

```
/*create dataset*/  
data original_data;  
input phrase $40.;  
datalines;  
A pig is my favorite animal  
My name is piglet  
Pigs are so cute  
Here is a baby pig  
His name is piggie  
;  
run;  
  
/*view dataset*/  
proc printdata=original_data;
```

Obs	phrase
1	A pig is my favorite animal
2	My name is piglet
3	Pigs are so cute
4	Here is a baby pig
5	His name is piggie

We can use the INDEXW function to search for the position of the first occurrence of the word 'pig' in the phrase column:

```
/*find position of first occurrence of 'pig' in phrase  
column*/
```

```
data new_data;
```

```
set original_data;
```

```
indexw_pig = indexw(phrase, 'pig');
```

```
run;
```

```
/*view results*/
```

```
proc printdata=new_data;
```

Obs	phrase	indexw_pig
1	A pig is my favorite animal	3
2	My name is piglet	0
3	Pigs are so cute	0
4	Here is a baby pig	16
5	His name is piggie	0

The new column called `indexw_pig` displays the position of the first occurrence of the word 'pig' in the phrase column.

If the word 'pig' never occurs in the phrase column then the `INDEXW` function simply returns a value of 0.

For example, from the output we can see:

The position of the first occurrence of the word 'pig' in the first phrase is 3.

And so on.

The Difference BETWEEN INDEX and INDEXW Functions

The INDEX function in SAS returns the position of the first occurrence of a particular substring in another string.

By contrast, the INDEXW function returns the position of the first occurrence of a particular word in another string.

By definition, a word must have a space before and after it.

The following example illustrates the difference between the INDEX and INDEXW functions:

```
/*create new dataset*/  
data new_data;  
set original_data;  
index_pig = index(phrase, 'pig');  
indexw_pig = indexw(phrase, 'pig');
```

```
run;
```

```
/*view new dataset*/
```

```
proc printdata=new_data;
```

Obs	phrase	index_pig	indexw_pig
1	A pig is my favorite animal	3	3
2	My name is piglet	12	0
3	Pigs are so cute	0	0
4	Here is a baby pig	16	16
5	His name is piggie	13	0

The `index_pig` column displays the position of the first occurrence of the substring 'pig' in the phrase column.

The `indexw_pig` column displays the position of the first occurrence of the word 'pig' in the phrase column.

The following tutorials explain how to use other common functions in SAS: