

How can I use the INDEXC function in SAS?

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The INDEXC function is a useful tool in SAS that allows users to search for a specific character or set of characters within a given string of text. This function can be used to extract certain characters from a larger string, determine the position of those characters, and perform various manipulations on the text. To use the INDEXC function, one must provide the string to be searched and the character or characters to be located. This function can be particularly valuable in data analysis and text processing tasks, allowing for efficient and precise identification and manipulation of relevant information.

Use the INDEXC Function in SAS

You can use the INDEXC function in SAS to return the position of the first occurrence of any individual character within a string.

This function uses the following basic syntax:

INDEXC(source, excerpt)

where:

source: The string to analyze
excerpt: The string of characters to search for within *source*

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

Example: Using the INDEXC Function in SAS

Suppose we have the following dataset in SAS that

contains a column of names:

```
/*create dataset*/  
data original_data;  
input name $25.;  
datalines;  
Andy Lincoln Bernard  
Barren Michael Smith  
Chad Simpson Arnolds  
Derrick Smith Henrys  
Eric Millerton Smith  
Frank Giovanni Goode  
;  
run;  
  
/*view dataset*/  
proc printdata=original_data;
```

Obs	name
1	Andy Lincoln Bernard
2	Barren Michael Smith
3	Chad Simpson Arnolds
4	Derrick Smith Henrys
5	Eric Millerton Smith
6	Frank Giovanni Goode

We can use the INDEXC function to search for the position of the first occurrence of the characters **x, y or z**:

```
/*find position of first occurrence of either x, y or z in name*/
```

```
data new_data;
```

```
set original_data;
```

```
first_xyz = indexc(name, 'xyz');
```

```
run;
```

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

```
proc printdata=new_data;
```

Obs	name	first_xyz
1	Andy Lincoln Bernard	4
2	Barren Michael Smith	0
3	Chad Simpson Arnolds	0
4	Derrick Smith Henrys	19
5	Eric Millerton Smith	0
6	Frank Giovanni Goode	0

The new column called **first_xyz** displays the position of the first occurrence of the characters **x, y or z** in the **name** column.

If none of these three characters are present in the name column, then the INDEXC function simply returns a value of 0.

For example, from the output we can see:

The position of the first occurrence of x, y or z in the first row is in position 4. We can see that the character in position 4 in the first row is a y.

And so on.

The Difference BETWEEN INDEX and INDEXC Functions

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

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

```
/*create new dataset*/  
data new_data;  
set original_data;  
index_smith = index(name, 'Smith');  
indexc_smith = indexc(name, 'Smith');
```

```
run;
```

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

```
proc printdata=new_data;
```

Obs	name	index_smith	indexc_smith
1	Andy Lincoln Bernard	0	7
2	Barren Michael Smith	16	9
3	Chad Simpson Arnolds	0	2
4	Derrick Smith Henrys	9	5
5	Eric Millerton Smith	16	3
6	Frank Giovanni Goode	0	8

The `index_smith` column displays the position of the first occurrence of the substring 'Smith' in the name column.

The `indexc_smith` column displays the position of the first occurrence of the letters s, m, i, t, o, r, h in the name column.

For example, from the output we can see:

The substring 'Smith' never occurs in the first name so `index_smith` returns a value of 0.

The letter i occurs in the 7th position of the first name so `indexc_smith` returns a value of 7.

And so on.

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

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