

What is the difference between FIND and INDEX in SAS?

Authored by
stats writer

June 23, 2024

RECOMMENDED CITATION

stats writer (2024). *What is the difference between FIND and INDEX in SAS?*.
PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=148005>

FIND and INDEX are two commonly used functions in SAS that serve similar purposes but have distinct differences. FIND is used to locate the position of a specific character or set of characters within a string, while INDEX is used to search for a specific substring and return the position of its first occurrence. FIND is more limited in its search capabilities as it can only locate exact matches, while INDEX allows for partial matches. Additionally, FIND is case-sensitive whereas INDEX is not. In summary, FIND is used for precise character matching while INDEX is used for more flexible substring matching.

SAS: The Difference Between FIND vs. INDEX

You can use both the FIND and INDEX functions in SAS to return the position of the first character of a substring that occurs within a string.

The difference between these functions is that the FIND function allows you to do two things that the INDEX function cannot do:

FIND allows you to perform a case-insensitive search. FIND allows you to specify a starting position for searching.

The following examples illustrate the difference between the FIND and INDEX functions in practice with 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

Example 1: Using FIND and INDEX with No Differences

The following code shows how to use both the FIND and INDEX functions to search for the position of the first occurrence of the substring 'pig' in the phrase

column:

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

```
data new_data;
```

```
set original_data;
```

```
find_pig = find(phrase, 'pig');
```

```
index_pig = index(phrase, 'pig');
```

```
run;
```

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

```
proc printdata=new_data;
```

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

Notice that the FIND and INDEX functions return the exact same results.

Both the find_pig and index_pig columns display the position of the first occurrence of the substring 'pig' in

the phrase column.

Example 2: Using FIND and INDEX with Case-Insensitive Search

The following code shows how to use both the FIND and INDEX functions 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;
find_pig = find(phrase, 'PIG', 'i');
index_pig = index(phrase, 'PIG');
run;

/*view results*/
proc printdata=new_data;
```

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

By using the 'i' modifier in the FIND function, we were able to perform a case-insensitive search of the substring 'PIG' in the phrase column.

Example 3: Using FIND and INDEX with Specific Starting Position

The following code shows how to use the FIND function to search for the substring 'pig' in the phrase column *starting at position 5* while the INDEX function is not capable of using a specific starting position at all:

```
/*find position of first occurrence of 'pig' in phrase
column starting at position 5*/
data new_data;
set original_data;
find_pig = find(phrase, 'pig', 5);
index_pig = index(phrase, 'pig');
run;

/*view results*/
proc printdata=new_data;
```

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

The **find_pig** function searches for the substring 'pig' starting from position 5 of the phrase column.

The **index_pig** function simply searches for the substring 'pig' anywhere in the phrase column since it is not capable of specifying a starting position for searching.

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