

How to Extract Numbers from String in SAS

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In SAS, to extract numbers from a string, the function INPUT can be used. The function takes a character string as input and returns a numeric value. The INPUT function also allows for the extraction of specific numbers within a string by specifying the format of the string. For example, if the string contains numbers in a comma-separated format, the format must be specified to extract the correct numbers. This can be done by using the \$ sign to specify a comma-separated format. This process can be used to extract any number from a string in SAS.

The easiest way to extract numbers from a string in SAS is to use the function with the 'A' modifier.

This function uses the following basic syntax:

```
data new_data;  
set original_data;  
numbers_only = compress(some_string, ', 'A');  
run;
```

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

Example: Extract Numbers from String in SAS

Suppose we have the following dataset in SAS that shows the names of various college courses:

```
/*create dataset*/  
data original_data;  
input course $12.;  
datalines;  
Stats101  
Economics203  
Business201  
Botany411  
Calculus101  
English201  
Chemistry402  
Physics102  
;  
run;  
  
/*view dataset*/  
proc print data=original_data;
```

Obs	course
1	Stats101
2	Economics203
3	Business201
4	Botany411
5	Calculus101
6	English201
7	Chemistry402
8	Physics102

We can use the following code to extract only the numbers from each course name:

```
/*extract numbers from course column*/  
data new_data;  
set original_data;  
course_number_only = compress(course, ", 'A');  
run;
```

```
/*view results*/  
proc print data=new_data;
```

Obs	course	course_number_only
1	Stats101	101
2	Economics203	203
3	Business201	201
4	Botany411	411
5	Calculus101	101
6	English201	201
7	Chemistry402	402
8	Physics102	102

Notice that the new column called **course_number_only** contains only the numbers from the strings in the **course** column.

If you would instead like to only extract the characters in each string, you can use the **COMPRESS**

function with the 'd' modifier instead:

```
/*extract characters from course column*/  
data new_data;  
set original_data;  
course_characters_only = compress(course, "", 'd');  
run;  
  
/*view results*/  
proc print data=new_data;
```

Obs	course	course_characters_only
1	Stats101	Stats
2	Economics203	Economics
3	Business201	Business
4	Botany411	Botany
5	Calculus101	Calculus
6	English201	English
7	Chemistry402	Chemistry
8	Physics102	Physics

Notice that the new column called **course_characters_only** contains only the numbers from the strings in the **course** column.

Note: You can find a complete list of modifiers for the **COMPRESS** function on this .

The following tutorials explain how to perform other common tasks in SAS: