

# How can I check if a column exists in a data frame in R?

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## RECOMMENDED CITATION

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To determine if a column exists in a data frame in R, the function "colnames()" can be used. This function will return a list of all the column names in the data frame and can be compared to the desired column name. If the desired column name is present in the list, then the column exists in the data frame. Another option is to use the "exists()" function, which will return a boolean value indicating if the specified column name exists in the data frame. Both of these methods provide a reliable way to check for the existence of a column in a data frame in R.

## Check if Column Exists in Data Frame in R

You can use the following methods to check if a column exists in a data frame in R:

### Method 1: Check if Exact Column Name Exists in Data Frame

```
'this_column' %in% names(df)
```

### Method 2: Check if Partial Column Name Exists in Data Frame

```
any(grepl('partial_name', names(df)))
```

### Method 3: Check if Several Exact Column Names All Exist in Data Frame

```
all(c('this_column', 'that_column', 'another_column')  
%in% names(df))
```

This tutorial explains how to use each method in practice with the following data frame:

```
#create data frame
```

```
df <- data.frame(team=c('A', 'B', 'C', 'D', 'E'),  
points=c(99, 90, 86, 88, 95),  
assists=c(33, 28, 31, 39, 34),  
rebounds=c(30, 28, 24, 24, 28))
```

```
#view data frame
```

```
df
```

```
team points assists rebounds
```

```
1 A 99 33 30
```

```
2 B 90 28 28
```

```
3 C 86 31 24
```

```
4 D 88 39 24
```

```
5 E 95 34 28
```

**Example 1: Check if Exact Column Name Exists in Data Frame**

The following code shows how to check if the exact column name 'rebounds' exists in the data frame:

```
#check if exact column name 'rebounds' exists in data  
frame
```

```
'rebounds' %in% names(df)
```

**TRUE**

The output returns TRUE.

This tells us that the exact column name 'rebounds' does exist in the data frame.

**Note:** This syntax is case-sensitive. This means if we used 'Rebounds' then we would receive a value of FALSE since the name 'Rebounds' with a capital letter does not exist in the data frame.

**Example 2: Check if Partial Column Name Exists in Data Frame**

The following code shows how to check if the partial column name 'tea' exists in the data frame:

```
#check if partial column name 'tea' exists in data frame  
any(grepl('tea', names(df)))
```

**TRUE**

The output returns TRUE.

**This tells us that the partial column name 'tea' does exist in the data frame.**

**Example 3: Check if Several Exact Column Names All Exist in Data Frame**

**The following code shows how to check if the names 'team', 'points', and 'blocks' all exist in the data frame:**

```
#check if three column names all exist in data frame  
all(c('team', 'points', 'blocks') %in% names(df))
```

**FALSE**

**The output returns FALSE.**

**This tells us that all three column names we checked do not all exist in the data frame.**