Can you set ‘colnames’ on an object with less than two dimensions?

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June 25, 2024

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RECOMMENDED CITATION

stats writer (2024). *Can you set ‘colnames’ on an object with less than two dimensions?*. PSYCHOLOGICAL SCALES. Retrieved from https://scales.arabpsychology.com/?p=152857

The question "Can you set 'colnames' on an object with less than two dimensions?" refers to the possibility of assigning column names to an object that has less than two dimensions. This means that the object only has one row or one column. This inquiry seeks clarification on whether it is possible to label the columns of such an object, and if so, what the process for doing so would be.

Fix: attempt to set 'colnames' on an object with less than two dimensions

One error message you may encounter when using R is:

Error in `colnames<-`(`*tmp*`, value = c("var1", "var2", "var3")) :
attempt to set 'colnames' on an object with less than two dimensions

This error usually occurs when you attempt to use the colnames() function to set the column names on an object that is not a data frame or matrix.

The following example shows how to resolve this error in practice.

How to Reproduce the Error

Suppose we have the following data frame in R:

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```
#create data frame
df <- data.frame(team=c('A', 'A', 'C', 'B', 'C', 'B', 'B', 'C', 'A'),
points=c(12, 8, 26, 25, 38, 30, 24, 24, 15),
rebounds=c(10, 4, 5, 5, 4, 3, 8, 18, 22))

#view data frame
df

team points rebounds
1 A 12 10
2 A 8 4
3 C 26 5
4 B 25 5
5 C 38 4
6 B 30 3
7 B 24 8
8 C 24 18
9 A 15 22
```

Now suppose we attempt to add a new row to the end of the data frame:

```
#define new row to add to end of data frame
```

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new_row <- c('D', 15, 11)

#attempt to define column names for new row
colnames(new_row) <- colnames(df)

Error in `colnames<-`(`*tmp*`, value = c("team", "points", "rebounds")) :
attempt to set 'colnames' on an object with less than two dimensions

We receive an error because we used the colnames() function on a vector instead of a data frame or matrix.

How to Fix the Error

To avoid this error, we need to make sure that we're using the colnames() function with a data frame:

For example, we can use the following code to add a new row to the end of the data frame

#define new row to add to end of data frame
new_row <- data.frame('D', 15, 11)

#define column names for new row
colnames(new_row) <- colnames(df)

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```
#add new row to end of data frame
df <- rbind(df, new_row)

#view updated data frame
df

team points rebounds
1 A 12 10
2 A 8 4
3 C 26 5
4 B 25 5
5 C 38 4
6 B 30 3
7 B 24 8
8 C 24 18
9 A 15 22
10 D 15 11
```

This time we don't receive any error because we used the colnames() function to define the column names of a data frame instead of a vector.

We're then able to successfully use to bind the new row to the end of the existing data frame.

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