

How do you check data type in R, and can you provide examples?

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The process of determining the data type in R is an essential task for data analysis and manipulation. To check the data type in R, the "class()" function can be used. It will return the class of an object, which represents the data type. For example, if we have a variable "age" with integer values, using the "class(age)" function will return "integer". Similarly, if we have a vector "names" with character values, the "class(names)" function will return "character". Additionally, the "typeof()" function can also be used to check the type of data, which returns a more specific type of data such as "integer", "double", "logical", etc. Overall, knowing the data type in R is crucial for performing various operations and ensuring accurate analysis of data.

Check Data Type in R (With Examples)

You can use the following functions to check the data type of variables in R:

#check data type of one variable

class(x)

#check data type of every variable in data frame

str(df)

#check if a variable is a specific data type

is.factor(x)

is.numeric(x)

is.logical(x)

The following examples show how to use these functions in practice.

Example 1: Check Data Type of One Variable

The following code shows how to check the data type of one variable in R:

```
#define variable x
x <- c("Andy", "Bob", "Chad", "Dave", "Eric", "Frank")

#check data type of x
class(x)

"character"
```

We can see that *x* is a character variable.

Example 2: Check Data Type of Every Variable in Data Frame

The following code shows how to check the data type of every variable in a data frame:

```
#create data frame
df <- data.frame(x=c(1, 3, 4, 4, 6),
y=c("A", "B", "C", "D", "E"),
z=c(TRUE, TRUE, FALSE, TRUE, FALSE))

#view data frame
df
```

```
x y z  
1 1 A TRUE  
2 3 B TRUE  
3 4 C FALSE  
4 4 D TRUE  
5 6 E FALSE
```

```
#find data type of every variable in data frame  
str(df)
```

```
'data.frame': 5 obs. of 3 variables:  
$ x: num 1 3 4 4 6  
$ y: chr "A" "B" "C" "D" ...  
$ z: logi TRUE TRUE FALSE TRUE FALSE
```

From the output we can see:

Variable x is a numeric variable. Variable y is a character variable. Variable z is a logical variable.

Example 3: Check if Variable is Specific Data Type

The following code shows how to check if a specific variable in a data frame is a numeric variable:

```
#create data frame
```

```
df <- data.frame(x=c(1, 3, 4, 4, 6),  
y=c("A", "B", "C", "D", "E"),  
z=c(TRUE, TRUE, FALSE, TRUE, FALSE))
```

```
#check if x column is numeric  
is.numeric(df$x)
```

TRUE

Since the output returned TRUE, this indicates that the x column in the data frame is numeric.

We can also use the function to check if every column in the data frame is numeric:

```
#check if every column in data frame is numeric  
sapply(df, is.numeric)
```

x y z

TRUE FALSE FALSE

We can see that column x is numeric, while columns y and z are not.