

How can I use the sprintf function in R to print formatted strings?

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The sprintf function in R is a powerful tool that allows users to format and print strings in a specific, organized manner. By using placeholders within the string and corresponding values in a separate argument, sprintf can generate customized and well-formatted output. This function is particularly useful for creating tables or reports with consistent formatting, as well as for displaying numerical data with a desired number of decimal places. Overall, the sprintf function offers a convenient and efficient way to produce visually appealing and structured strings in R.

Use sprintf Function in R to Print Formatted Strings

You can use the sprintf() function in R to print formatted strings.

This function uses the following basic syntax:

sprintf(fmt, x)

where:

fmt: The format to use x: The value to format

The following examples show how to use this function in practice.

Example 1: Format Digits After Decimal Point

The following code shows how to use sprintf() to only display two digits after a decimal point:

#define value

```
x <- 15.49347782
```

```
#only display 2 digits after decimal place
```

```
sprintf("%.2f", x)
```

```
"15.49"
```

Example 2: Format Digits Before Decimal Point

The following code shows how to use sprintf() to display ten digits before the decimal point:

```
#define value
```

```
x <- 15435.4
```

```
#display 10 total digits before decimal place
```

```
sprintf("%10.f", x)
```

```
" 15435"
```

Since there were only five digits before the decimal point to start with, the sprintf() function added another five blank spaces at the beginning of the string to make a total of 10 digits before the decimal point.

Example 3: Format Value Using Scientific Notation

The following code shows how to use `sprintf()` to display a value in scientific notation:

```
#define value
```

```
x <- 15435.4
```

```
#display in scientific notation using lowercase e
```

```
sprintf("%e", x)
```

```
"1.543540e+04"
```

```
#display in scientific notation using uppercase E
```

```
sprintf("%E", x)
```

```
"1.543540E+04"
```

Example 4: Format One Value in String

```
#define value
```

```
x <- 5.4431
```

```
#display string with formatted value
```

```
sprintf("I rode my bike about %.1f miles", x)
```

```
"I rode my bike about 5.4 miles"
```

Example 5: Format Multiple Values in String

The following code shows how to use `sprintf()` to format multiple values in a string:

```
#define values
```

```
x1 <- 5.4431
```

```
x2 <- 10.778342
```

```
#display string with formatted values
```

```
sprintf("I rode my bike %.1f miles and then ran %.2f  
miles", x1, x2)
```

```
"I rode my bike 5.4 miles and then ran 10.78 miles"
```

Additional Resources

How to Use paste & paste0 Functions in R