

How can I append values to a vector using a loop in R?

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Appending values to a vector using a loop in R refers to the process of adding new elements to a pre-existing vector in a sequential manner. This can be achieved by using a loop, which allows for the repeated execution of a set of instructions until a specific condition is met. By using a loop, one can efficiently add multiple values to a vector without having to manually input each value. This enables the user to easily manipulate and expand the vector, making it a useful tool in data analysis and programming tasks in R.

Append Values to a Vector Using a Loop in R

To append values to a vector using a loop in R, you can use the following basic syntax:

```
for(i in 1:10) {  
  data <- c(data, i)  
}
```

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

Example 1: Append Values to Empty Vector

The following code shows how to append values to an empty vector in R:

```
#define empty vector  
data <- c()#use for loop to add integers from 1 to 10 to  
vector  
for(i in 1:10) {
```

```
data <- c(data, i)  
}
```

```
#view resulting vector  
data
```

```
1 2 3 4 5 6 7 8 9 10
```

Example 2: Perform Operation & Append Values to Vector

The following code shows how to perform an operation and append values to an empty vector:

```
#define empty vector  
data <- c()#use for loop to add square root of integers  
from 1 to 10 to vector  
for(i in 1:10) {  
data <- c(data, sqrt(i))  
}
```

```
#view resulting vector  
data
```

```
1.000000 1.414214 1.732051 2.000000 2.236068 2.449490  
2.645751 2.828427  
3.000000 3.162278
```

Example 3: Append Values to Existing Vector

The following code shows how to append values to an existing vector in R:

```
#define vector of data
```

```
data <- c(4, 5, 12)
```

```
#define new data to add
```

```
new <- c(16, 16, 17, 18)
```

```
#use for loop to append new data to vector
```

```
for(i in 1:length(new)) {
```

```
  data <- c(data, new)
```

```
}
```

```
#view resulting vector
```

```
data
```

```
4 5 12 16 16 17 18
```

Example 4: Append a Single Value to Vector

If you simply want to append a single value to the end of an existing vector, you can use the following code without a for loop:

```
#define vector of data
```

```
data <- c(4, 5, 12)
```

```
#append the value "19" to the end of the vector
```

```
new <- c(data, 19)
```

```
#display resulting vector
```

```
new
```

```
4 5 12 19
```

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