Introduction to R Software

Repeats

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Repeats

Command `rep` is used to replicates the values in a vector.

Syntax `rep(x)` replicates the values in a vector `x`.

`rep(x, times=n )` # Repeat `x` as a whole `n` times

`rep(x, each=n )` # Repeat each cell `n` times

Repeats

Help for the command `rep`

```
> help("rep")
```

127.0.0.1:13069/library/base/html/rep.html

rep {base}   R Documentati

Replicate Elements of Vectors and Lists

Description

`rep` replicates the values in `x`. It is a generic function, and the (internal) default method is described here.

`rep.int` and `rep_len` are faster simplified versions for two common cases. They are not generic.

Usage

```
rep(x, ...)

rep.int(x, times)

rep_len(x, length.out)
```

Arguments

`x`   a vector (of any mode including a list) or a factor or (for `rep` only) a `POSIXct` or `POSIXlt` or `Date` object; or an S4 object containing such an object.

`...`   further arguments to be passed to or from other methods. For the internal default method these can include:

          `times`

Repeats

The command `rep`

Repeat an object *n*–times:

```
> rep(3.5, times=10)
```

```
[1] 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5
```

```
> rep(1:4, 2)
  [1] 1 2 3 4 1 2 3 4
```

R Console

```
> rep(3.5, times=10)
 [1] 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5
>
> rep(1:4, 2)
[1] 1 2 3 4 1 2 3 4
```

Repeats

Repeat an object *n*-times:

```
rep(x, times = n )
```

Repeat each cell *n*-times:

```
rep(x, each = n )
```

```
> x <- 1:3
> x
[1] 1 2 3

> rep(x, times = 3 )
[1] 1 2 3 1 2 3 1 2 3

> rep(x, each = 3 )
[1] 1 1 1 2 2 2 3 3 3
```

Repeats

Every object is repeated several times successively:

```
> rep(1:4, each = 2)
  [1] 1 1 2 2 3 3 4 4


> rep(1:4, each = 2, times = 3)
[1] 1 1 2 2 3 3 4 4 1 1 2 2 3 3 4 4 1 1 2 2 3 3 4 4
```

```
R Console
> rep(1:4, each = 2)
[1] 1 1 2 2 3 3 4 4
>
> rep(1:4, each = 2, times = 3)
  [1] 1 1 2 2 3 3 4 4 1 1 2 2 3 3 4 4 1 1 2 2 3 3 4 4
```

Repeats

Every object is repeated a different number of times:

```
> rep(1:4, 2:5)
  [1]  1 1 2 2 2 3 3 3 3 4 4 4 4 4
```

Repeats

Every object is repeated a different number of times:

```
> ans <- seq(from=2, to=8, by=2)
> ans
  [1] 2 4 6 8

> rep(1:4, ans)
  [1] 1 1 2 2 2 2 3 3 3 3 3 3 4 4 4 4 4 4 4 4
```

Repeats

```
R Console

> rep(1:4, 2:5)
 [1] 1 1 2 2 2 3 3 3 3 4 4 4 4 4
>
> ans <- seq(from=2, to=8, by=2)
> ans
[1] 2 4 6 8
>
> rep(1:4, ans)
 [1] 1 1 2 2 2 2 3 3 3 3 3 3 4 4 4 4 4 4 4 4
```

Repeats

```
> x <- matrix(nrow=2, ncol=2, data=1:4, byrow=T)

> x
       [,1] [,2]
  [1,]   1    2
  [2,]   3    4


> rep(x, 3)
 [1] 1 3 2 4 1 3 2 4 1 3 2 4
```

Repeats

```
R Console

> x <- matrix(nrow=2, ncol=2, data=1:4, byrow=T)
> x
      [,1] [,2]
[1,]    1    2
[2,]    3    4
>
> rep(x, 3)
 [1] 1 3 2 4 1 3 2 4 1 3 2 4
>
```

Repeats

Repetition of characters

```
> rep(c("a", "b", "c"), 2)
[1] "a" "b" "c" "a" "b" "c"



> rep(c("apple", "banana", "cake"), 2)
[1] "apple"  "banana" "cake"    "apple"  "banana" "cake"
```

Repeats

```
R Console
> rep(c("a", "b", "c"), 2)
[1] "a" "b" "c" "a" "b" "c"
>
> rep(c("apple", "banana", "cake"), 2)
[1] "apple"  "banana" "cake"   "apple"  "banana" "cake"
```