R Built-in Features

seq() - creates a sequence

In [1]:
```
seq(1,10)
```

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

In [2]:
```
# by argument for stepsize
seq(1,10,by=2)
```

```
1  3  5  7  9
```

In [3]:
```
seq(1,10,2)
```

```
1  3  5  7  9
```

---

sort() to sort a vector

In [5]:
```
v1 <- c(10,2,11,4,6,5,12,7)
```

In [6]:
```
sort(v1)
```

```
2  4  5  6  7  10  11  12
```

In [7]:
```
sort(v1, decreasing=T)
```

```
12  11  10  7  6  5  4  2
```

---

rev() to reverse elements of an object

In [8]:
```
rev(v1)
```

```
7  12  5  6  4  11  2  10
```

---

str() describes structure of an object

In [9]:
```
str(v1)
```

```
 num [1:8] 10 2 11 4 6 5 12 7
```

In [10]:
```
mat <- matrix(1:15,nrow=3)
```

In [11]:
```
mat
```

```
1  4  7  10  13
2  5  8  11  14
3  6  9  12  15
```

In [12]:
```
str(mat)
```

```
 int [1:3, 1:5] 1 2 3 4 5 6 7 8 9 10 ...
```

---

append() merges objects together

In [13]:
```
append(v1,90)
```

```
10  2  11  4  6  5  12  7  90
```

In [14]:
```
v2 <- c(1,2,3,4)
```

In [84]:
```
append(v1,v2)
```

```
10  2  11  4  6  5  12  7  1  2  3  4
```

sample() gives a random value from a sequence

In [2]:
```
sample(1:20,1)
```

```
17
```

In [3]:
```
sample(1:20,2)
```

```
1  17
```

In [6]:
```
sample(v1,1)
```

```
10
```

is.* checks class of an object

In [16]:
```
is.vector(v1)
```

TRUE

In [23]:
```
is.list(v1)
```

FALSE

as.* converts object type

In [24]:
```
as.list(v1)
```

1. 10
2. 2
3. 11
4. 4
5. 6
6. 5
7. 12
8. 7

In [25]:
```
as.matrix(v1)
```

10
2
11
4
6
5
12
7

Math functions

abs()

In [29]:
```
abs(-10)
```

10

round()

In [30]:
```
round(10.23)
```

10

In [31]:
```
round(10.232343,2)
```

10.23

sqrt()

In [33]:
```
sqrt(144)
```

12

exp()

In [35]:
```
exp(1)
```

2.71828182845905

Logarithm

In [43]:
```
log(10)
```

2.30258509299405

In [44]:
```
log10(12)
```

1.07918124604762

Trigonometry

In [47]:
```
sin(90)
```

0.893996663600558

In [48]:
```
cos(90)
```

-0.44807361612917

In [49]:
```
tan(90)
```

-1.99520041220824

Regular expression

grepl() returns logical output

In [50]:
```
text <- "I am data scientist"
```

In [52]:
```
grepl("data",text)
```

TRUE

In [53]:
```
grepl("outlier",text)
```

FALSE

grep() returns index

In [61]:
```
v <- c(10,20,30)
```

In [62]:
```
v
```

10 20 30

In [64]:
```
grep(20,v)
```

2

In [66]:
```
grep(40,v)

# No output
```

Date Time

Sys.Date() get system's date

In [69]:
```
Sys.Date()
```

2019-09-06

as.Date() convert string to date object

In [73]:
```
as.Date('1997-02-19')
```

1997-02-19

Formatting

Code	Value
%d	Day of the month
%m	Month
%b	Abbreviated month
%B	Full month
%y	2 digit year
%Y	4 digit year

In [74]:
```
as.Date('28-November-1992',format="%d-%B-%Y")
```

1992-11-28

In [77]:
```
as.Date('12-Jan-86',format="%d-%b-%y")
```

1986-01-12

Sys.time() to get time

In [81]:
```
Sys.time()
```

```
[1] "2019-09-06 16:49:38 IST"
```

as.POSIXct to convert string to date and time

In [82]:
```
as.POSIXct("08:30:03",format="%H:%M:%S")
```

```
[1] "2019-09-06 08:30:03 IST"
```

In [83]:
```
as.POSIXct("28-November-1992 09:25:04",format="%d-%B-%Y %H:%M:%S")
```

```
[1] "1992-11-28 09:25:04 IST"
```