Some interesting things about vectors in R

Naming vectors

Vectors can have assigned names with the `names()` function

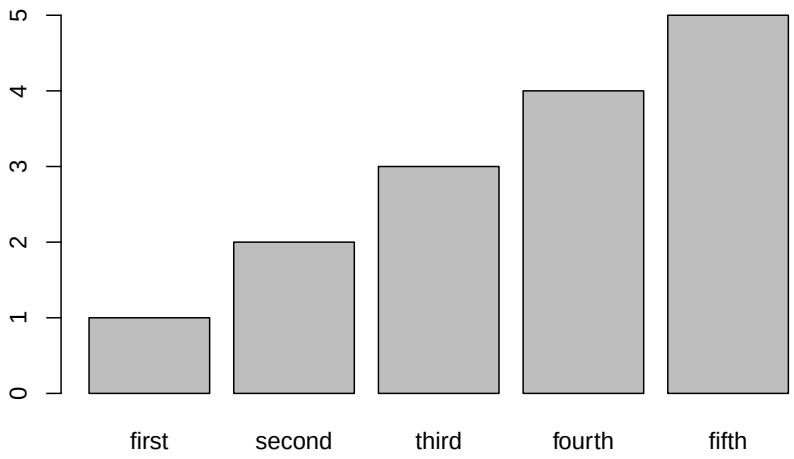
```
numbers = c(1:5)
names(numbers) = c("first", "second", "third", "fourth", "fifth")
numbers
```

```
##  first second  third fourth  fifth
##      1      2      3      4      5
```

Plotting vectors

The `barplot()` function draws a bar chart with a vector's values.

```
barplot(numbers)
```



Arithmetic operations on vectors

When we use arithmetic operations on vectors, they are applied to each element of it.

```
numbers + 10
```

```
##  first second  third fourth  fifth
##     11     12     13     14     15
```

```
numbers / 2
```

```
##  first second  third fourth  fifth
##    0.5    1.0    1.5    2.0    2.5
```

```
numbers * 3
```

```
##  first second  third fourth  fifth
##      3      6      9     12     15
```

Other math functions like “sin”, “cos” or “sqrt” can be applied to each element of the vector the same way theay are used with numbers:

```
sqrt(numbers)
```

```
##    first   second    third   fourth    fifth
## 1.000000 1.414214 1.732051 2.000000 2.236068
```

Adding vectors

Vectors can be added or subtracted using the “+”, “-” operators when they have the same dimension.

```
a = 1:3
b = 5:7
a + b
```

```
## [1]  6  8 10
```

Comparing vectors

Vectors can also be compared with the “==” operator. This will compare each of their elements and return a vector with its boolean values.

```
a == 2:4
```

```
## [1] FALSE FALSE FALSE
```

```
a == 1
```

```
## [1]  TRUE FALSE FALSE
```

```
a < b
```

```
## [1] TRUE TRUE TRUE
```