

Lab Work No. 2

- Creation of a vector

```
X1 <- -c(1, 3, 5, 7, 9)  X2 <- -c("Homme ", "femme ")  X3 <- -c(T, T, F, F, T)
X4 <- -2 : 7           seq(2, 7, 1)           seq(from = 2, to = 7, by = 1)  seq(from = 2, to = 7, by = 0.2)
```

- Repeat the data of a vector

```
rep(1, times = 10)           rep("anwar", times = 3)
rep(seq(from = 2, to = 5, by = 0.5), times = 4)  rep(1 : 5, times = 5)
```

- Type x and y

```
x <- -1 : 10
y <- -c(11, 12, 13, 14, 15, 16, 17, 18, 19, 20)
```

- Perform operations on vectors:

```
x + 10  x - 10  x * 10  x/10  x%%5  x%%/5
x + y   x - y   x * y   x/y   x%%y  x%%/y
x > 6   !(x > 6)  sum(x)  mean(x)  min(x)  max(x)
```

- Extract data from a vector:

```
y[2]  y[-2]  y[1 : 4]  y[c(1, 4)]  y[-c(1, 4)]  y[y < 14]
```

- Concatenate two vectors:

```
z <- -c(x, y)
```

- Replace data in a vector

```
x[3] <- -35  x[x == 1] <- -25  x[x >= 5] <- -20
```

- Name the components of a vector

```
notes <- c(Anglais=12, Informatique=19.5, Mathématique=14)
```

- Sort the components of a vector

```
sort(z)  rev(sort(z))
```

- Mode and length of a vector

```
mode(X1) mode(X2) mode(X3) length(X1) length(X2) length(X3)
```