

Practical Work N° 3: Vectors in R

- **Creating a Vector**

```
X1<- c(1,3,5,7,9)
```

```
X2<-c("Homme ", "femme ")
```

```
X3<-c(T,T,F,F,T)
```

```
X4<- 2 :7
```

```
X5=seq(2,7,1)
```

```
X6=seq(from=2,to=7,by=1)
```

- **Repeating Vector Data**

```
rep(1,times=10)
```

```
rep(c("H","F"),times=10)
```

```
rep(1 :5,times=5)
```

- **Defining x and y**

```
x<- 1 :10
```

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

- **Performing 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)
```

```
min(x)
```

```
max(x)
```

- **Extracting Data from a Vector:**

```
y[2]
```

```
y[-2]
```

```
y[1 :4]
```

```
y[c(1,4)]
```

```
y[-c(1,4)]
```

```
y[y<14]
```

- **Concatenating Two Vectors:**

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

- **Replacing Data in a Vector**

```
x[3] <- 35
```

```
x[x==1] <- 25
```

```
x[x>=5] <- 20
```

- **Naming Vector Components**

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

- **Sorting Vector Components**

```
sort(z)
```

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

- **Vector Mode and Length**

```
mode(X1)
```

```
mode(X2)
```

```
mode(X3)
```

```
length(X1)
```

```
length(X2)
```

```
length(X3)
```