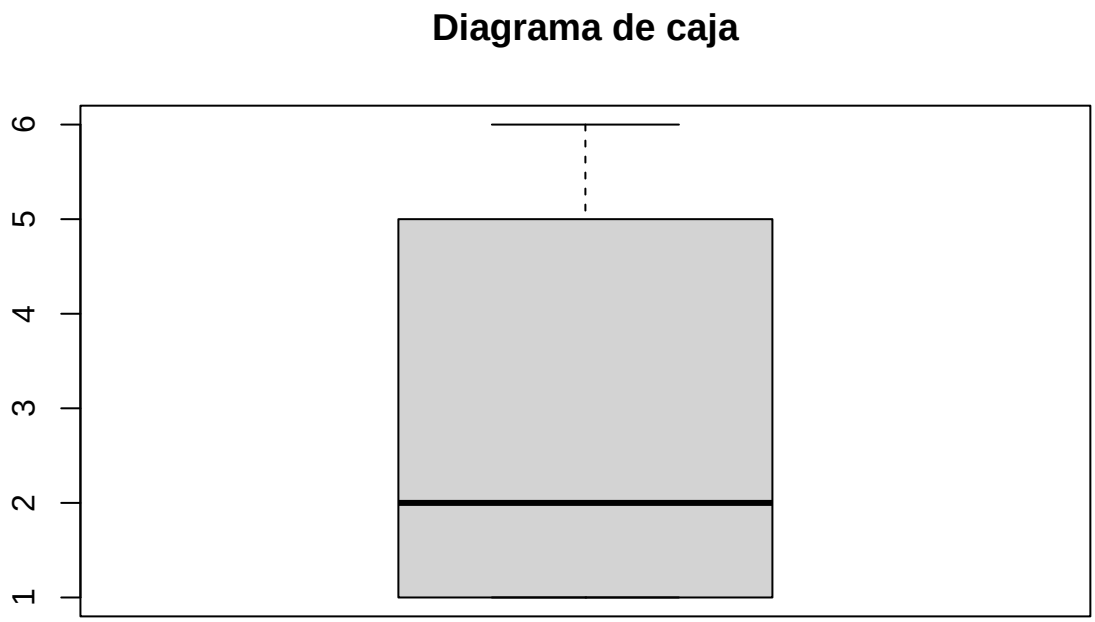
07-Diagrama de cajas

Adrian

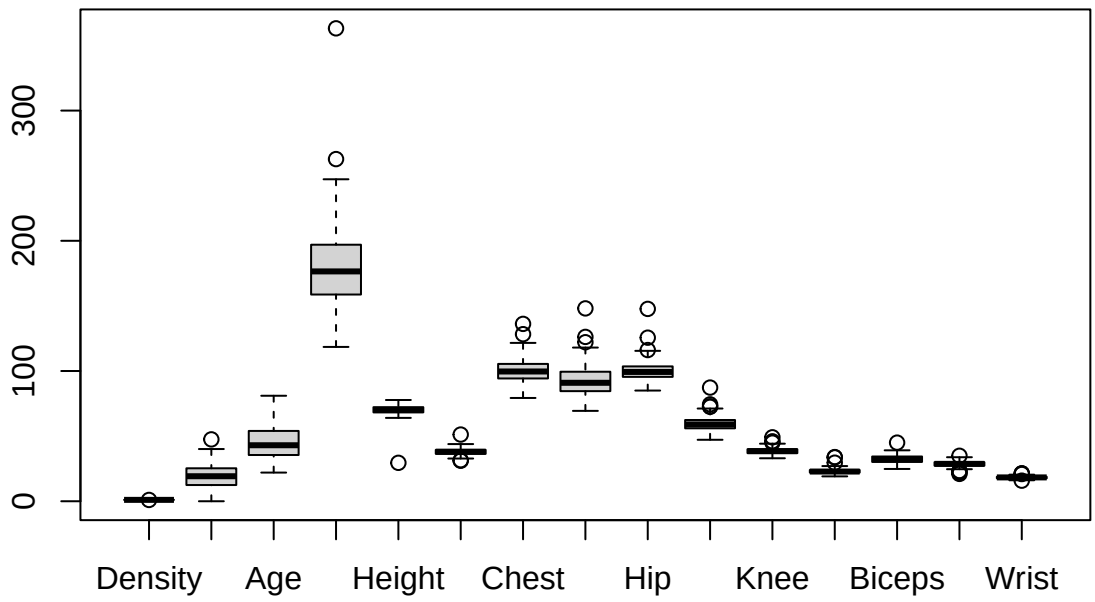
17/1/2022

Funcion boxplot()

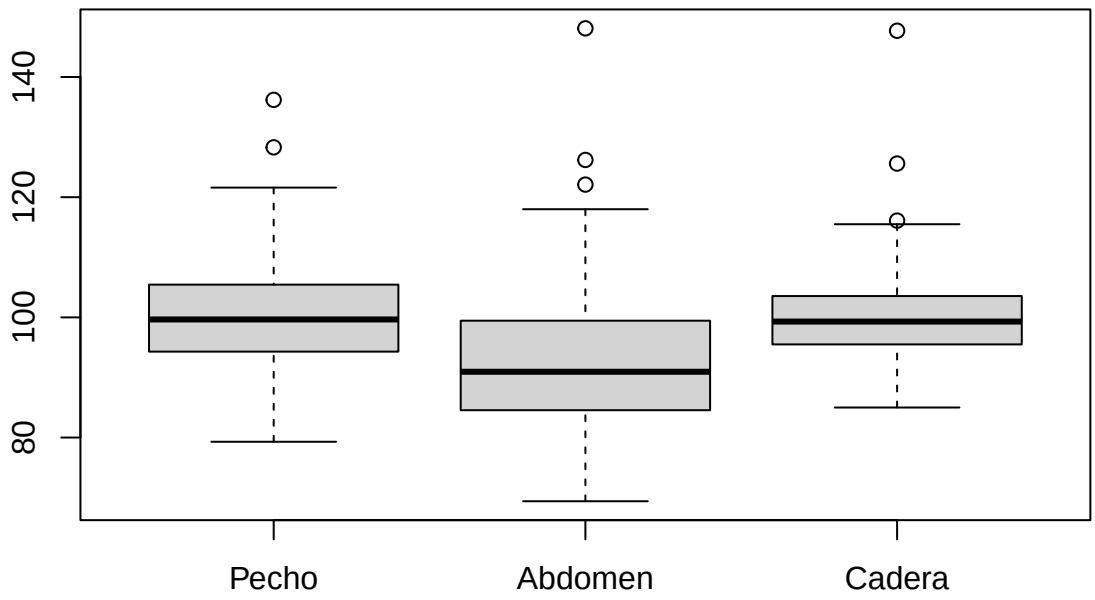
```
dados = sample(1:6, 25, replace = T)
boxplot(dados, main = "Diagrama de caja")
```




```
body = read.table("../../../data/bodyfat.txt", header = T)
boxplot(body)
```




```
# Filtrar columnas
boxplot(body[,7:9], names = c("Pecho", "Abdomen", "Cadera"))
```



Ejemplo - Comprobar mejores insecticidas

```
data = InsectSprays
head(data)
```

```
##   count spray
## 1    10     A
## 2     7     A
## 3    20     A
## 4    14     A
## 5    14     A
## 6    12     A
```

```
str(data)
```

```
## 'data.frame':    72 obs. of  2 variables:
##  $ count: num  10 7 20 14 14 12 10 23 17 20 ...
##  $ spray: Factor w/ 6 levels "A","B","C","D",..: 1 1 1 1 1 1 1 1 1 1 ...
```

```
by(data$count, data$spray, FUN = summary)
```

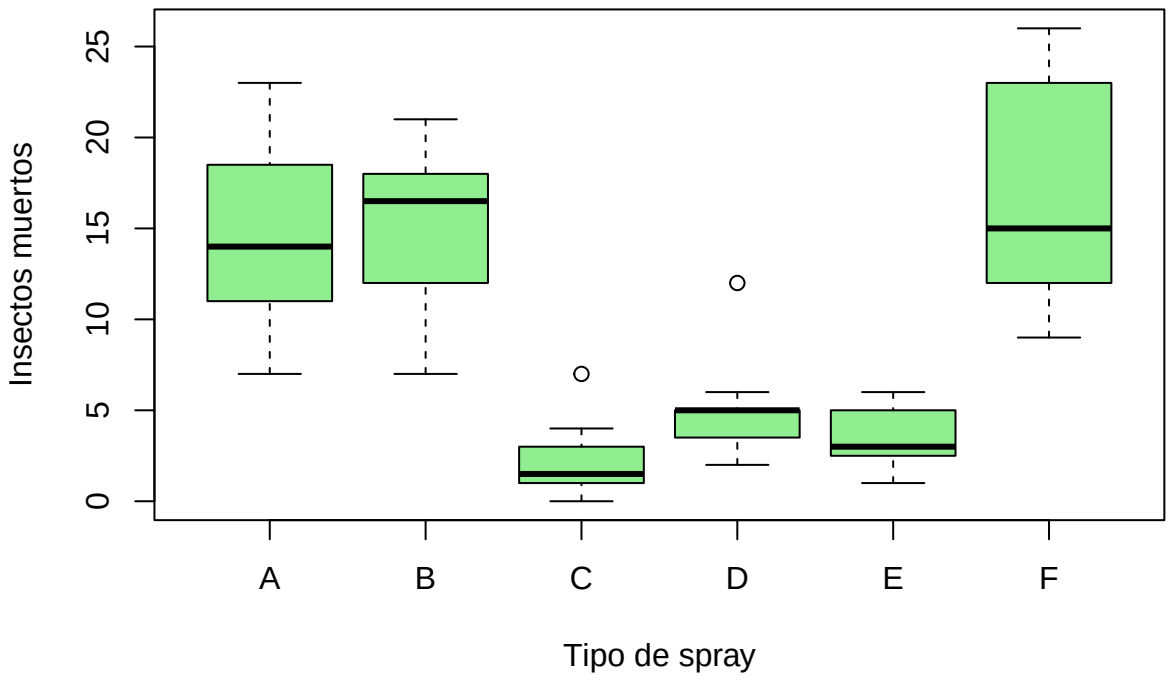
```
## data$spray: A
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    7.00   11.50   14.00   14.50   17.75   23.00
## ------------------------------------------------------------
## data$spray: B
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    7.00   12.50   16.50   15.33   17.50   21.00
## ------------------------------------------------------------
## data$spray: C
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000   1.000   1.500   2.083   3.000   7.000
## ------------------------------------------------------------
## data$spray: D
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   2.000   3.750   5.000   4.917   5.000  12.000
## ------------------------------------------------------------
## data$spray: E
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    1.00    2.75    3.00    3.50    5.00    6.00
## ------------------------------------------------------------
## data$spray: F
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    9.00   12.50   15.00   16.67   22.50   26.00
```

```
# Obtener la desviacion tipica por cada tipo de spray
aggregate(count~spray, data = data, FUN = sd)
```

```
##   spray    count
## 1     A 4.719399
## 2     B 4.271115
## 3     C 1.975225
## 4     D 2.503028
## 5     E 1.732051
## 6     F 6.213378
```

```
boxplot(count~spray, data = data, col = "lightgreen",
        xlab = "Tipo de spray", ylab = "Insectos muertos")
```


Insectos muertos
0
5
10
15
20
25
A
B
C
D
E
F
Tipo de spray