

“R: Gráficos básicos”

M.Sc. Henry Luis López García

Universidad Nacional Autónoma de Nicaragua, UNAN-Managua
Vicerrectorado de Investigación, Posgrado y Extensión Universitaria
Dirección de Investigación



@Hen1985



hlopez@unan.edu.ni

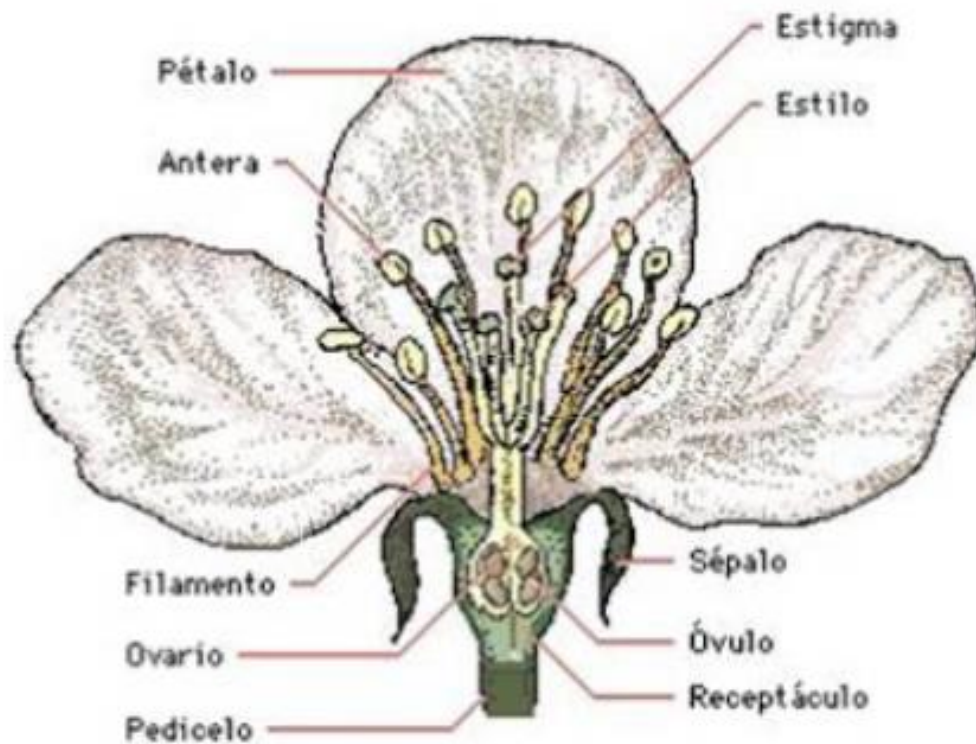
Gráficos con R

- `plot()`
- `hist()`
- `barplot()`
- `boxplot()`
- `pie()`

Importar datos con EXCEL

```
> data("iris")
> View(iris)
> str(iris)
'data.frame':  150 obs. of  5 variables:
 $ Sepal.Length: num  5.1 4.9 4.7 4.6 5 5.4 4.6 5 4.4 4.9 ...
 $ Sepal.Width : num  3.5 3 3.2 3.1 3.6 3.9 3.4 3.4 2.9 3.1 ...
 $ Petal.Length: num  1.4 1.4 1.3 1.5 1.4 1.7 1.4 1.5 1.4 1.5 ...
 $ Petal.Width : num  0.2 0.2 0.2 0.2 0.2 0.4 0.3 0.2 0.2 0.1 ...
 $ Species     : Factor w/ 3 levels "setosa","versicolor",...: 1 1 1 1
1 1 1 1 1 1 ...
```

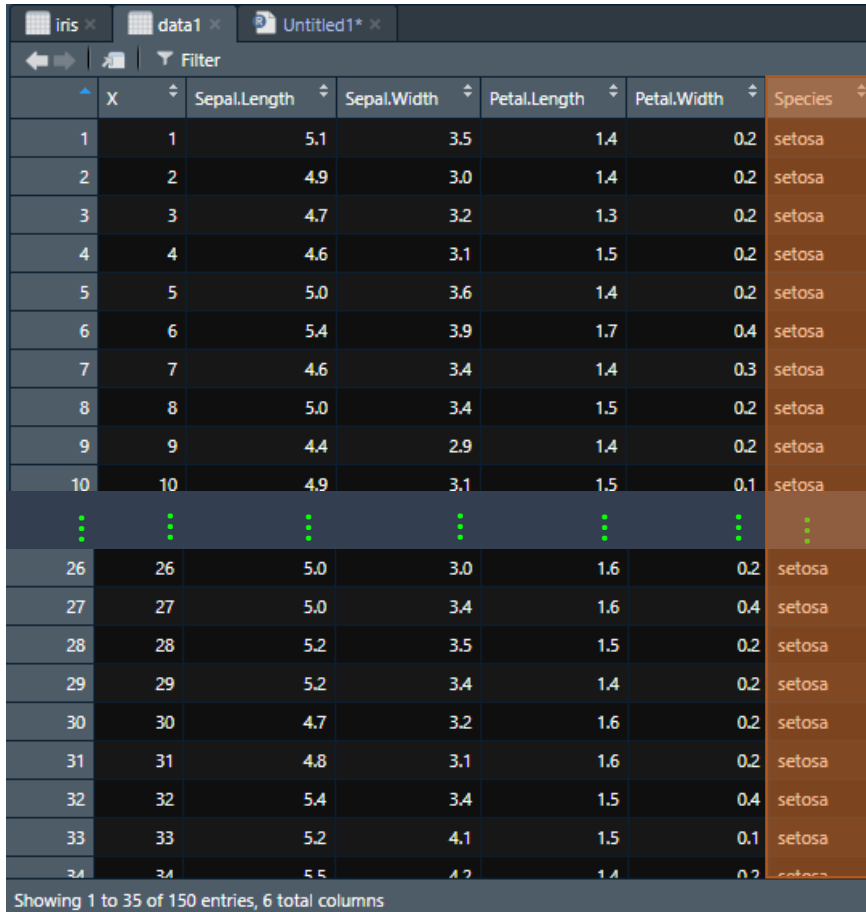
Morfología de una flor



Importar datos con EXCEL

```
> is.factor(iris$Species)
[1] TRUE
> # guarde el archivo en formato csv
> write.csv(iris, file="C:/Users/HP/Documents/iris.csv")
> # Abrirlo el archivo con el nombre data1
> data1 <- read.csv("C:/Users/HP/Documents/iris.csv")
> View(data1)
```

Importar datos con EXCEL



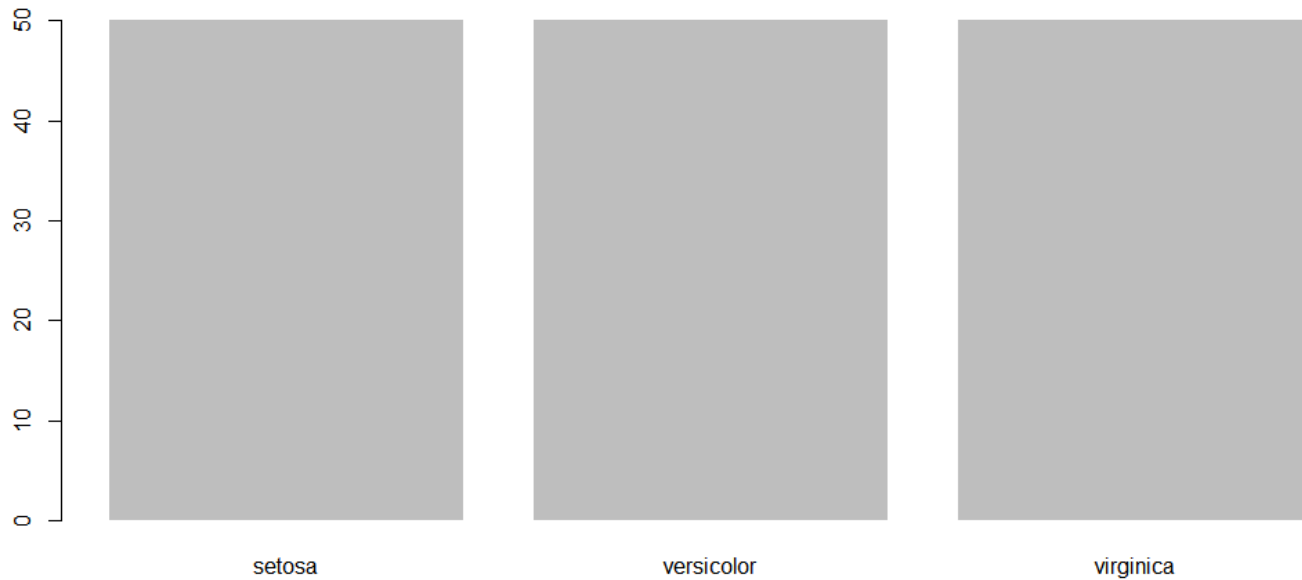
	X	Sepal.Length	Sepal.Width	Petal.Length	Petal.Width	Species
1	1	5.1	3.5	1.4	0.2	setosa
2	2	4.9	3.0	1.4	0.2	setosa
3	3	4.7	3.2	1.3	0.2	setosa
4	4	4.6	3.1	1.5	0.2	setosa
5	5	5.0	3.6	1.4	0.2	setosa
6	6	5.4	3.9	1.7	0.4	setosa
7	7	4.6	3.4	1.4	0.3	setosa
8	8	5.0	3.4	1.5	0.2	setosa
9	9	4.4	2.9	1.4	0.2	setosa
10	10	4.9	3.1	1.5	0.1	setosa
	⋮	⋮	⋮	⋮	⋮	⋮
26	26	5.0	3.0	1.6	0.2	setosa
27	27	5.0	3.4	1.6	0.4	setosa
28	28	5.2	3.5	1.5	0.2	setosa
29	29	5.2	3.4	1.4	0.2	setosa
30	30	4.7	3.2	1.6	0.2	setosa
31	31	4.8	3.1	1.6	0.2	setosa
32	32	5.4	3.4	1.5	0.4	setosa
33	33	5.2	4.1	1.5	0.1	setosa
34	34	5.5	4.2	1.4	0.2	setosa

Showing 1 to 35 of 150 entries, 6 total columns

```
> is.factor(data1$Species)
[1] FALSE
> species1 <- as.factor(data1$Species)
> is.factor(species1)
[1] TRUE
> data1$species1 <- species1
```

plot() variable categórica

```
> plot(data1$species1, border=NA)
```



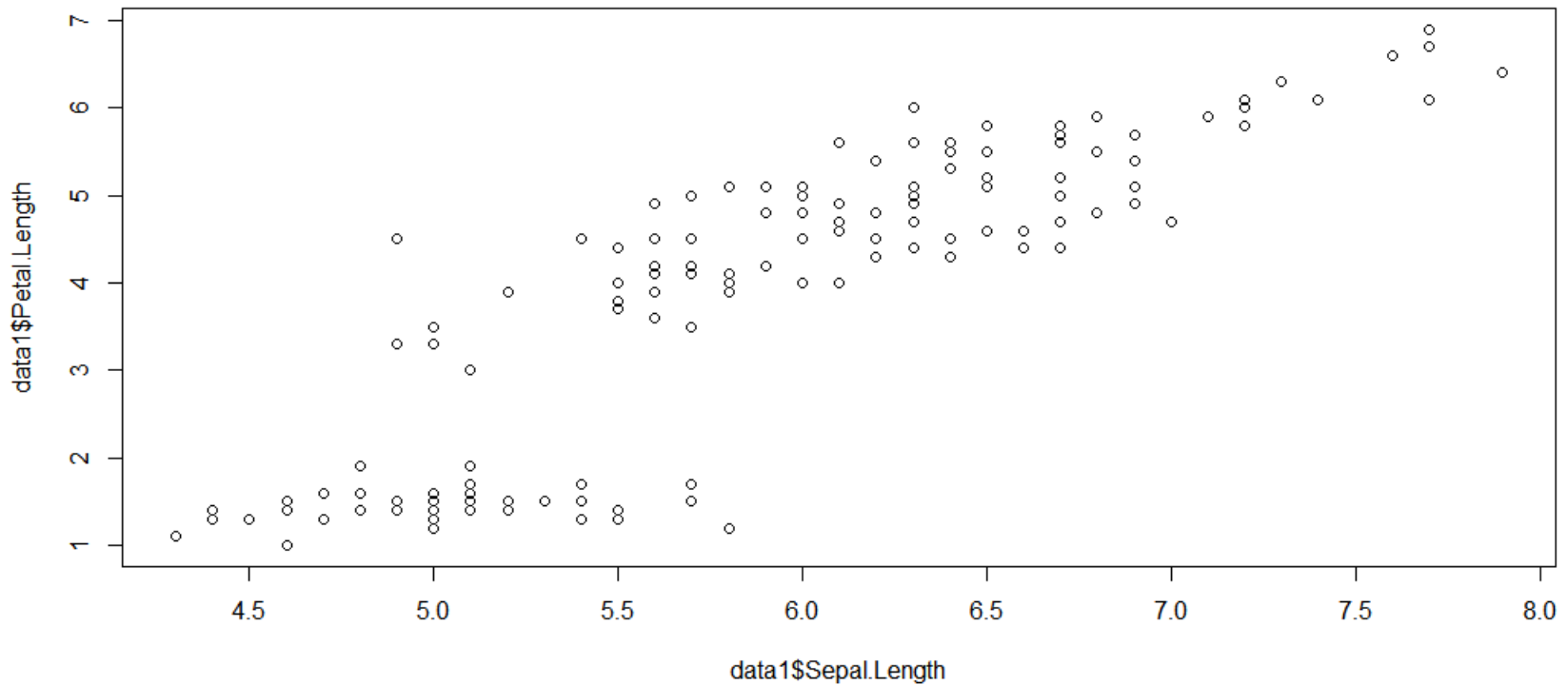
plot() variable categórica

```
> plot(data1$species1,ylab="Frecuencia", xlab="Especie",main="Gráfico de las especies",col=c("gray40","gray60", "gray70"),border=NA)
```



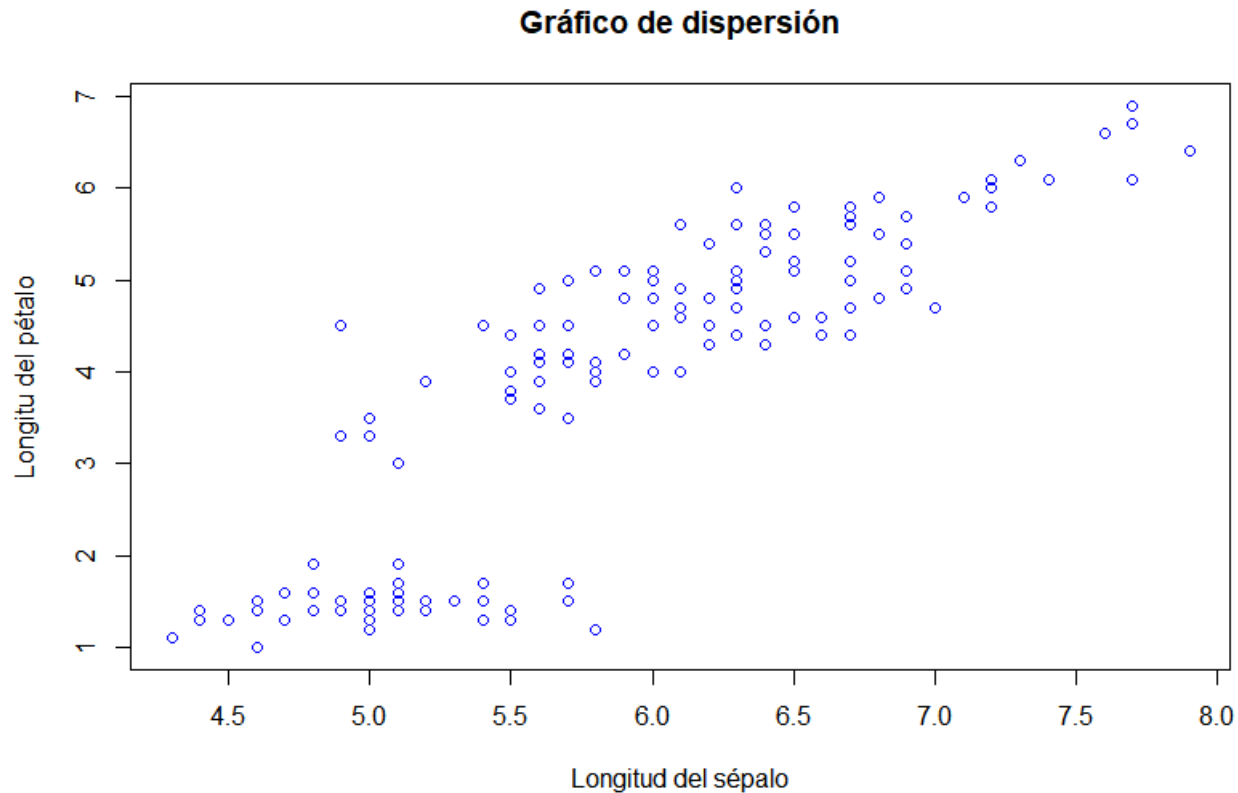
plot() variable numérica

```
> plot(data1$Sepal.Length, data1$Petal.Length)
```



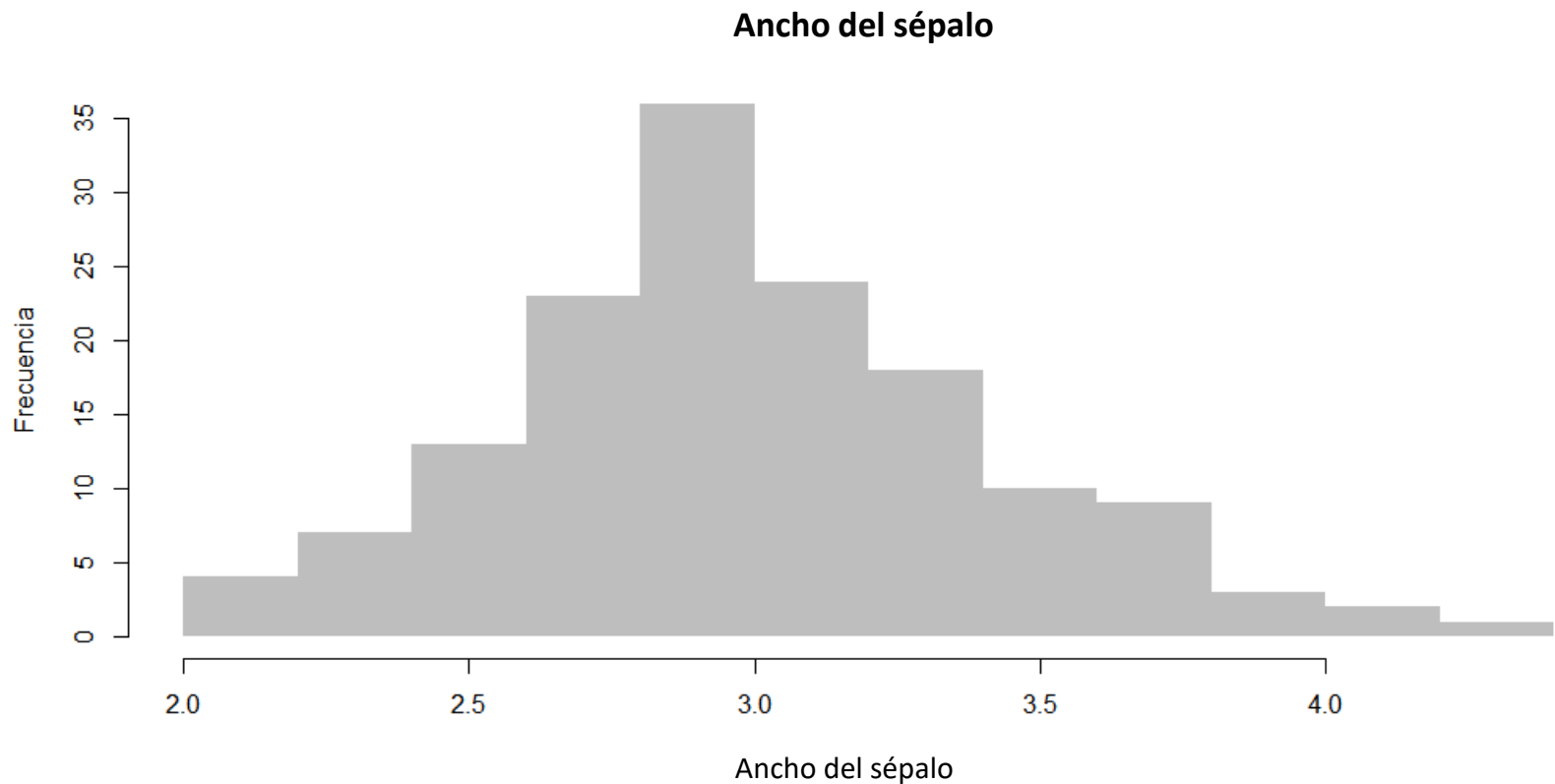
plot() variable numérica

```
> plot(data1$Sepal.Length, data1$Petal.Length, ylab="Longitu del  
pétalo", xlab="Longitud del sépalo", main = "Gráfico de dispersión",  
col="blue")
```



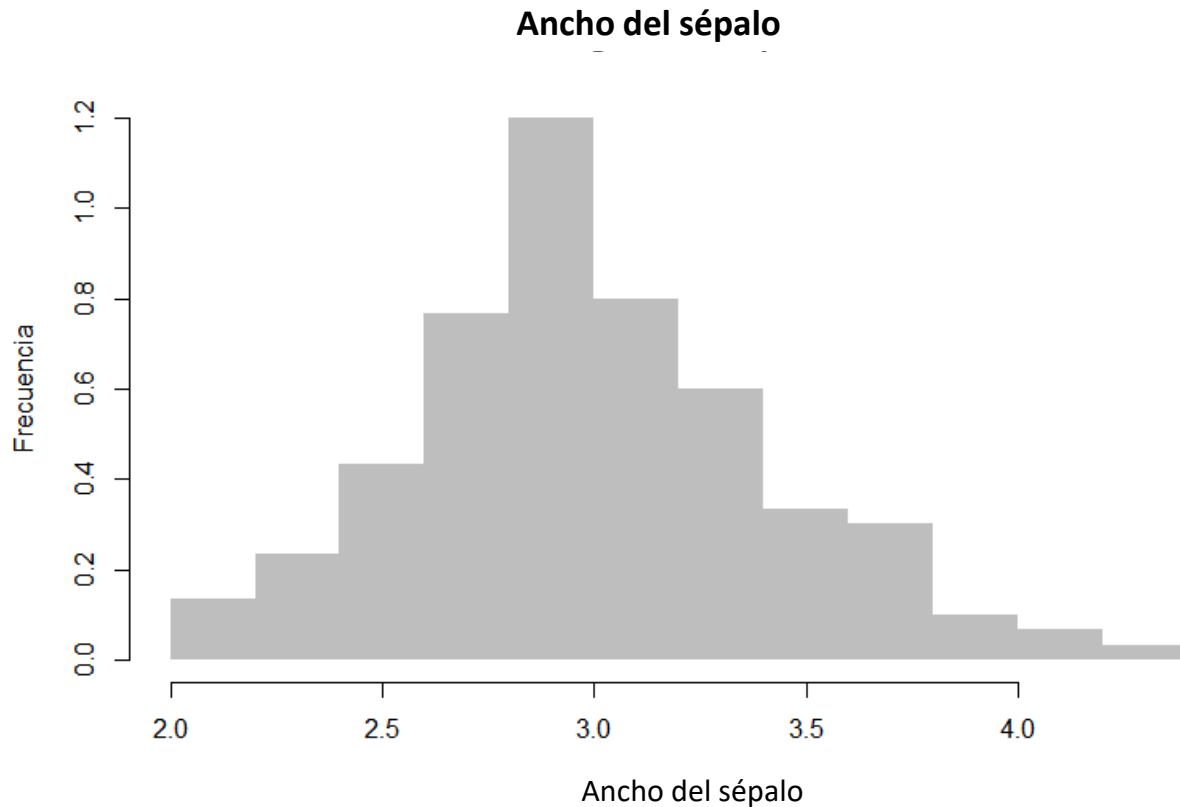
hist()

```
> hist(data1$Sepal.Width, ylab = "Frecuencia", xlab = "Ancho del  
sépal", main="Ancho del sépal", col="gray", border = NA)
```



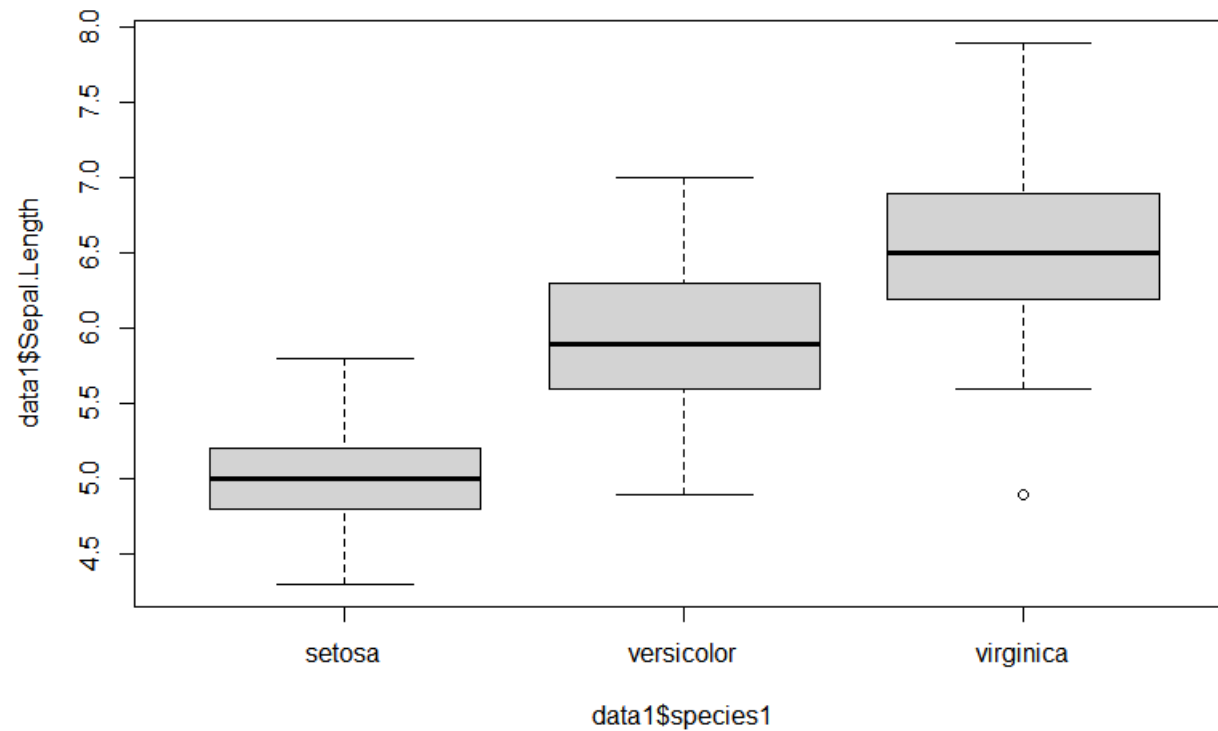
hist()

```
> hist(data1$Sepal.Width, ylab = "Frecuencia", xlab = "Longitud del  
sépal", main="Ancho del sépal", col="gray", border = NA, freq=FALSE)
```



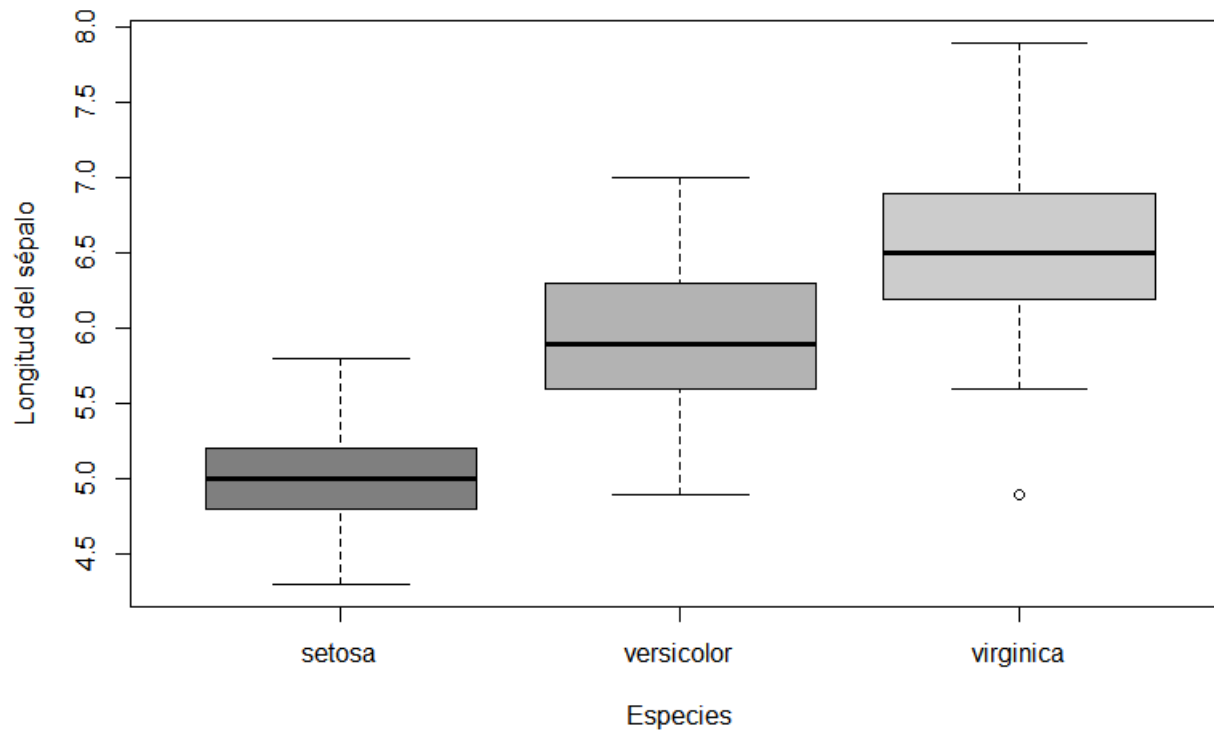
boxplot()

```
> boxplot(data1$Sepal.Length)
```



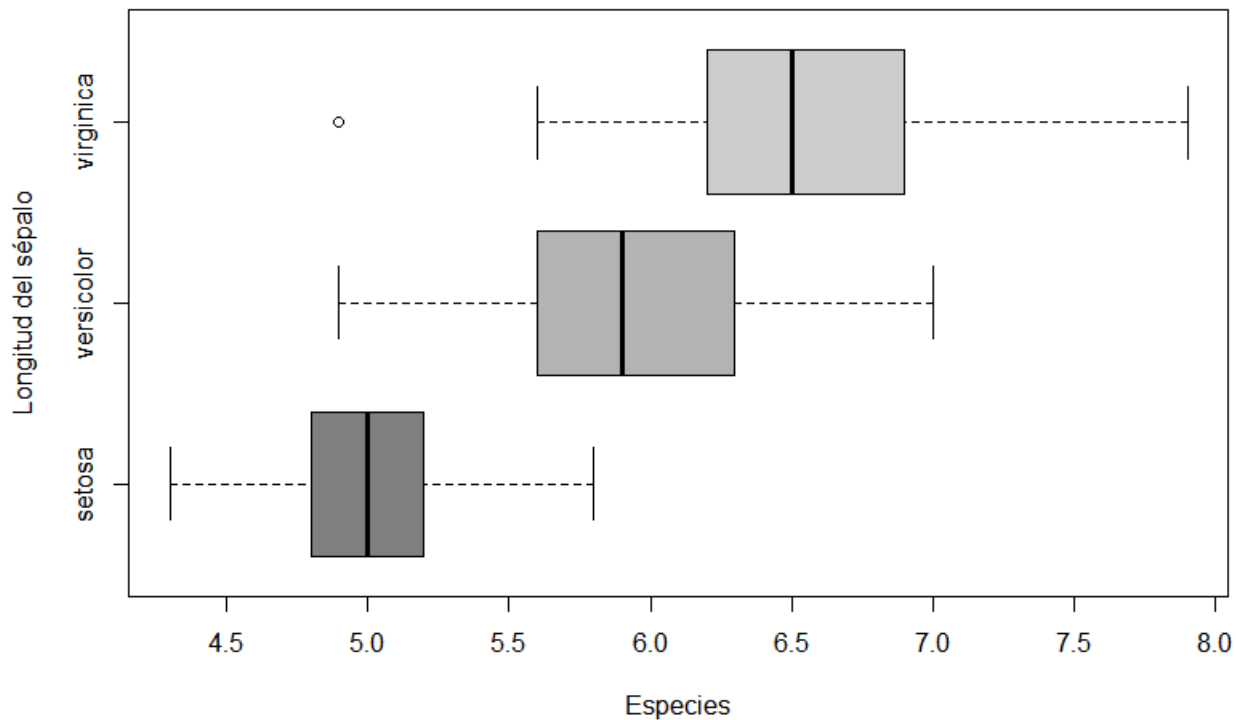
boxplot()

```
> boxplot(data1$Sepal.Length ~ data1$species1, ylab="Longitud del  
sépalo", xlab="Especies", col=c("gray50", "gray70", "gray80"))
```



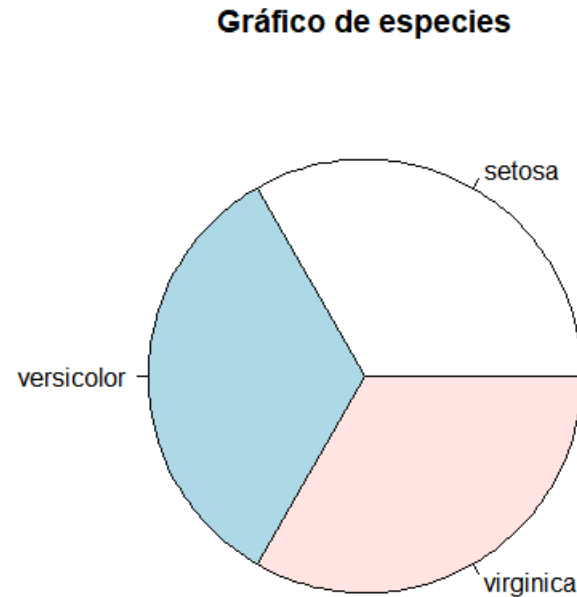
boxplot()

```
> boxplot(data1$Sepal.Length~ data1$species1, ylab="Longitud del  
sépal", xlab="Especies", col=c("gray50", "gray70", "gray80"), horizontal =  
T)
```



pie() gráfico circular

```
> circular <- table(data1$species1)  
> pie(circular, main="Gráfico de especies")
```



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