Statistics Class 1

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Session 1

```
data("iris")
```

```
summary(iris)
```

```
##   Sepal.Length    Sepal.Width     Petal.Length    Petal.Width
##  Min.   :4.300   Min.   :2.000   Min.   :1.000   Min.   :0.100
##  1st Qu.:5.100   1st Qu.:2.800   1st Qu.:1.600   1st Qu.:0.300
##  Median :5.800   Median :3.000   Median :4.350   Median :1.300
##  Mean   :5.843   Mean   :3.057   Mean   :3.758   Mean   :1.199
##  3rd Qu.:6.400   3rd Qu.:3.300   3rd Qu.:5.100   3rd Qu.:1.800
##  Max.   :7.900   Max.   :4.400   Max.   :6.900   Max.   :2.500
##        Species
##  setosa    :50
##  versicolor:50
##  virginica :50
##
##
##
```

```
mean(iris$Sepal.Length)
```

```
## [1] 5.843333
```

```
median(iris$Sepal.Length)
```

```
## [1] 5.8
```

```
sd(iris$Sepal.Length)
```

```
## [1] 0.8280661
```

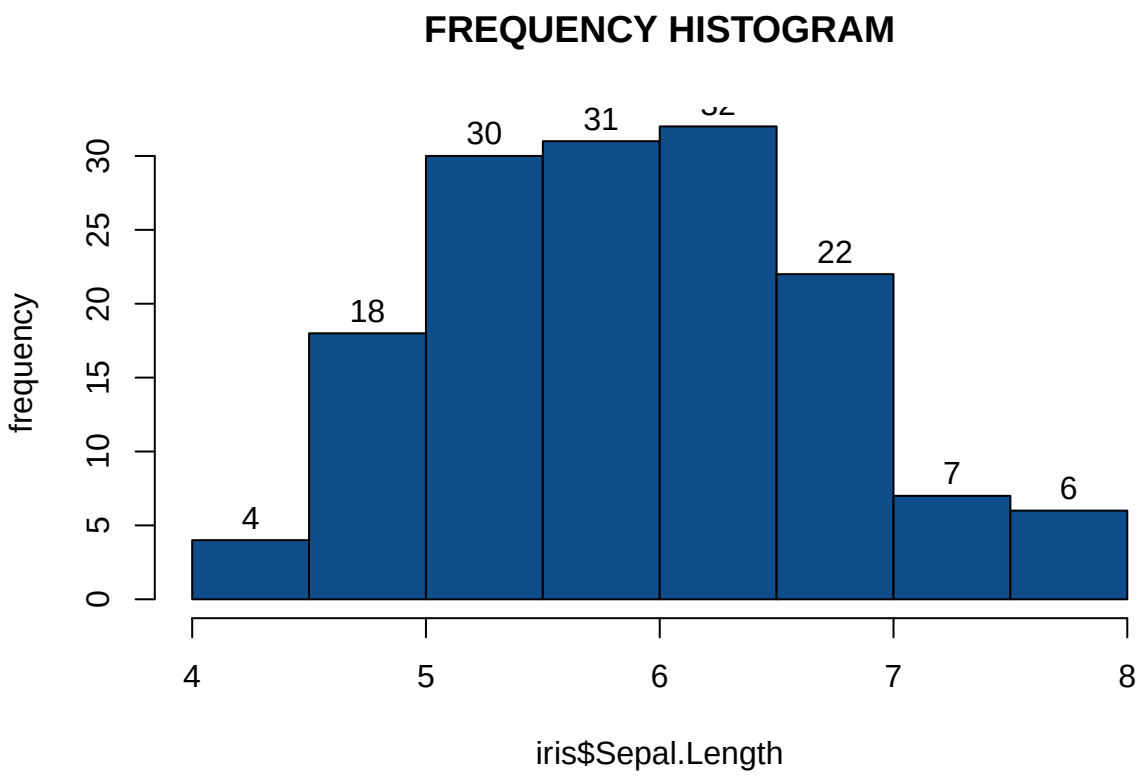
Tree diagram

```
stem(iris$Sepal.Length, scale=0.5)
```

```
##
##   The decimal point is at the |
##
##   4 | 3444
##   4 | 566667788888999999
##   5 | 00000000001111111122223444444
##   5 | 55555556666667777777788888888999
```

```
##   6 | 000000111111222233333333334444444
##   6 | 5555566777777778889999
##   7 | 0122234
##   7 | 677779
```

```
hist(iris$Sepal.Length, right = FALSE, main="FREQUENCY HISTOGRAM", ylab = "frequency", col = "dodgerblu
```



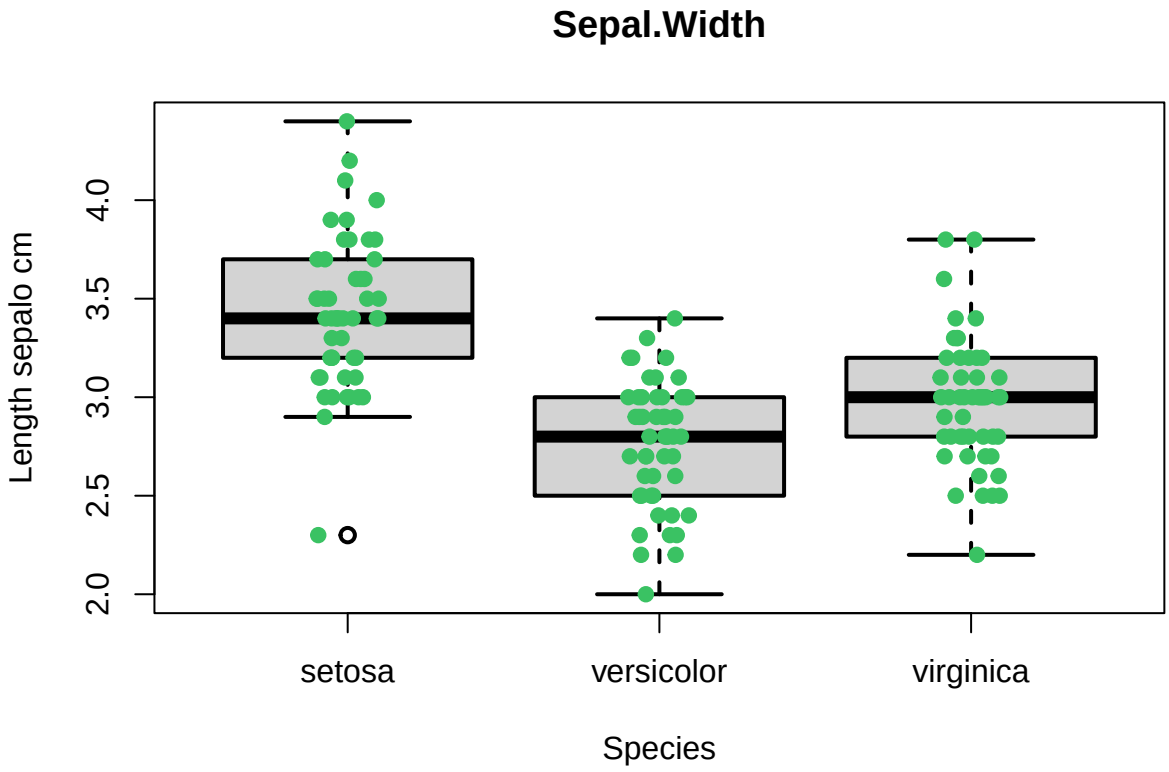

```
str(iris)
```

```
## '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 ...
```

Boxplot Graph1

```
boxplot(Sepal.Width ~ Species, data = iris, lwd = 2, main="Sepal.Width",ylab="Length sepalo cm")

stripchart(Sepal.Width ~ Species, vertical = TRUE, data = iris,
           method = "jitter", add = TRUE, pch = 20, cex = 1.5, col = '#3AC263')
```


Sepal.Width
Length sepalo cm
2.0
2.5
3.0
3.5
4.0
setosa
versicolor
virginica
Species