

ANALYSIS OF IRIS DATASET

1. Loading of the dataset

```
data=iris
```

```
print(data)
```

```
> data=iris
> print(data)
   Sepal.Length Sepal.Width Petal.Length Petal.Width Species
1           5.1           3.5           1.4           0.2   setosa
2           4.9           3.0           1.4           0.2   setosa
3           4.7           3.2           1.3           0.2   setosa
4           4.6           3.1           1.5           0.2   setosa
5           5.0           3.6           1.4           0.2   setosa
6           5.4           3.9           1.7           0.4   setosa
7           4.6           3.4           1.4           0.3   setosa
8           5.0           3.4           1.5           0.2   setosa
9           4.4           2.9           1.4           0.2   setosa
10          4.9           3.1           1.5           0.1   setosa
```

2. Type of Data

```
class(data)
```

```
> class(data)
[1] "data.frame"
```

3. Displaying first 6 rows

```
head(data)
```

```
> head(data)
   Sepal.Length Sepal.Width Petal.Length Petal.Width Species
1           5.1           3.5           1.4           0.2   setosa
2           4.9           3.0           1.4           0.2   setosa
3           4.7           3.2           1.3           0.2   setosa
4           4.6           3.1           1.5           0.2   setosa
5           5.0           3.6           1.4           0.2   setosa
6           5.4           3.9           1.7           0.4   setosa
```

4. Viewing data

```
View(data)
```

	^ Sepal.Length ^	Sepal.Width ^	Petal.Length ^	Petal.Width ^	Species ^
1	5.1	3.5	1.4	0.2	setosa
2	4.9	3.0	1.4	0.2	setosa
3	4.7	3.2	1.3	0.2	setosa
4	4.6	3.1	1.5	0.2	setosa
5	5.0	3.6	1.4	0.2	setosa
6	5.4	3.9	1.7	0.4	setosa
7	4.6	3.4	1.4	0.3	setosa
8	5.0	3.4	1.5	0.2	setosa
9	4.4	2.9	1.4	0.2	setosa
10	4.9	3.1	1.5	0.1	setosa

5. Finding the structure of the data

str(data)

```
> str(data)
'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 ...
```

6. Finding the number of rows and column

dim(data)

```
> dim(data)
[1] 150 5
```

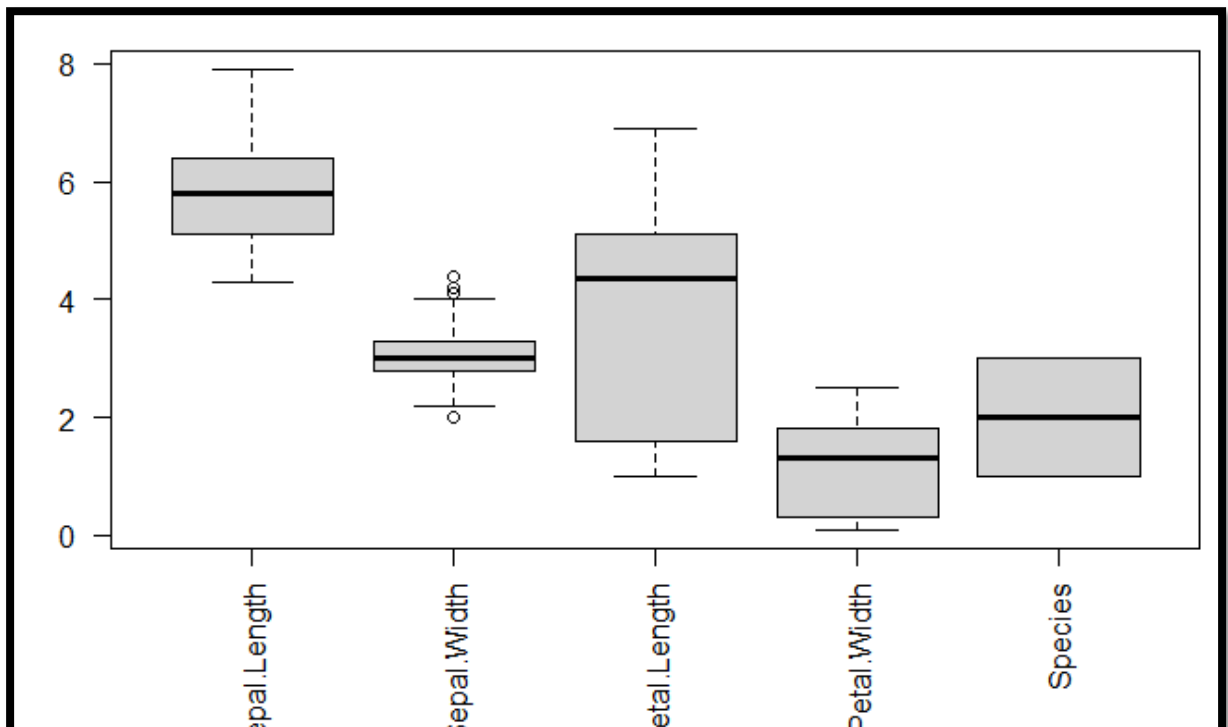
7. Summary of the data

summary(data)

```
> summary(data)
 Sepal.Length      Sepal.width      Petal.Length      Petal.width      Species
Min.   :4.300   Min.   :2.000   Min.   :1.000   Min.   :0.100   setosa   :50
1st Qu.:5.100   1st Qu.:2.800   1st Qu.:1.600   1st Qu.:0.300   versicolor:50
Median :5.800   Median :3.000   Median :4.350   Median :1.300   virginica :50
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
> |
```

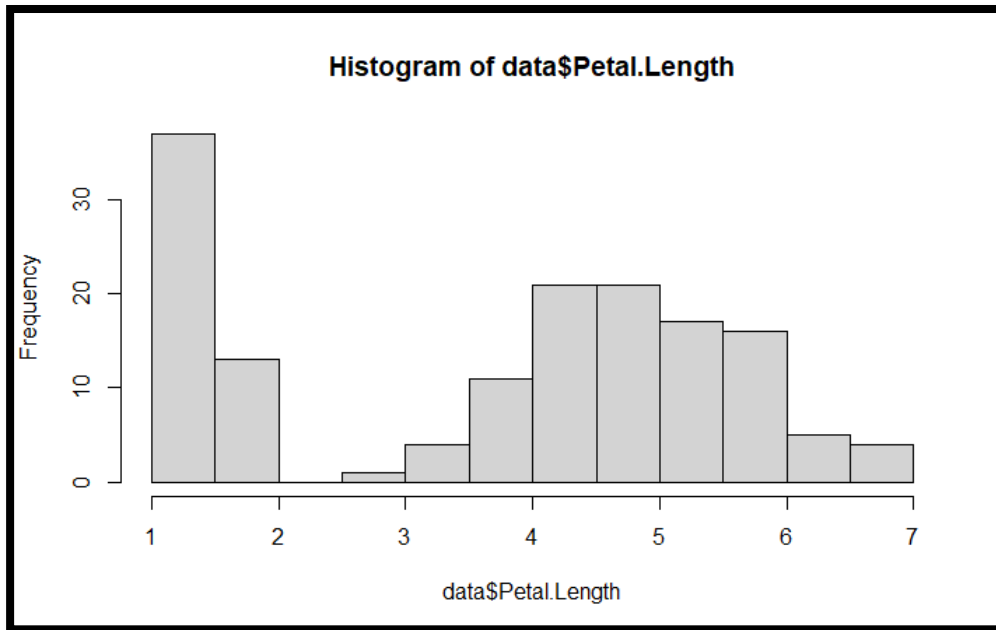
8. Boxplot

boxplot(data, las=2)



9. Histogram

```
hist(data$Petal.Length)
```



10. Scatter plot

```
plot(data$Petal.Length,data$Petal.Width,col=c("red","blue","green")[as.integer(data$Species)],pch=c(1,2,3) [as.integer(data$Species)],cex=0.6)
```

```
legend("topleft",legend=c("setosa","versicolor","virginica"),col=c("red","blue","green"),pch=c(1,2,3))
```

