R Assignment 3

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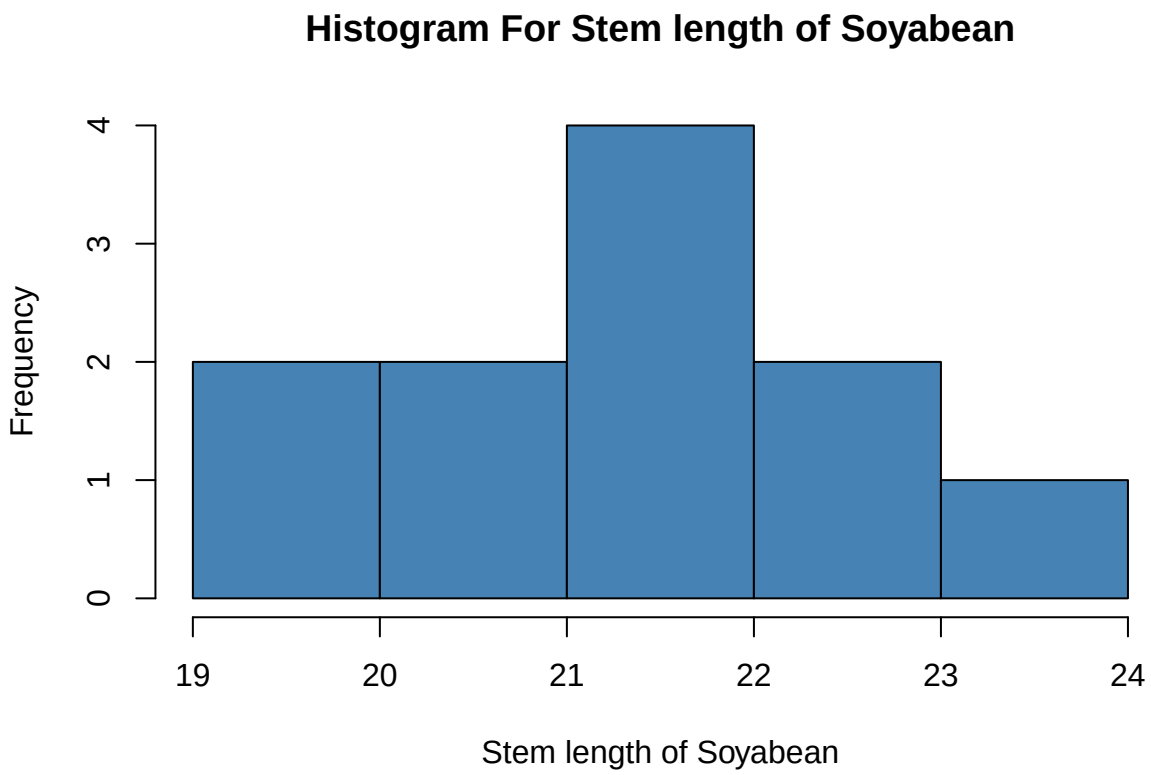
```r
# Creation of Data
length = c(20.2, 22.9, 23.3, 20.0, 19.4, 22.0, 22.1, 22.0, 21.9, 21.5, 20.9)
```

```r
# Creation of Histogram
hist(length,main="Histogram For Stem length of Soyabean",xlab="Stem length of Soyabean",col="steelblue")
```



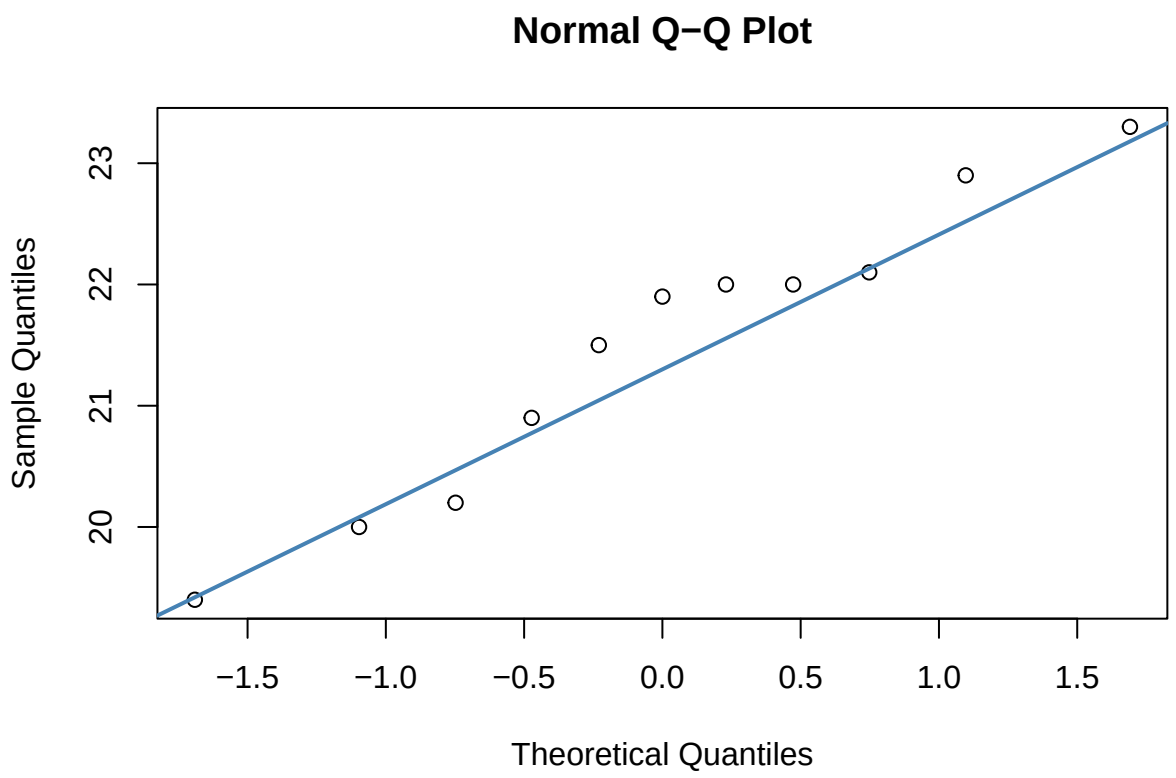
```r
# Creation of Tests
 t.test(length,mu=22,conf.level=0.98,alternative='two.sided')
```

```
##
##  One Sample t-test
##
## data:  length
## t = -1.4316, df = 10, p-value = 0.1828
## alternative hypothesis: true mean is not equal to 22
## 98 percent confidence interval:
##  20.45480 22.49065
## sample estimates:
## mean of x
##  21.47273
```

the p-value= 0.1828 meaning it is greater than 0.05 level of significance , so the null hypothesis is accepted and concludes that the population mean is different than 22.

98 percent confidence interval is 20.45480 22.49065

```r
# Creation of QQ Plot
qqnorm(length)
qqline(length, col = "steelblue", lwd = 2)
```



The QQ Plot above shows that all points lie near the line, so the data follows assumption of normality.

By observing above Q-Q plot all points are lies near to line so the data follows normality assumption.