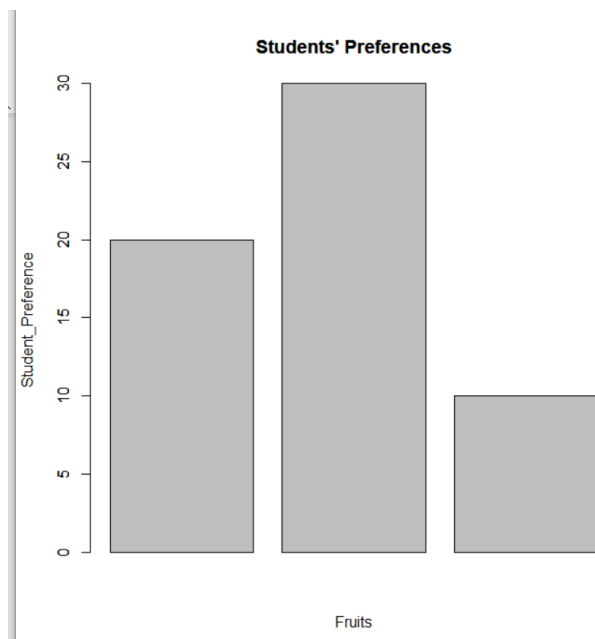


SCS 2211- Laboratory II-Lecture 3

Homework 1

```
>
Fruits<-c("Mango","Orange","Apple")
Students_Preference<-c(20,30,10)
> barplot(Students_Preference,main="Students' Preferences",xlab="Fruits",ylab=$
>
```



Home work 2

```
>
> weight<-c(109,148,175,148,116,175,112,159,158,169,136,133,143,169,165,106,15$
> stem(weight)
```

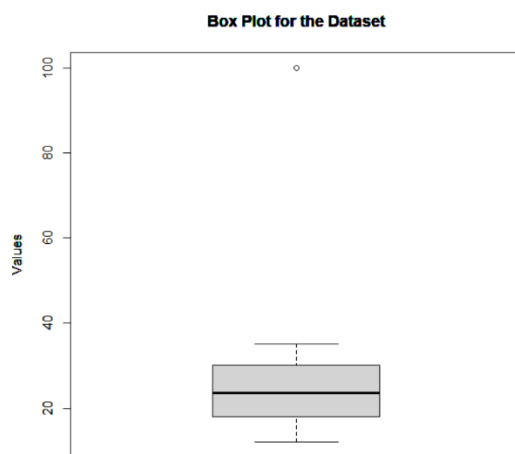
The decimal point is 1 digit(s) to the right of the |

```
10 | 56926
12 | 36
14 | 3883489
16 | 599555
```

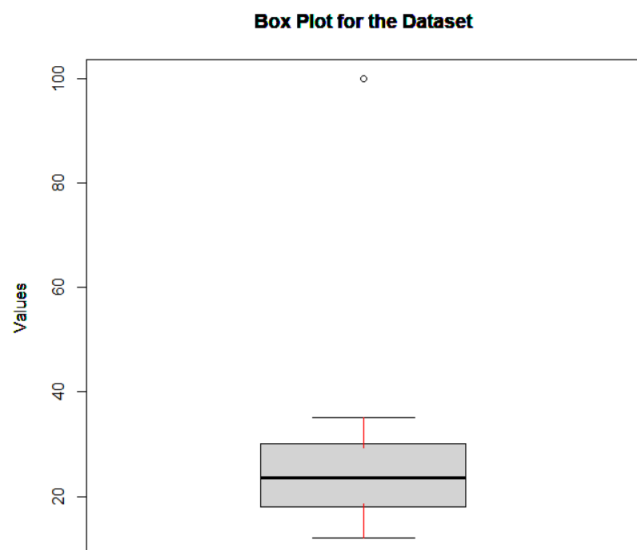
Exercise

Draw a Box plot for the following Dataset:

```
> data<-c(15,18,100,20,12,22,25,27,30,35)
> median<-median(data)
> q1<-quantile(data,0.25)
> q3<-quantile(data,0.75)
> boxplot(data, main = "Box Plot for the Dataset", ylab = "Values")
> █
```



```
> IQ<-q3-q1 █
> lower_bound<-q1-1.5*IQ
> upper_bound<-q3+1.5*IQ
> segments(1, min(data[data > lower_bound]), 1, q1, col = "red") █
> segments(1, max(data[data < upper_bound]), 1, q3, col = "red") █
```



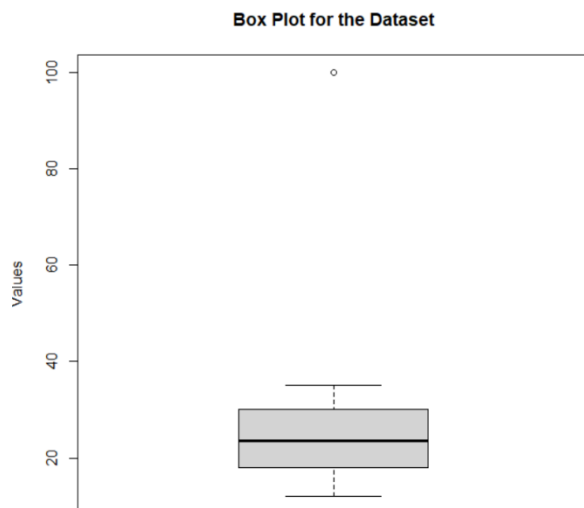
Exercise

Draw a Box plot for the following Dataset:

15, 18, 100, 20, 12, 22, 25, 27, 30, 35

1. Arrange the numbers in ascending order: 12, 15, 18, 20, 22, 25, 27, 30, 35, 100
2. Find the median (Q2), which is the middle value: Median (Q2) = 22
3. Find Q1 (the median of the lower half of the data):
 - a. Q1 = Median of {12, 15, 18, 20, 22} = 18
4. Find Q3 (the median of the upper half of the data):
 - a. Q3 = Median of {25, 27, 30, 35, 100} = 30

```
> data<-c(15, 18, 100, 20, 12, 22, 25, 27, 30, 35)
> boxplot(data,main = "Box Plot for the Dataset",ylab="Values")
>
```



```
> outliers <- boxplot(data, plot=FALSE)$out
> points(rep(1, length(outliers)), outliers, pch=19, col="red")
> abline(h=quantile(data, 0.25), col="blue", lty=2) # Q1
> abline(h=median(data), col="red", lty=2) # Median
> abline(h=quantile(data, 0.75), col="blue", lty=2)
>
```

Box Plot for the Dataset

