Pie Chart:

- ✓ It is a circular diagram , with slices
- ✓ The slices are used to represent the categories
- ✓ One slice for each category
- ✓ The size of the slice is proportional to the corresponding category.

Example:

construct pie chart for the following data

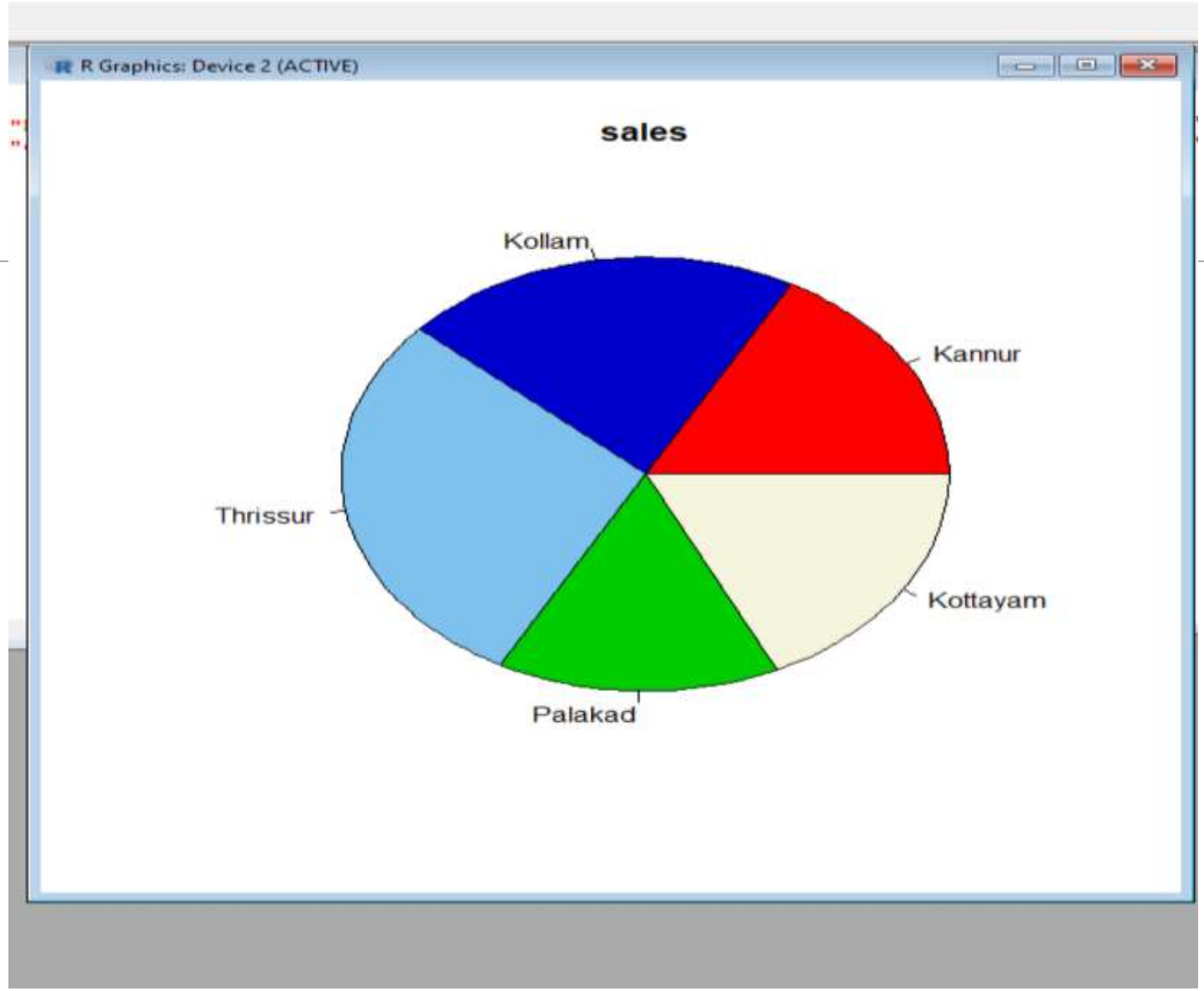
City	sales
Kannur	79
Kollam	99
Thrissur	134
Palakkad	70
Kottayam	33

R Console

```
> sales=c(79,99,134,70,83)
> names(sales)=c("Kannur","Kollam","Thrissur","Palakad","Kottayam")
> pie(sales,main="sales",col=c("red","blue3","skyblue2","green3","beige"))
>
```

Untitled - R Editor

```
sales=c(79,99,134,70,83)
names(sales)=c("Kannur","Kollam","Thrissur","Palakad","Kottayam")
pie(sales,main="sales",col=c("red","blue3","skyblue2","green3","beige"))
```

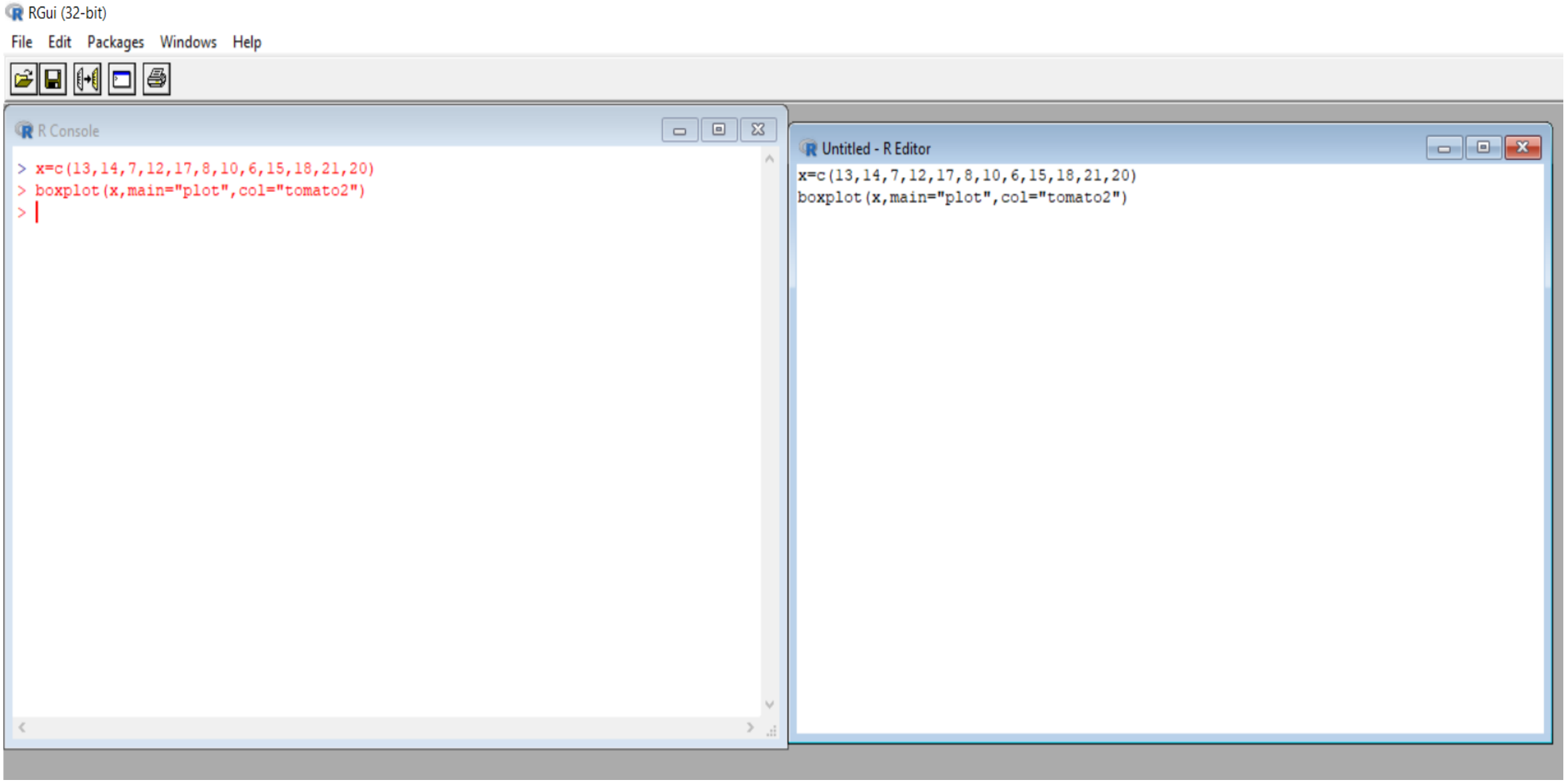

R Graphics: Device 2 (ACTIVE)
sales
Kollam
Kannur
Thrissur
Kottayam
Palakad

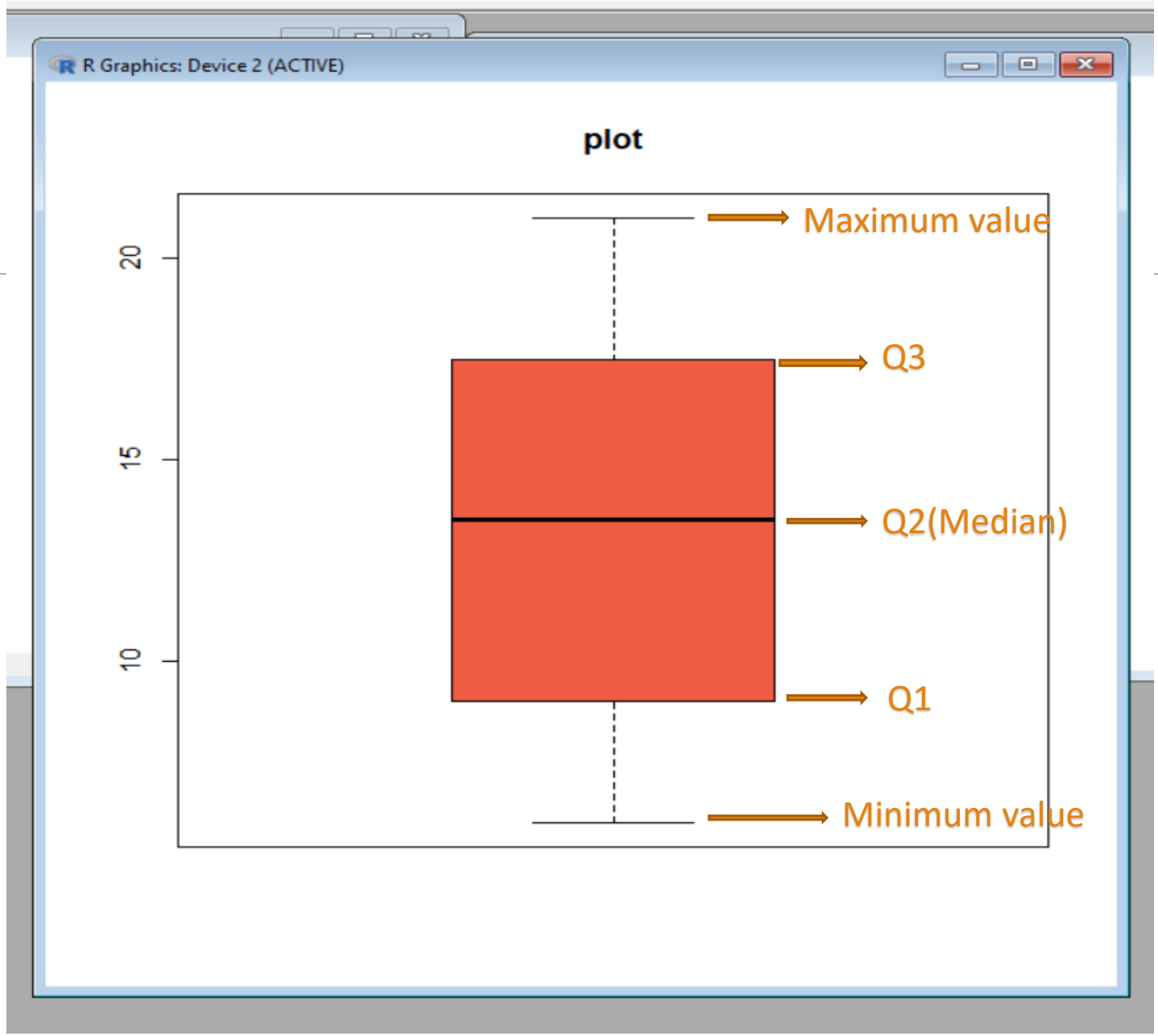
Box plots:

- ✓ It attempts to provide a visual representation of data distribution.
- ✓ Is a graphical representation based on its quartile, as well as its smallest and largest values.

Example:

Construct a boxplot of the data; 13,14,7,12,17,8,10,6,15,18,21,20


RGui (32-bit)
File Edit Packages Windows Help
R Console
> x=c(13,14,7,12,17,8,10,6,15,18,21,20)
> boxplot(x,main="plot",col="tomato2")
>
Untitled - R Editor
x=c(13,14,7,12,17,8,10,6,15,18,21,20)
boxplot(x,main="plot",col="tomato2")


R Graphics: Device 2 (ACTIVE)
plot
20
15
10
Maximum value
Q3
Q2(Median)
Q1
Minimum value

Scatter diagrams:

- ✓ Diagrammatic representation of bivariate data
- ✓ Used to analyses the relationship between two variables
- ✓ Each pair is represented by single point

Example:

Draw a scatter diagram for the data given bellow

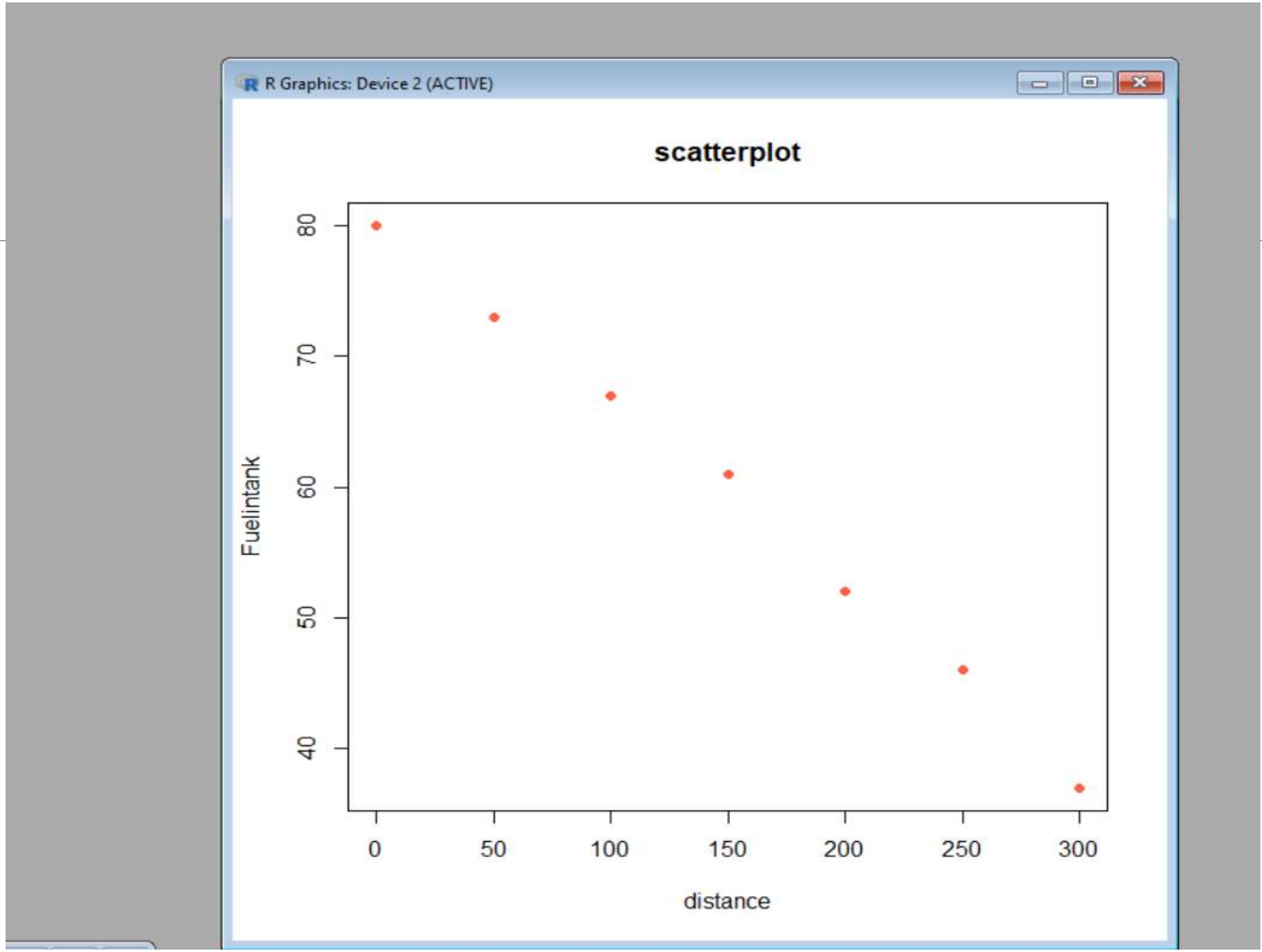
Distance(in KM)	Fuel in tank(in Ltr)
0	80
50	73
100	67
150	61
200	52
250	46
300	37

R Console

```
> x=c(0,50,100,150,200,250,300)
> y=c(80,73,67,61,52,46,37)
> plot(x,y,main="scatterplot",xlab="distance",ylab="Fuelintank",col="tomato1",pch=16)
>
```

Untitled - R Editor

```
x=c(0,50,100,150,200,250,300)
y=c(80,73,67,61,52,46,37)
plot(x,y,main="scatterplot",xlab="distance",ylab="Fuelintank",col="tomato1",pch=16)
```


R Graphics: Device 2 (ACTIVE)
scatterplot
Fuelintank
80
70
60
50
40
0
50
100
150
200
250
300
distance

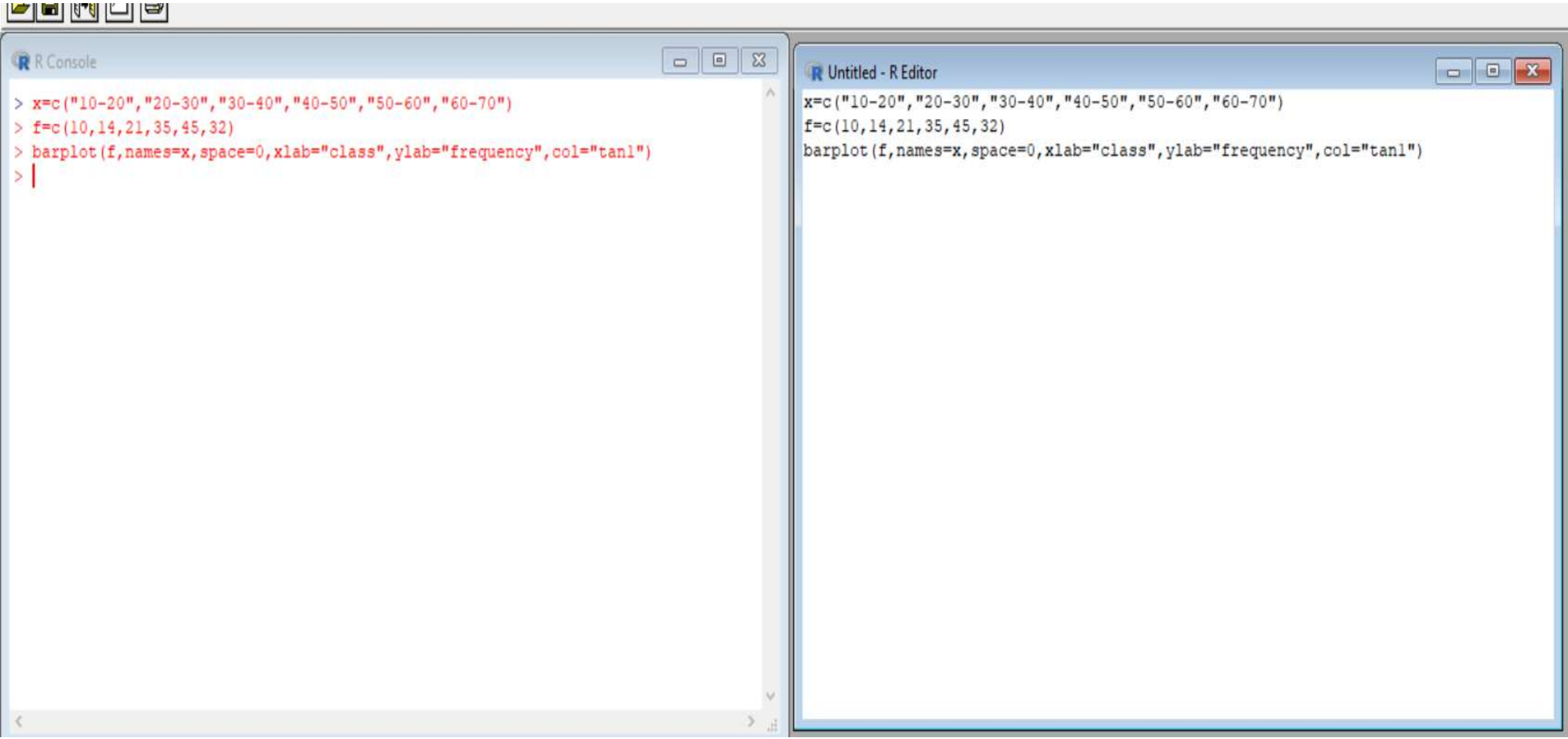
Histograms:

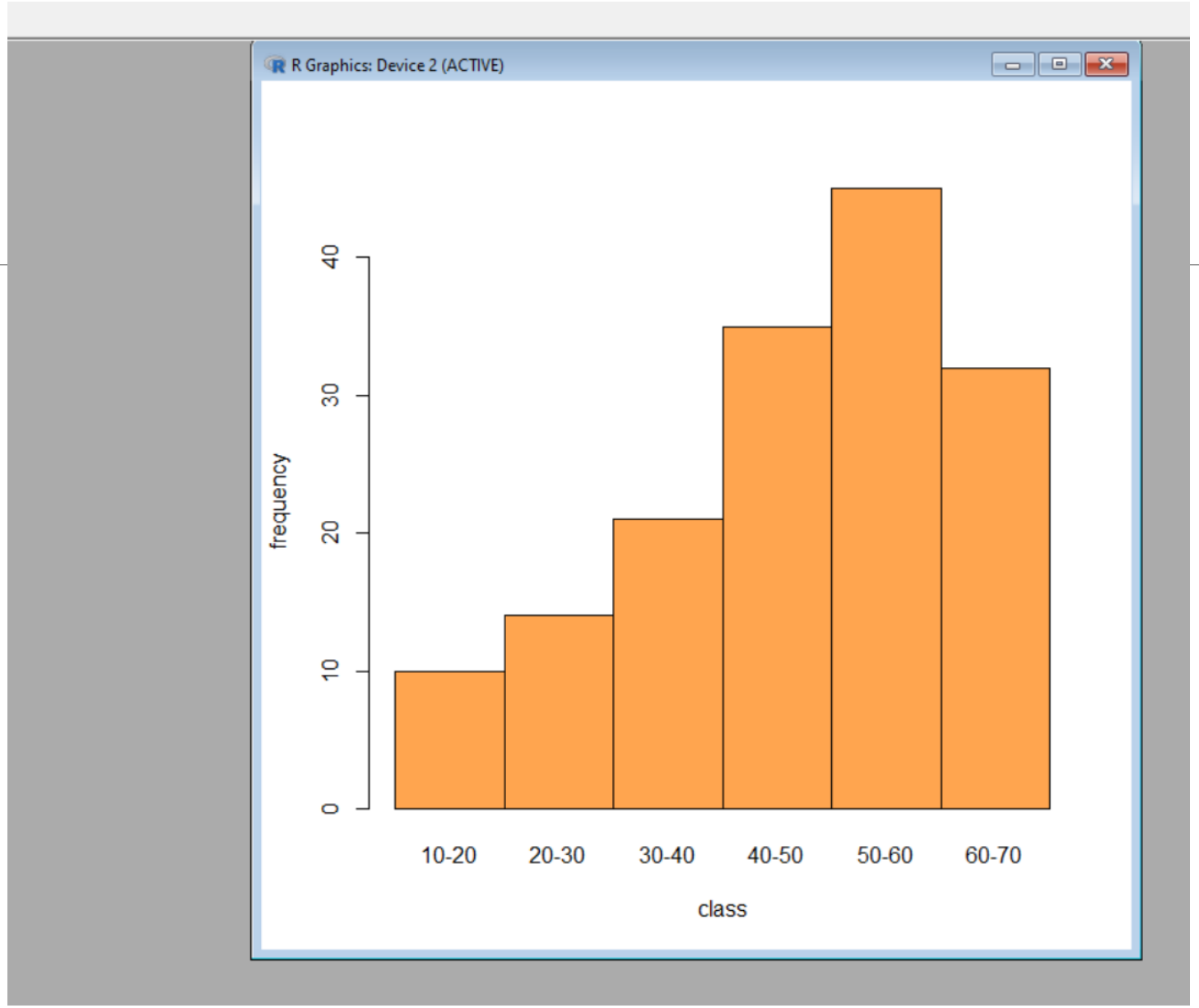
- ✓ An important method of displaying the frequency distribution data
- ✓ Set of bars with heights are proportional to frequencies represented.
- ✓ A histogram generally represents a continuous curve.

Example:

Draw a histogram for the data

Class	Frequency
10-20	10
20-30	14
30-40	21
40-50	35
50-60	45
60-70	32


R Console
> x=c("10-20","20-30","30-40","40-50","50-60","60-70")
> f=c(10,14,21,35,45,32)
> barplot(f,names=x,space=0,xlab="class",ylab="frequency",col="tan1")
>
Untitled - R Editor
x=c("10-20","20-30","30-40","40-50","50-60","60-70")
f=c(10,14,21,35,45,32)
barplot(f,names=x,space=0,xlab="class",ylab="frequency",col="tan1")


R Graphics: Device 2 (ACTIVE)
frequency
0
10
20
30
40
10-20
20-30
30-40
40-50
50-60
60-70
class

- We can also draw histograms by using the command hist()

- The graphical representations can also done by the Package ggplot2 which can be download. When we use ggplot2 the graphs and diagrams are very attractive

THANK YOU