PRESENTATION OF PIECHART

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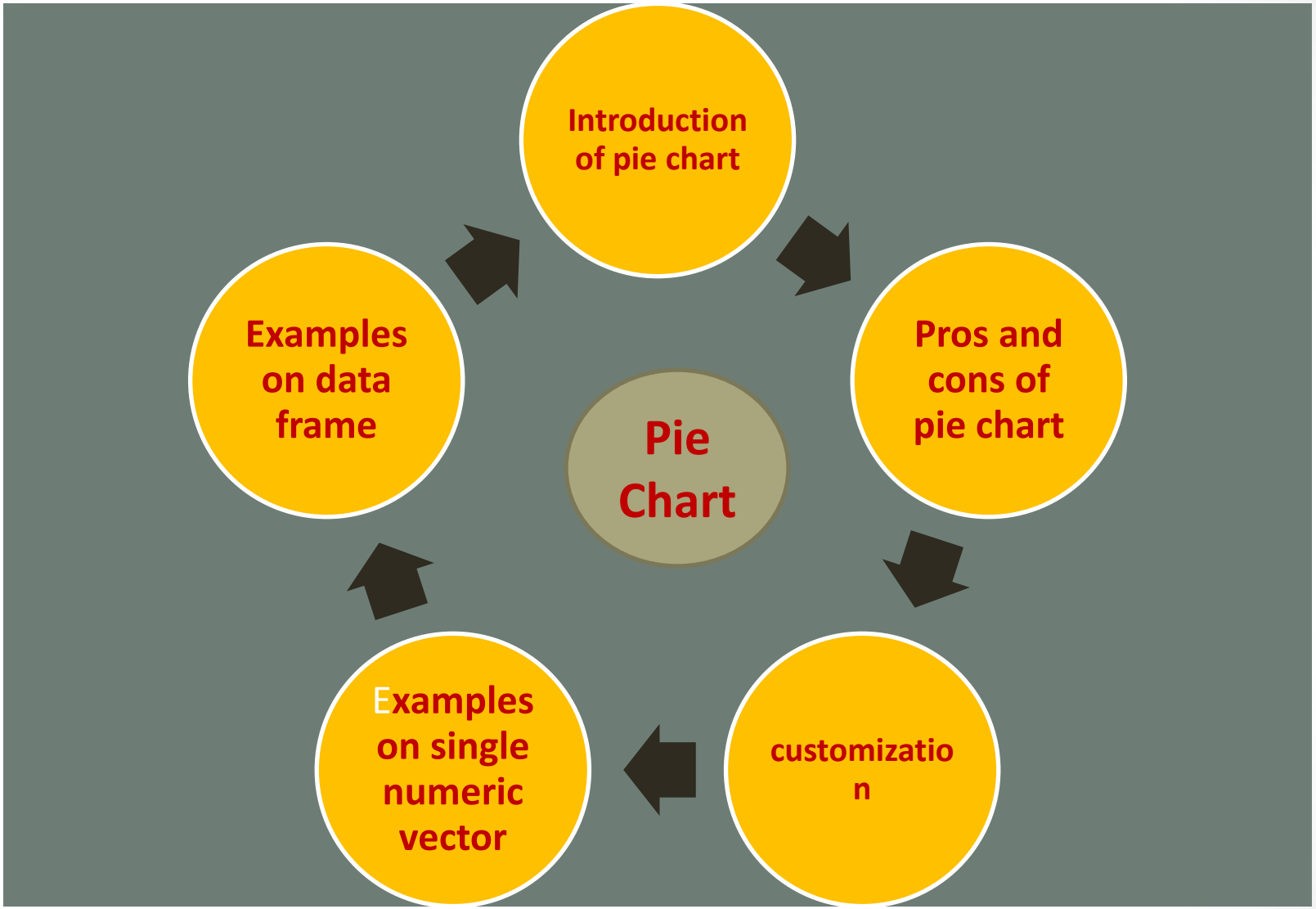
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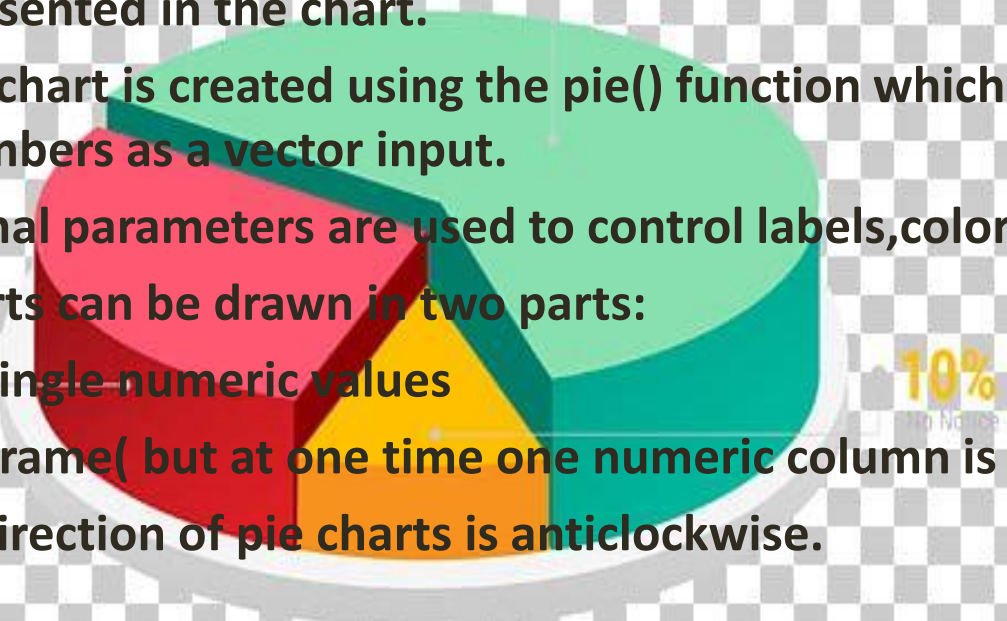
Pie Chart

INTRODUCTION OF PIE CHARTS

- It is commanly used to display proportional data.
- A pie-chart is a representation of values as slices of a circle with different colors.
- The slices are labeled and the numbers corresponding to each slice is also represented in the chart.
- In R the pie chart is created using the pie() function which takes positive numbers as a vector input.
- The additional parameters are used to control labels,color,title etc.
- In R pie charts can be drawn in two parts:
  - vector of single numeric values
  - As a data frame(but at one time one numeric column is taken).
- By default direction of pie charts is anticlockwise.



Pros and Cons of Pie chart

Pros:

- Represents the proportions of the multiple groups of data.
- Can Represent the quantity through circle size.
- Simple Visualisation graph.
- Highly used graph to represent the data in majority of mediums.
- Require minimal additional explanation.
- Summarize a large data set in visual form.

Cons:

- Do not easily reveal exact values.
- Many pie charts may be needed to show changes over time.
- Not precise.
- Dynamics data requires plenty of charts to showcase.
- Key decisions cannot be made on this visualised data.
- 3-D plotting cannot be used due to false impressions.

CUSTOMIZATION

- The basic syntax for creating a pie-chart using the R is-
  - pie(x ,labels ,radius ,main ,col ,clockwise)
- Following is the description of the parameters used-

i. x is a vector containing the numeric valued used in the pie charts.

ii. labels is used to give description to the slices.

iii. radius indicated the radius of the circle of the pie chart.(value between -1 and +1)

iv. main indicated the title of chart.

v. col indicates the color paletes.

vi. Clockwise is a logical value indicating if the slices are drawn clockwise or anticlockwise

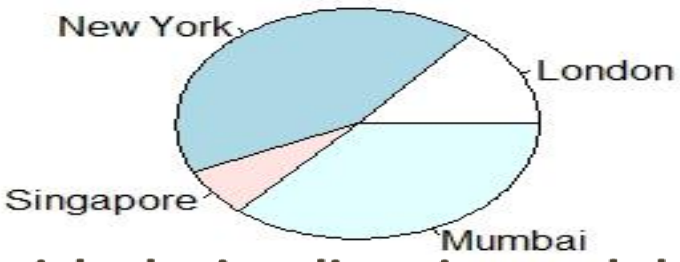
Command and their use in R , for creating a pie-chart

- Suppose we have a single numeric vector defined in R.
- The simplest command for creating the pie chart is pie().
- The command for creating the pie chart by using the customization is:
- pie(x, main=“ “, col=lf , clockwise=TRUE)
- Before using the customization command with col, we have defined the col command in R.
- Suppose we have a two numeric column (a,b) of data frame (w) then we can plot the pie chart-
- pie(w $ a) ,at one time only one numeric column is considered.

Examples on single numeric data

- Create data for the graph.
- x <- c(21, 62, 10, 53)
- labels <- c("London", "New York", "Singapore", "Mumbai")
- Plot the chart
- pie(x , labels)

- Output:



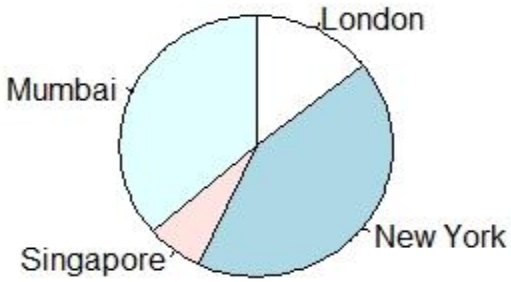
By defaults it gives anticlockwise direction and the starting angle is 0 degree.

When we add the clockwise=TRUE command in the pie( ) then the output direction change.

Input:

pie(x ,labels ,clockwise =TRUE)

output:



by default starting angle is 90 degree.

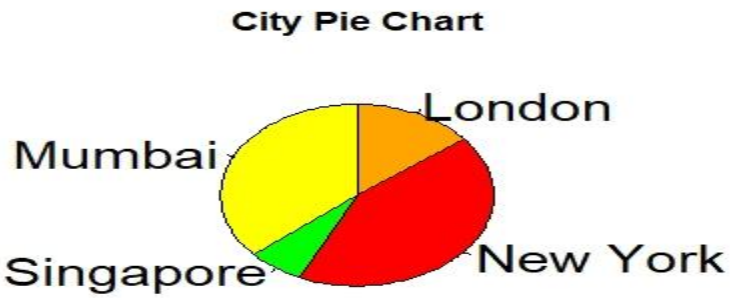
When we add the few more command like col ,main , cex in pie ( ) then the output is:

Input:

```
pc<-c("orange“ ,"red“ ,"green“ ,"yellow”)

pie(x ,labels , clockwise=TRUE , col=pc , main="City Pie Chart” ,cex=1.8)
```

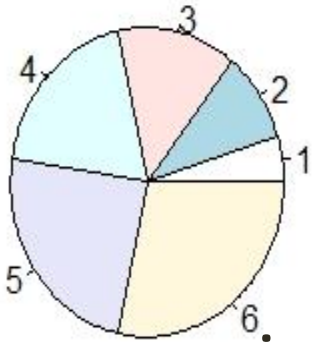
Output:



cex mean instructions to make slice labels a little bigger.

Examples on Data frame-(a)

- Create the data for the graph:
  - count<-c(1,2,3,4,5,6)
  - speed<-c(9,8,7,6,5,4)
  - mf<-data.frame(count ,speed)
  - class(mf)
- Plot the chart in count column:
  - pie(mf $ count)
  - Output:



- In data frame, at one time one numeric column is taken.

Plot the chart in speed column

Input:

pie(mf $ speed)

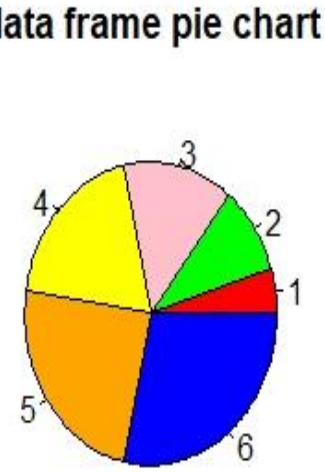
output:

When we add the col and main command then otput in count column is:

Input:

```
lf<-c("red","green","pink","yellow","orange","blue")
pie(mf $ count ,col =lf , main="data frame pie chart")
```

output:

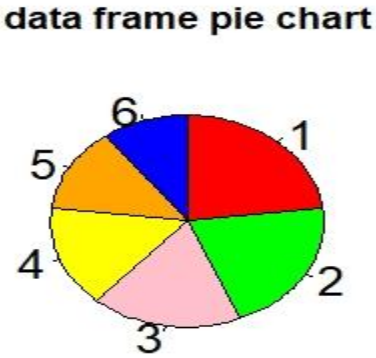


When we add the cex and clockwise command then output in speed column is:

Input:

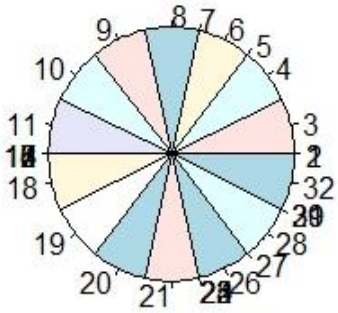
pie(mf $ speed , col= lf, main="data frame pie chart ", cex=1.6,clockwise=TRUE)

output:



Examples on Data frame-(b)

- Create the data for the graph
  - mtcars
  - class(mtcars)
- Plot the chart
  - pie(mtcars $ vs)

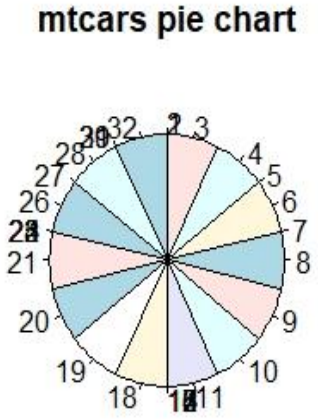


After using the customization

Input:

```
pie( mtcars $ vs , main ="mtcars pie
chart",clockwise=TRUE)
```

output:

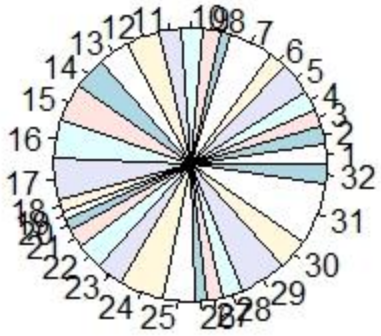


Create the data:

mtcars
class(mtcars)

Plot the chart:
pie(mtcars $ hp)

output:

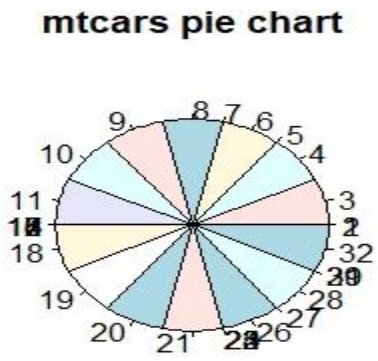


After using the Customization

Input:

```
pie(mtcars $ hp, main="mtcars pie
chart",clockwise = TRUE)
```

output:




THANK
YOU