Syntax

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 −

* **x** is a vector containing the numeric values used in the pie chart.
* **labels** is used to give description to the slices.
* **radius** indicates the radius of the circle of the pie chart.(value between −1 and +1).
* **main** indicates the title of the chart.
* **col** indicates the color palette.
* **clockwise** is a logical value indicating if the slices are drawn clockwise or anti clockwise.
* x <- c(21, 62, 10, 53)
* labels <- c("London", "New York", "Singapore", "Mumbai")
* png(file = "city.jpg")
* pie(x,labels)
* dev.off()
* x <- c(21, 62, 10, 53)
* labels <- c("London", "New York", "Singapore", "Mumbai")
* # Give the chart file a name.
* png(file = "city\_title\_colours.jpg")
* # Plot the chart with title and rainbow color pallet.
* pie(x, labels, main = "City pie chart", col = rainbow(length(x)))
* # Save the file.
* dev.off()

## Slice Percentages

* x <- c(21, 62, 10,53)
* > labels <- c("London","New York","Singapore","Mumbai")
* >
* > piepercent<- round(100\*x/sum(x), 1)
* > png(file = "city\_percentage\_legends.jpg")
* >
* > pie(x, labels = piepercent, main = "City pie chart",col = rainbow(length(x)))
* > legend("topright", c("London","New York","Singapore","Mumbai"), cex = 0.8,
* + fill = rainbow(length(x)))
* > dev.off()

## 3D Pie Chart

install.packages("plotrix")

library(plotrix)

# Create data for the graph.

x <- c(21, 62, 10,53)

lbl <- c("London","New York","Singapore","Mumbai")

# Give the chart file a name.

png(file = "3d\_pie\_chart.jpg")

# Plot the chart.

pie3D(x,labels = lbl,explode = 0.1, main = "Pie Chart of Countries ")

# Save the file.

dev.off()

# Bar Charts

barplot(H,xlab,ylab,main, names.arg,col)

Following is the description of the parameters used −

* **H** is a vector or matrix containing numeric values used in bar chart.
* **xlab** is the label for x axis.
* **ylab** is the label for y axis.
* **main** is the title of the bar chart.
* **names.arg** is a vector of names appearing under each bar.
* **col** is used to give colors to the bars in the graph.
* H <- c(7,12,28,3,41)
* # Give the chart file a name
* png(file = "barchart.png")
* # Plot the bar chart
* barplot(H)
* # Save the file
* dev.off()
* H <- c(7,12,28,3,41)
* M <- c("Mar","Apr","May","Jun","Jul")
* # Give the chart file a name
* png(file = "barchart\_months\_revenue.png")
* # Plot the bar chart
* barplot(H,names.arg=M,xlab="Month",ylab="Revenue",col="blue",
* main="Revenue chart",border="red")
* # Save the file
* dev.off()

## Group Bar Chart and Stacked Bar Chart

colors = c("green","orange","brown")

> months <- c("Mar","Apr","May","Jun","Jul")

> regions <- c("East","West","North")

>

> # Create the matrix of the values.

> Values <- matrix(c(2,9,3,11,9,4,8,7,3,12,5,2,8,10,11), nrow = 3, ncol = 5, byrow = TRUE)

>

> # Give the chart file a name

> png(file = "barchart\_stacked.png")

>

> # Create the bar chart

> barplot(Values, main = "total revenue", names.arg = months, xlab = "month", ylab = "revenue", col = colors)

>

> # Add the legend to the chart

> legend("topleft", regions, cex = 1.3, fill = colors)

>

> # Save the file

> dev.off()

# Histograms

hist(v,main,xlab,xlim,ylim,breaks,col,border)

* **v** is a vector containing numeric values used in histogram.
* **main** indicates title of the chart.
* **col** is used to set color of the bars.
* **border** is used to set border color of each bar.
* **xlab** is used to give description of x-axis.
* **xlim** is used to specify the range of values on the x-axis.
* **ylim** is used to specify the range of values on the y-axis.
* **breaks** is used to mention the width of each bar.
* v <- c(9,13,21,8,36,22,12,41,31,33,19)
* # Give the chart file a name.
* png(file = "histogram.png")
* # Create the histogram.
* hist(v,xlab = "Weight",col = "yellow",border = "blue")
* # Save the file.
* dev.off()
* v <- c(9,13,21,8,36,22,12,41,31,33,19)
* # Give the chart file a name.
* png(file = "histogram\_lim\_breaks.png")
* # Create the histogram.
* hist(v,xlab = "Weight",col = "green",border = "red", xlim = c(0,40), ylim = c(0,5),
* breaks = 5)
* # Save the file.
* dev.off()

# Line Graphs

plot(v,type,col,xlab,ylab)

* **v** is a vector containing the numeric values.
* **type** takes the value "p" to draw only the points, "l" to draw only the lines and "o" to draw both points and lines.
* **xlab** is the label for x axis.
* **ylab** is the label for y axis.
* **main** is the Title of the chart.
* **col** is used to give colors to both the points and lines.
* v <- c(7,12,28,3,41)
* # Give the chart file a name.
* png(file = "line\_chart.jpg")
* # Plot the bar chart.
* plot(v,type = "o")
* # Save the file.
* dev.off()
* v <- c(7,12,28,3,41)
* # Give the chart file a name.
* png(file = "line\_chart\_label\_colored.jpg")
* # Plot the bar chart.
* plot(v,type = "o", col = "red", xlab = "Month", ylab = "Rain fall",
* main = "Rain fall chart")
* # Save the file.
* dev.off()
* v <- c(7,12,28,3,41)
* t <- c(14,7,6,19,3)
* # Give the chart file a name.
* png(file = "line\_chart\_2\_lines.jpg")
* # Plot the bar chart.
* plot(v,type = "o",col = "red", xlab = "Month", ylab = "Rain fall",
* main = "Rain fall chart")
* lines(t, type = "o", col = "blue")
* # Save the file.
* dev.off()