**R charts and graphs**

**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, colour, title etc.

The basic syntax for creating a pie-chart using the R is −

pie(x, labels, radius, main, col, clockwise)

* **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.

**Bar chart represents** data in rectangular bars with length of the bar proportional to the value of the variable. R uses the function **barplot()** to create bar charts. R can draw both vertical and Horizontal bars in the bar chart. In bar chart each of the bars can be given different colours.

The basic syntax to create a bar-chart in R is −

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

**Boxplots** are used to measure how well distributed is the data in a data set. It divides the data set into three quartiles. This graph represents the minimum, maximum, median, first quartile and third quartile in the data set. It is also useful in comparing the distribution of data across data sets by drawing boxplots for each of them.

Boxplots are created in R by using the **boxplot()** function.

The basic syntax to create a boxplot in R is

boxplot(x, data, notch, varwidth, names, main)

**R creates histogram** using **hist()** function. This function takes a vector as an input and uses some more parameters to plot histograms.

The basic syntax for creating a histogram using R is −

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

**A line chart** is a graph that connects a series of points by drawing line segments between them. These points are ordered in one of their coordinate (usually the x-coordinate) value. Line charts are usually used in identifying the trends in data.

The **plot()** function in R is used to create the line graph.

The basic syntax to create a line chart is

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

**Scatterplots show** many points plotted in the Cartesian plane. Each point represents the values of two variables.The simple scatterplot is created using the **plot()** function

The basic syntax for creating scatterplot

plot(x, y, main, xlab, ylab, xlim, ylim, axes)

**Basic statistic operations – mean median mode**

Mean

It is calculated by taking the sum of the values and dividing with the number of values in a data series.

The function **mean()** is used to calculate mean

The basic syntax for calculating mean is

mean(x, trim = 0, na.rm = FALSE, ...)

Median

The middle most value in a data series is called the median. The **median()** function is used in R to calculate this value.

Syntax

The basic syntax for calculating median is

median(x, na.rm = FALSE)

**Mode**

R does not have a standard in-built function to calculate mode.

Create your own

Ex

**# Create the function.**

**getmode <- function(v) {**

**uniqv <- unique(v)**

**uniqv[which.max(tabulate(match(v, uniqv)))]**

**}**

And try your hands on **tidyverse**  and also on reading different types of files.