GRAPHS AND CHARTS

I) Bar plot

* Bar plot()
* We can supply a vector or matrix as I/P
* If we supply a vector, the plot will have bars with thier heights equal to the elmnts in the vector.

Eg: temp = c(27,26,23,24,26,28,25)
barplot(temp)

main - heading
xlab - x axis name
ylab - y axis name
name.arg - name of each bar
col - color name of bar
horiz - horizontal graph (horiz = TRUE)
density - shading (density = 10)
border - bar border color.

Pie chart

function: Pie(x)

eg: x = (1, 1, 1, 2, 2, 3, 3, 4, 4, 4)
y = table(x)
pie(y)

* main :- heading
> pie(y, main = "First")
* x - input values
* labels - to give labels names for slices
* edges - circular o/p of pie is approximated by a polygon with many edges [default: 200].
* radius - to change radius, default - 0.8, max - 1
* clockwise - to label in clockwise direction (clockwise - T)
* density - to shade pie.

Eg: density = c(10, 20, 30, 40) →
diff. shading each slice

* col - to give colors.

col = rainbow(15)

border - to give border
border=f

Histogram

```
x=c(1,1,1,1,2,2,2,2,3,3,3,4,4)
y= table(x)
>y
>x
 1 2 3 4
 5 4 3 2
> hist(x)
```

To see grouping

```
> cut(x,6)
```

*main - heading
*xlab - x axis name
*ylab - y axis name
*xlim - x limit
*ylim - y limit
*col - color
*density - shading density - c(20,30,40)

* freq - get the probability distri. instead of freq.
freq = FALSE

* las - to show the limit values horizon.
las = TRUE

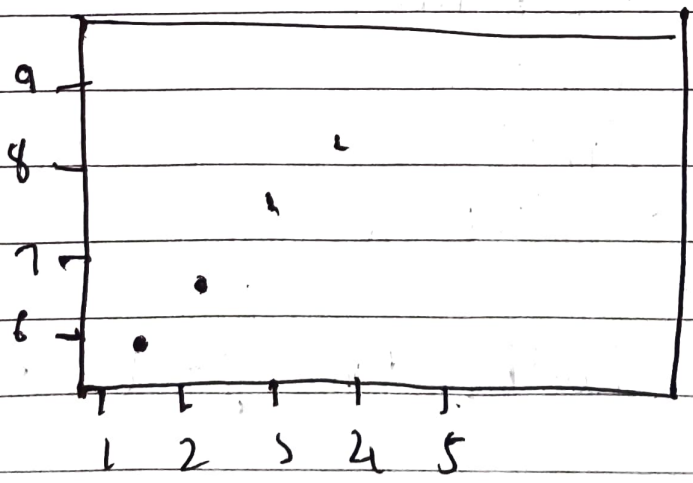
* border - set border
border = F

* break - no. of cells we want
- place where the breaks occur

* counts - no. of observation falling in that cell

Scatter plot

> plot (c(5,6,7,8,9))



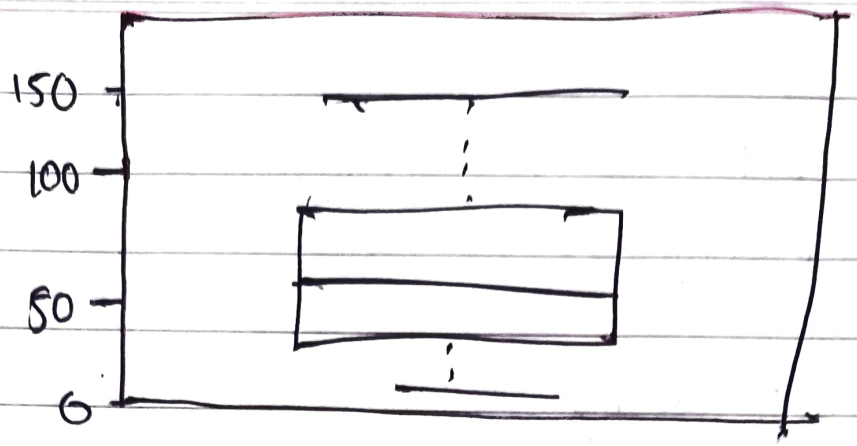
```
> x=1:5
> y=6:10
> plot(x,y)
```

* main - heading
* xlab -
* ylab -
* col - color
* type - 'p' for points
'l' for lines
'b' both lines & point-
'e' for lines part alone of 'b'
'o' over plotted
'h' for histogram
's' for stair
'n' no plotting.

Box Plot

- Quantitative data plotting
- function - boxplot

eg:
```
> boxplot(airquality$Ozone)
```



* main
* xlab
* ylab
* col
* notch - notch in the plot - notch = T
* horizontal - horizontal = T
  display box plot horizontaly.

multiple boxplot:

> oz = airquality $ ozone
> temp = airquality $ temp
> wind = airquality $ wind
> boxplot = (oz, temp, wind)

* Var width:
  - changes the box width
  - var width = 1
* border - It change border color.