Data Visualization : Script and Graphs

1 . CO2 Data visualization :
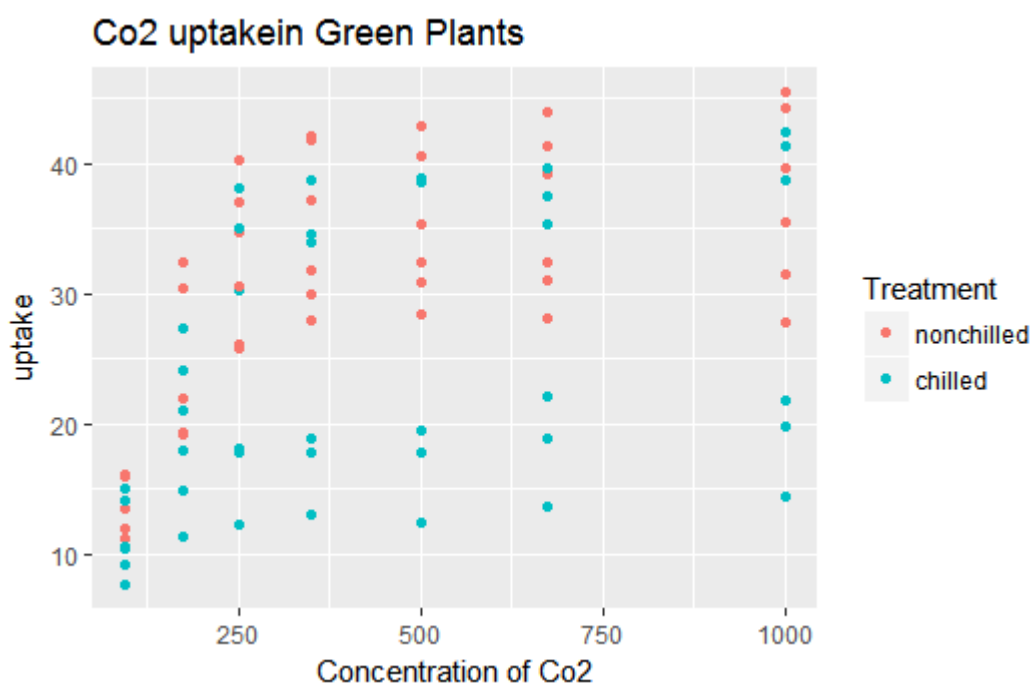
R script:

>library(ggplot2)

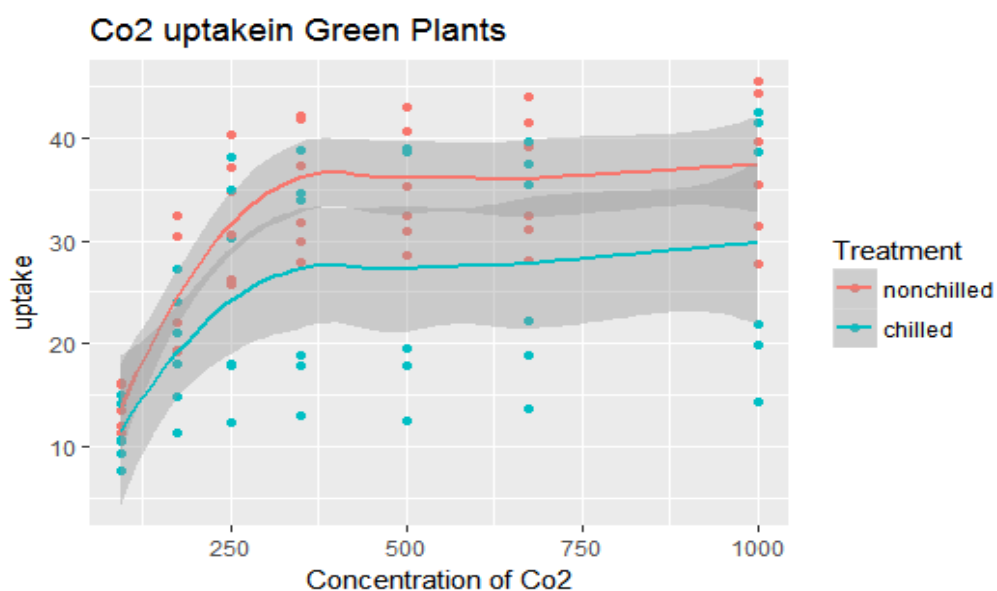#Scatter plot

>qplot(conc,uptake,data = CO2,geom = "point",color=Treatment,xlab = "Concentration of Co2",main="Co2 uptakein Green Plants")

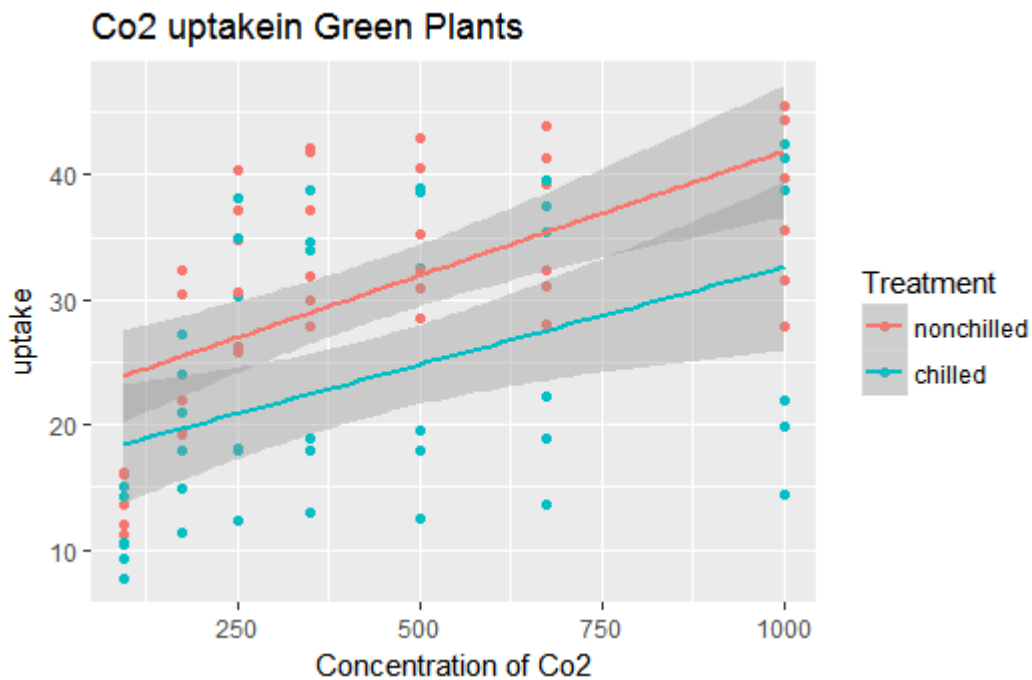Scatter plot : with different treatment distinguished by color

>qplot(conc,uptake,data = CO2,geom = c("point","smooth"),color=Treatment,xlab = "Concentration of Co2",main="Co2 uptakein Green Plants")

Smooth fitting curve
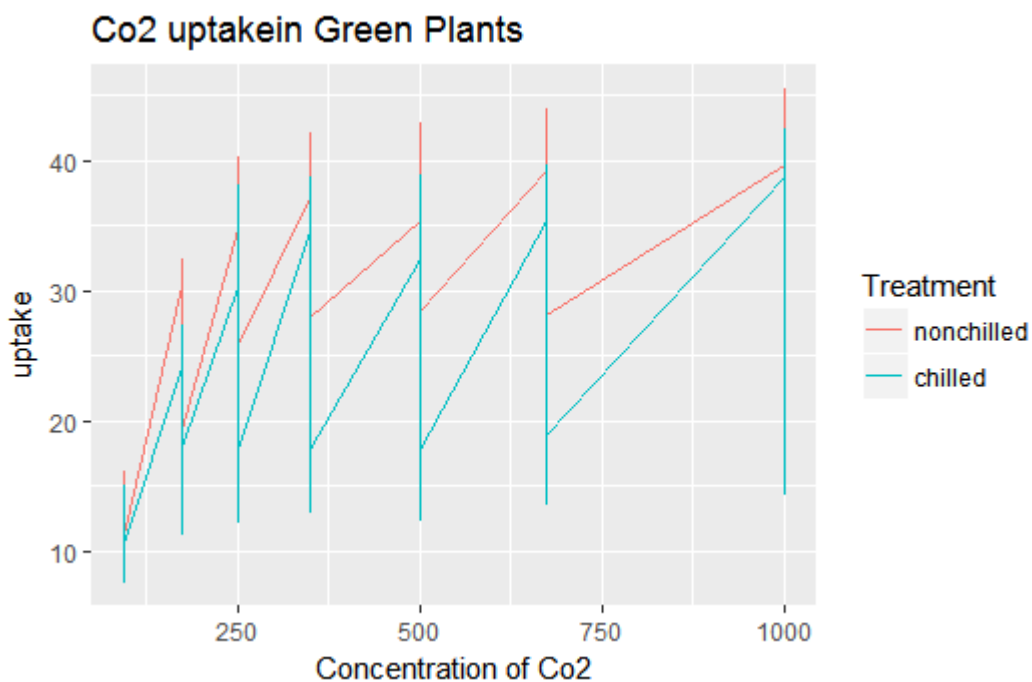
>qplot(conc,uptake,data = CO2,geom = c("point","smooth"),method='lm',color=Treatment,xlab = "Concentration of Co2",main="Co2 uptakein Green Plants")
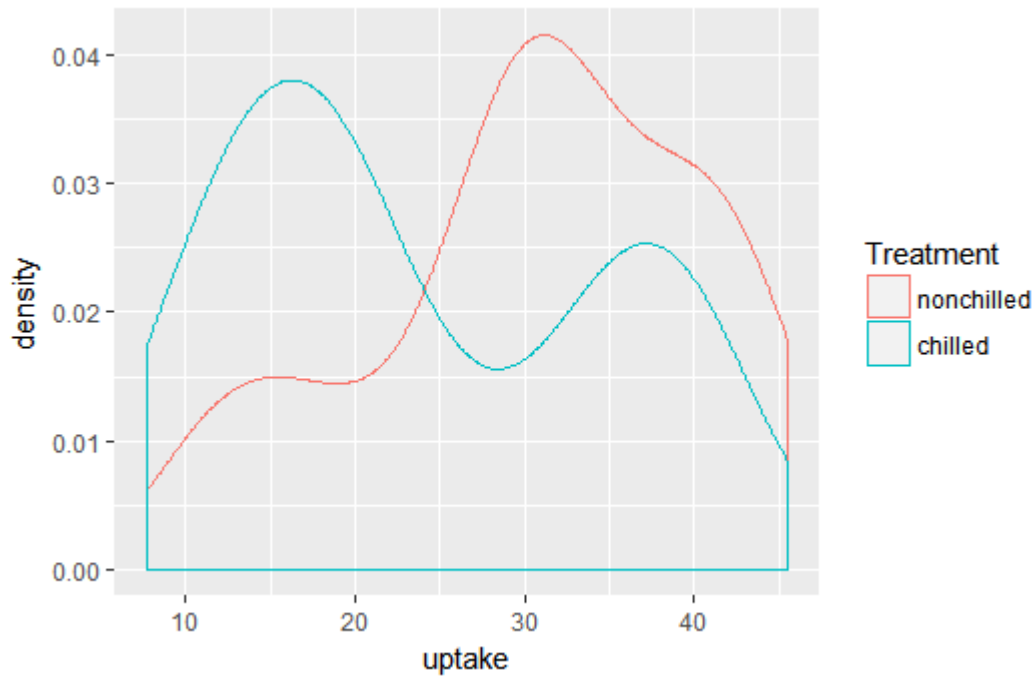
linear regression fitting line :

>qplot(conc,uptake,data = CO2,geom = c("line"),color=Treatment,shape=Treatment,xlab = "Concentration of Co2",main="Co2 uptakein Green Plants")
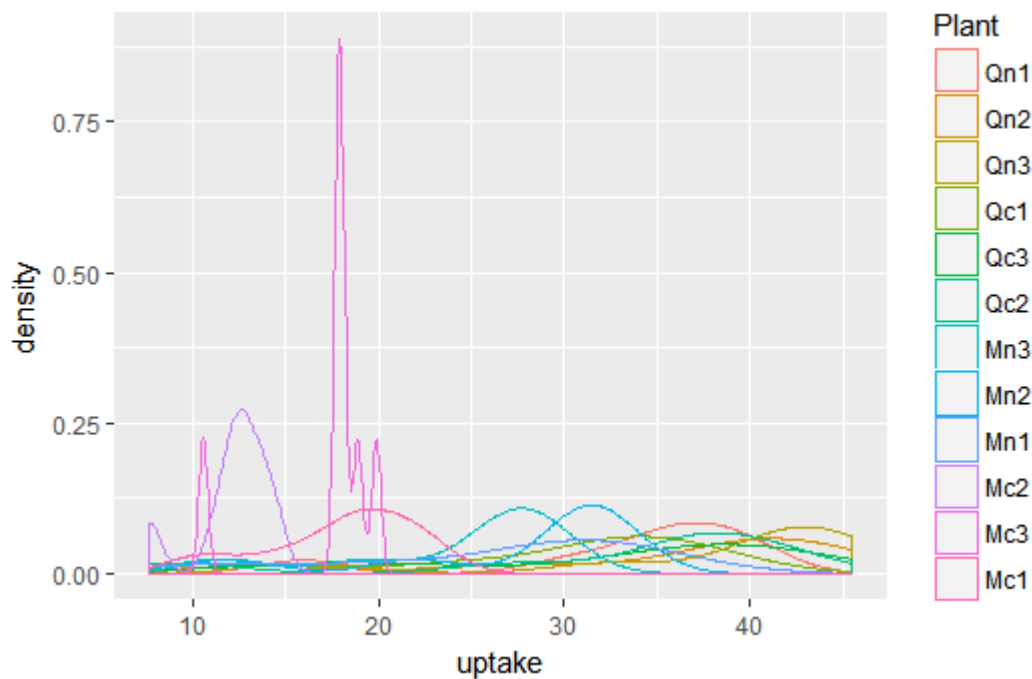Line plot :

>qplot(uptake,data = CO2,geom = "density",colour=Treatment)
Density function plot of uptake groups of chilled and non chilled are distinguished by colour

>qplot(uptake,data = CO2,geom = "density",colour=Plant)
Density function plot of uptake groups of plant types are distinguished by colour

>qplot(conc,uptake,data = CO2,geom = "point",color=Plant,xlab = "Concentration of Co2",main="Co2 uptakein Green Plants")

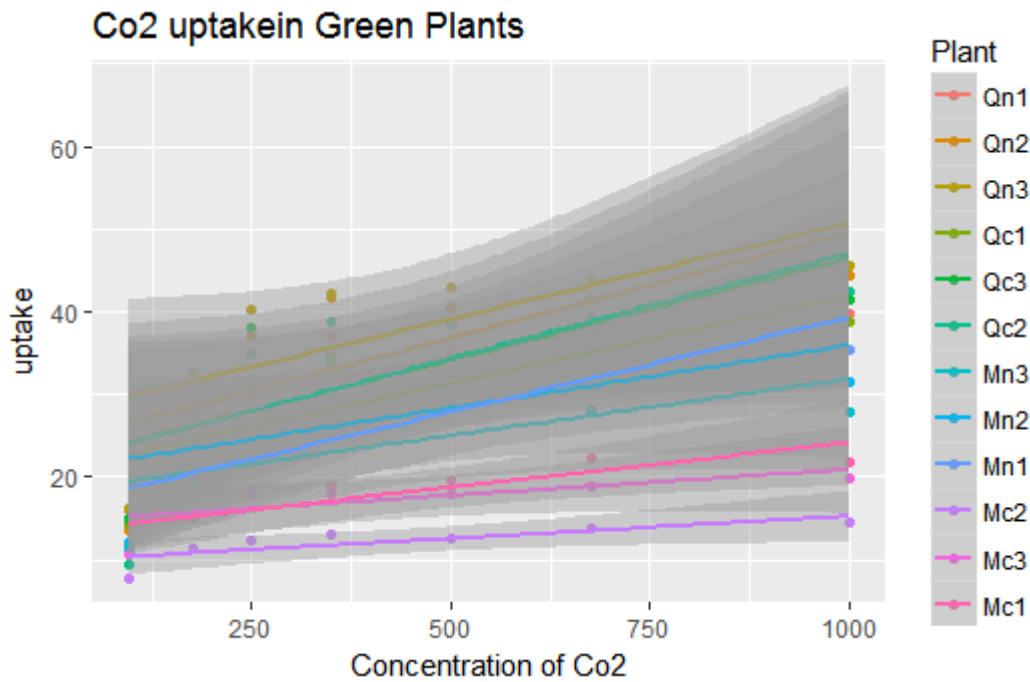scatter plot of uptake vs conc for different plants distinguished by colour of dots
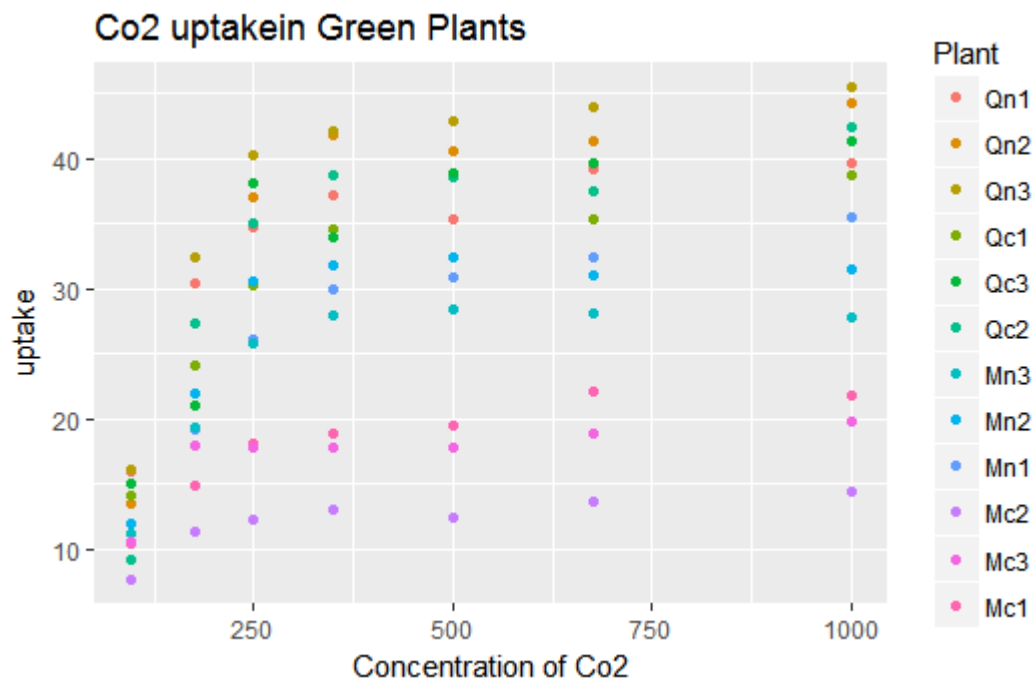
>qplot(conc,uptake,data = CO2,geom = c("point","smooth"),color=Plant,xlab = "Concentration of Co2",main="Co2 uptakein Green Plants")
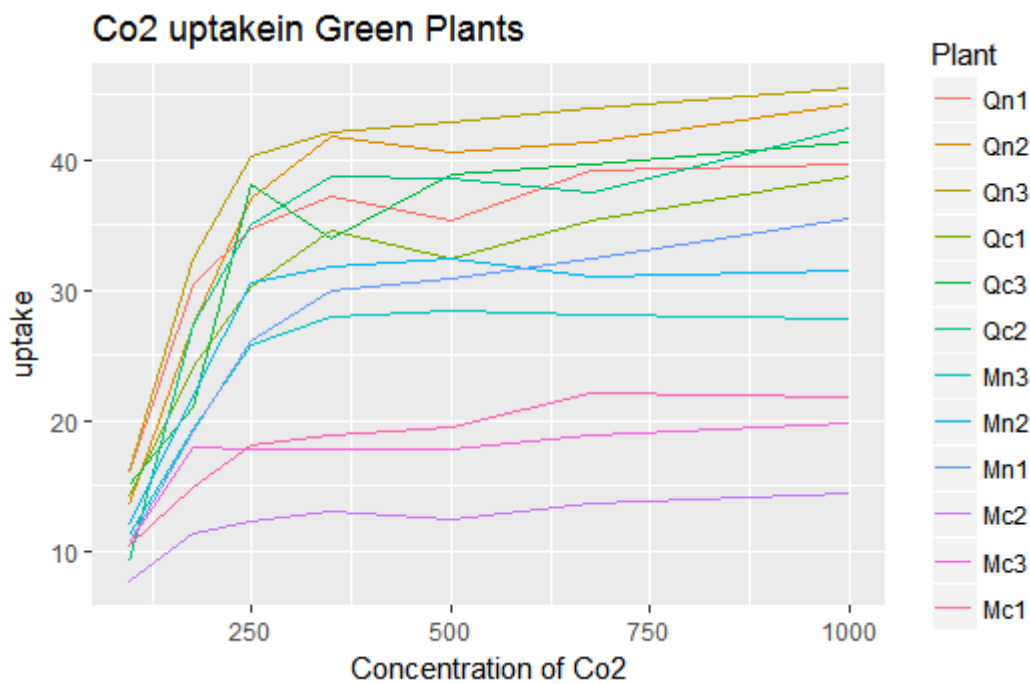
smooth regression :
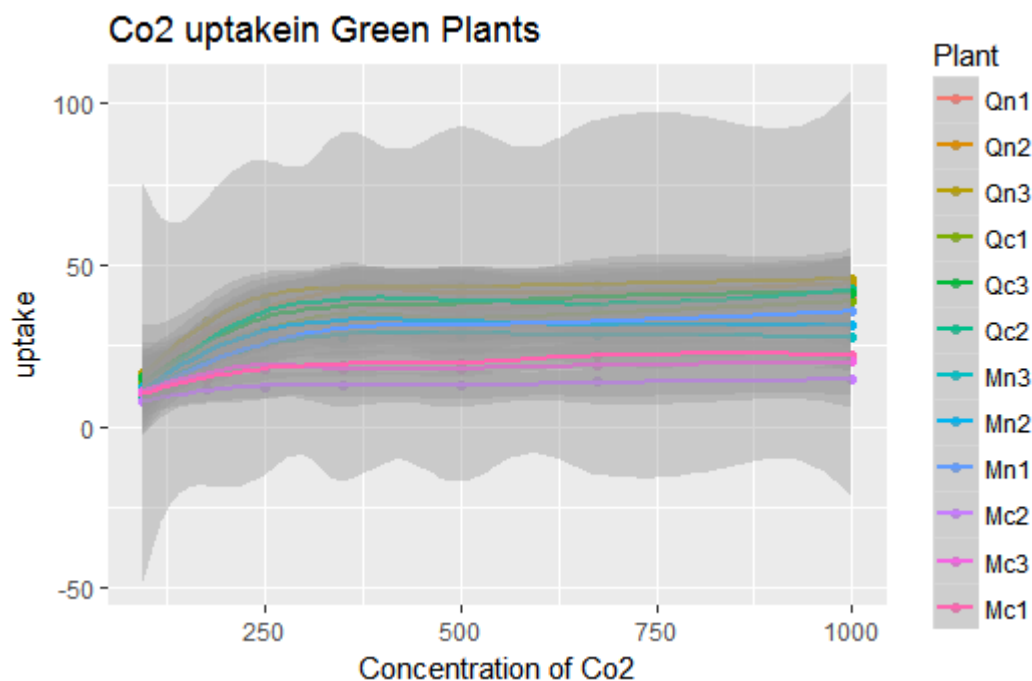
>qplot(conc,uptake,data = CO2,geom = c("point","smooth"),method='lm',color=Plant,xlab = "Concentration of Co2",main="Co2 uptakein Green Plants")

linear regression :

>qplot(conc,uptake,data = CO2,geom = c("line"),color=Plant,shape=Plant,xlab = "Concentration of Co2",main="Co2 uptakein Green Plants")

line plot for uptake vs conc for different plants

2 . IPL POINTS TABLE VISUALISATION :

```
>library(ggplot2)
>library(rvest)

>download.file(url = "https://en.wikipedia.org/wiki/2017_Indian_Premier_League",destfile = "D://dc++//workspace
2//Data Visualization//ipl.html")
>ipl_nodes <- html_nodes(read_html("D://dc++//workspace 2//Data Visualization//ipl.html"),'.wikitable')
>iplTable <- html_table(ipl_nodes[2])
>pointsTable <- iplTable[[1]]
>pointsTable$NRR <- as.numeric(pointsTable$NRR)
>names(pointsTable)[1] <- "Team"


>qplot(Pld,Pts,data = pointsTable,geom = 'boxplot')
```
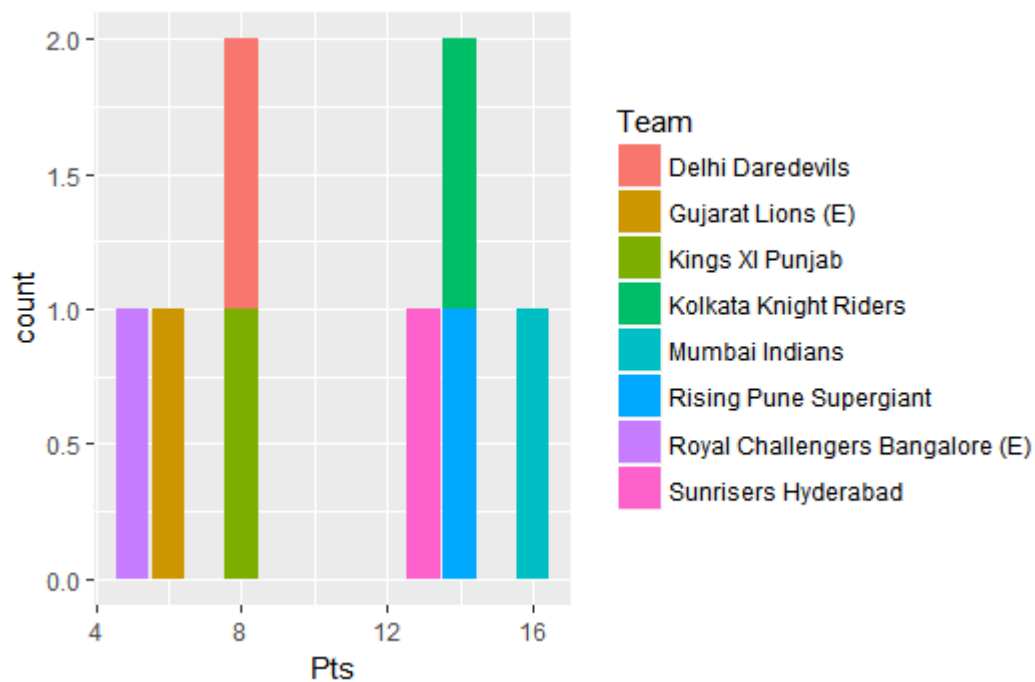
boxplot for points gained vs matches played :
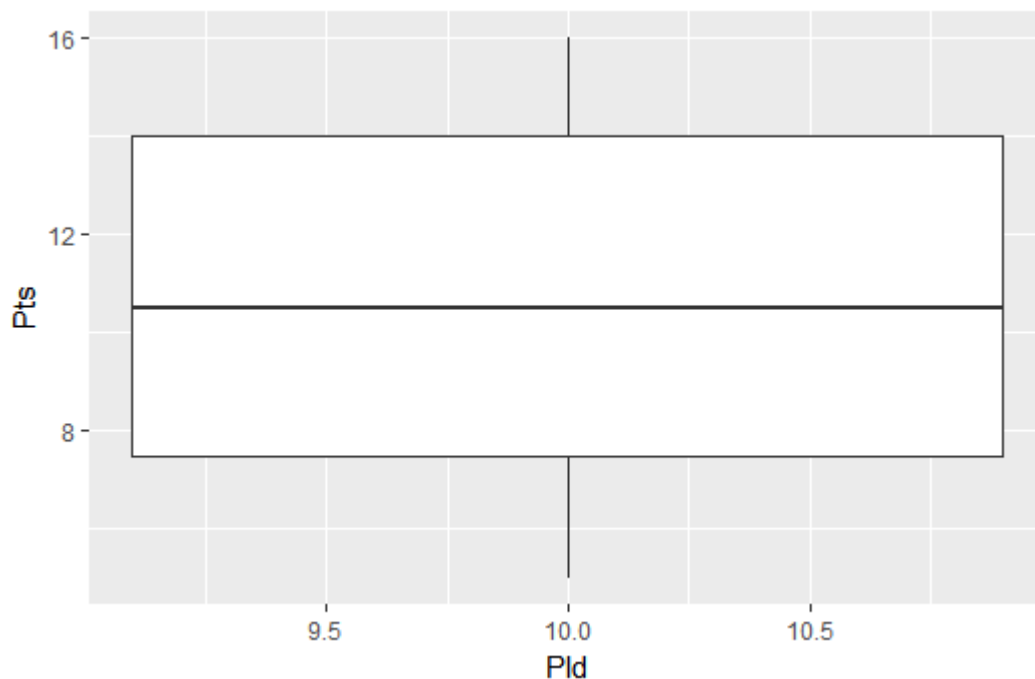

```
>qplot(Pts,data = pointsTable,geom = 'bar',fill=Team)
```

Bar diagram of points of different teams distinguished by colour

3 .Titanic Deaths mosaic plot :

```
>library(rvest)
>library(vcd)
>library(ggplot2)

>download.file(url = "https://en.wikipedia.org/wiki/Mosaic_plot", destfile = "D:\\dc++\\workspace 2\\Data
Visualization\\mosaic.html")
>Deathread <- read_html("D:\\dc++\\workspace 2\\Data Visualization\\mosaic.html")
>deathNodes <- html_nodes(Deathread,'table.wikitable')
>DeathTable <- html_table(deathNodes[1])

>DeathTable <- DeathTable[[1]]
>mosaicdata <- table(DeathTable$Gender,DeathTable$Survived,DeathTable$Crew)
>mosaicplot(mosaicdata,color = c(2,3))
```

Mosaic plot showing Gender vs survival vs class
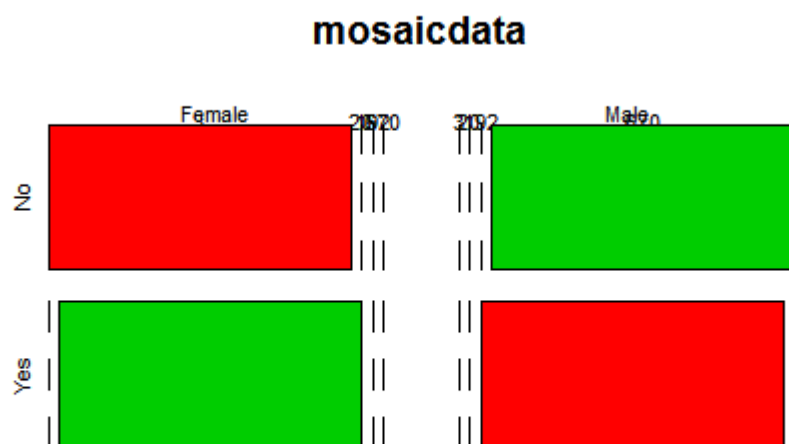
4 . Advanced_plots_NBA :

```
>library(rvest)
>library(ggplot2)
>library(tidyr)
>library(scatterplot3d)
>library(corrgram)

>NBA <- read.csv("http://datasets.flowingdata.com/ppg2008.csv",sep=",")

>NBAlong <-
   NBA %>% gather(key = Metrics, value = Performance, G:PF)
## Joining all the metrics into a single var]

>ggplot(data = NBAlong,aes(x=Metrics,y=Name))+geom_tile(aes(fill=Performance))+ggtitle("NBA PLAYERS AND
THEIR PERFORMANCE MEASURES")
```
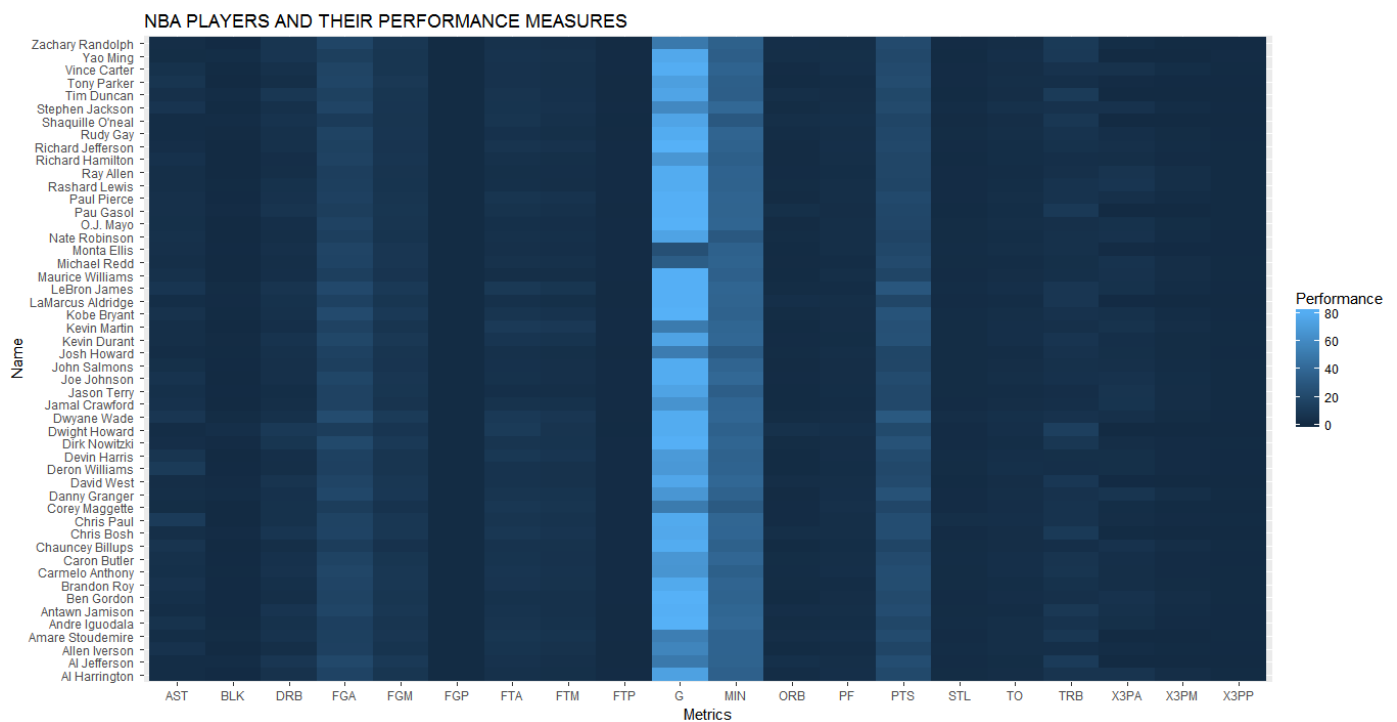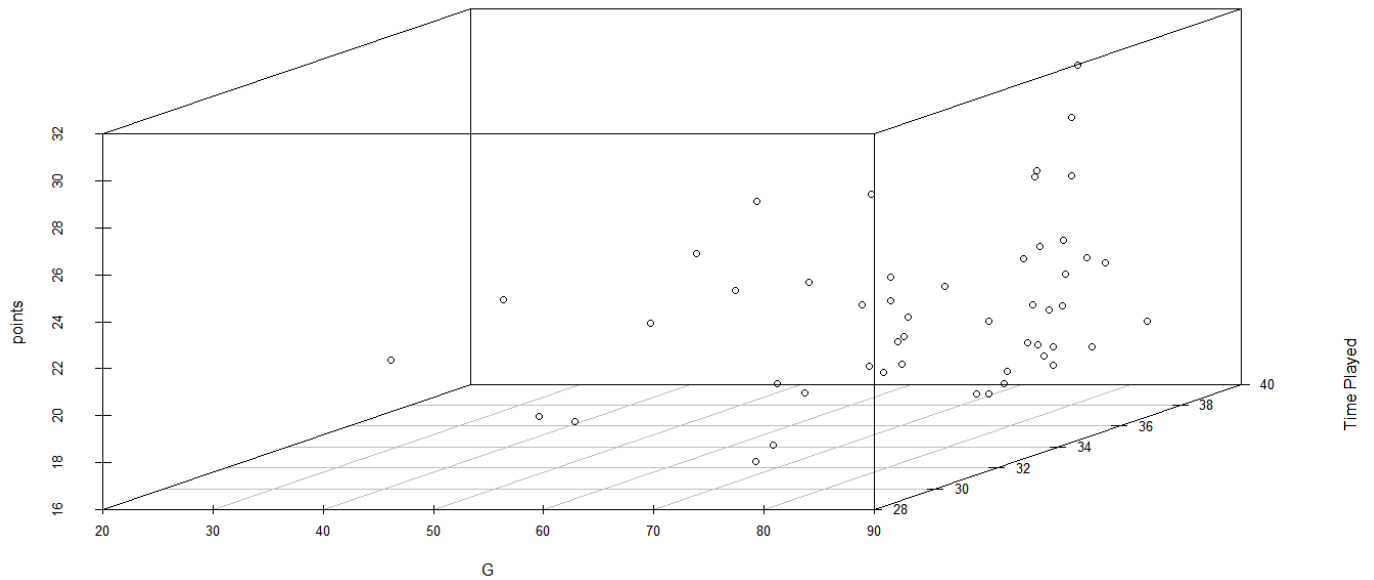
Heat map of Different players vs performance with respect to different Metrics :

>scatterplot3d(NBAG,NBAMIN,NBA$PTS,axis = T,grid = T,box=T,zlab = "points",ylab = "Time Played",xlab = "G")

3D scatter plot showing 3 variable relation ships of 50 players :

>corrgram(NBA)

Correlogram showing the correlation patterns of different metrics of 50 NBA players :