

**SHETH L.U.J. & SIR M.V. COLLEGE OF SCIENCE**  
**SUBJECT - Data Analysis with R / SAS / SPSS**

Aim :- Creating graphical reports using ,ggplot2 (R).

Output :

R RStudio

File Edit Code View Plots Session Build Debug Profile Tools Help

Source

Console Terminal Background Jobs

R 4.5.2 · ~/

```
> diamonds <- read.csv("diamonds.csv")
> str(diamonds)
'data.frame': 53940 obs. of 10 variables:
 $ carat : num 0.23 0.21 0.23 0.29 0.31 0.24 0.24 0.26 0.22 0.23 ...
 $ cut   : chr "Ideal" "Premium" "Good" "Premium" ...
 $ color : chr "E" "E" "E" "I" ...
 $ clarity: chr "SI2" "SI1" "VS1" "VS2" ...
 $ depth  : num 61.5 59.8 56.9 62.4 63.3 62.8 62.3 61.9 65.1 59.4 ...
 $ table  : num 55 61 65 58 58 57 57 55 61 61 ...
 $ x     : num 3.95 3.89 4.05 4.2 4.34 3.94 3.95 4.07 3.87 4 ...
 $ y     : num 3.98 3.84 4.07 4.23 4.35 3.9 3.98 4.11 3.78 4.05 ...
 $ z     : num 2.43 2.31 2.31 2.63 2.75 2.48 2.47 2.53 2.49 2.39 ...
 $ price : int 326 326 327 334 335 330 333 331 337 338 ...
> summary(diamonds)
      carat        cut          color           clarity      
 Min.   :0.2000  Length:53940    Length:53940    Length:53940  
 1st Qu.:0.4000  Class  :character  Class  :character  Class  :character 
 Median :0.7000  Mode   :character  Mode   :character  Mode   :character 
 Mean   :0.7979                        
 3rd Qu.:1.0400                        
 Max.   :5.0100                        
                               depth        table         x            y      
 Min.   :43.00    Mirr.  :43.00    Min.   : 0.000  Min.   : 0.000  
 1st Qu.:61.00    1st Qu.:56.00    1st Qu.: 4.710  1st Qu.: 4.720  
 Median :61.80    Median :57.00    Median : 5.700  Median : 5.710  
 Mean   :61.75    Mean   :57.46    Mean   : 5.731  Mean   : 5.735  
 3rd Qu.:62.50    3rd Qu.:59.00    3rd Qu.: 6.540  3rd Qu.: 6.540  
 Max.   :70.00    Max.   :95.00    Max.   :10.740  Max.   :58.900  
                               price        
 Min.   : 0.000  Min.   : 326  
 1st Qu.: 1.910  1st Qu.: 950  
 Median : 3.530  Median : 2401  
 Mean   : 3.539  Mean   : 3933  
 3rd Qu.: 4.040  3rd Qu.: 5324  
 Max.   :31.800  Max.   :18823
```

**MITHIL KADAM S083**

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Source

Console Terminal × Background Jobs ×

R 4.5.2 · ~/

```
$ z      : num  2.43 2.31 2.31 2.63 2.75 2.48 2.47 2.53 2.49 2.39 ...
$ price  : int  326 326 327 334 335 336 336 337 337 338 ...
> summary(diamonds)
   carat          cut          color          clarity        
Min.   :0.2000  Length:53940    Length:53940    Length:53940    
1st Qu.:0.4000 Class  :character  Class  :character  Class  :character  
Median :0.7000 Mode   :character  Mode   :character  Mode   :character  
Mean   :0.7979                        
3rd Qu.:1.0400                        
Max.   :5.0100                        
   depth          table         x           y           z      
Min.   :43.00  Min.   :43.00  Min.   : 0.000  Min.   : 0.000 
1st Qu.:61.00 1st Qu.:56.00  1st Qu.: 4.710  1st Qu.: 4.720 
Median :61.80 Median :57.00  Median : 5.710  Median : 5.710 
Mean   :61.75 Mean   :57.46  Mean   : 5.711  Mean   : 5.735 
3rd Qu.:62.50 3rd Qu.:59.00  3rd Qu.: 5.540  3rd Qu.: 6.540 
Max.   :79.00  Max.   :95.00  Max.   :10.740  Max.   :58.900 
   z             price        
Min.   : 0.000  Min.   : 326 
1st Qu.: 2.910  1st Qu.: 950 
Median : 3.530  Median :2401 
Mean   : 3.539  Mean   :3933 
3rd Qu.: 4.040  3rd Qu.:5324 
Max.   :31.800  Max.   :18823
> head(diamonds)
   carat      cut color clarity depth table     x     y     z price
1 0.23      Ideal E     SI2  61.5    55 3.95 3.98 2.43  326
2 0.21      Premium I    SI1  59.8    61 3.89 3.84 2.31  326
3 0.23      Good  E     VS1  56.9    65 4.05 4.07 2.31  327
4 0.29      Premium I    VS2  62.4    58 4.20 4.23 2.63  334
5 0.31      Good  J     SI2  63.3    58 4.34 4.35 2.75  335
6 0.24      Very Good J    VVS2  62.8    57 3.94 3.96 2.48  336
> unique(diamonds$cut)
[1] "Ideal"   "Premium" "Good"    "Very Good" "Fair"
> unique(diamonds$color)
[1] "E"       "I"       "J"       "H"       "F"       "G"       "D"
```

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Graph :

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