FML_assignment

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#Data Importing

```
library(readr)
yashu = read.csv("C:/Users/HP/Desktop/FML Dataset.csv")
yashu
```

```
##          Country Total.Library.Size No..of.TV.Shows No..of.Movies
## 1      Argentina               4760            3154          1606
## 2        Austria               5640            3779          1861
## 3        Bolivia               4991            3155          1836
## 4       Bulgaria               6797            4819          1978
## 5          Chile               4994            3156          1838
## 6       Colombia               4991            3156          1835
## 7     Costa Rica               4988            3152          1836
## 8        Croatia               2274            1675           599
## 9        Czechia               7325            5234          2091
## 10       Ecuador               4992            3155          1837
## 11       Estonia               6456            4486          1970
## 12        France               5445            3604          1841
## 13       Germany               5668            3814          1854
## 14     Gibraltar               6167            4079          2088
## 15        Greece               4772            3344          1428
## 16     Guatemala               4767            3154          1613
## 17      Honduras               4989            3154          1835
## 18     Hong Kong               4746            2883          1863
## 19       Iceland               6387            4426          1961
## 20         India               5843            3718          2125
## 21        Israel               5713            3650          2063
## 22         Italy               5183            3545          1638
## 23         Japan               5475            3619          1856
## 24  Liechtenstein               3048            1712          1336
## 25      Malaysia               5952            3565          2387
## 26        Mexico               4993            3158          1835
## 27       Moldova               3937            2473          1464
## 28        Monaco               5804            3806          1998
## 29        Norway               4528            2955          1573
## 30      Paraguay               4797            3155          1642
## 31          Peru               4986            3155          1831
## 32   Philippines               6362            4154          2208
## 33        Poland               5109            3512          1597
## 34       Romania               5303            3832          1471
## 35        Russia               5711            3624          2087
## 36    San Marino               2310            1937           373
## 37      Slovakia               7035            5055          1980
## 38  South Africa               5736            3686          2050
## 39   South Korea               5195            3334          1861
## 40        Taiwan               5105            3134          1971
## 41      Thailand               4948            2977          1971
## 42        Turkey               4639            2930          1709
## 43       Ukraine               5336            3261          2075
## 44       Uruguay               4989            3154          1835
## 45     Venezuela               4797            3154          1643
## 46       Belgium               4990            3374          1616
## 47     Singapore               6303            4109          2194
## 48       Finland               4045            2638          1407
## 49        Latvia               6450            4479          1971
## 50   New Zealand               6084            4003          2081
## 51       Hungary               6884            4802          2082
## 52      Portugal               5047            3419          1628
## 53   Netherlands               5376            3779          1597
## 54        Sweden               4361            2973          1388
```

```
## 55          Canada              6239          4311          1928
## 56       Lithuania              6462          4490          1972
## 57           Spain              5229          3536          1693
## 58 United Kingdom               6643          4551          2092
## 59       Indonesia              3887          2449          1438
## 60          Brazil              4972          3162          1810
## 61         Ireland              6486          4515          1971
## 62     Switzerland              5506          3654          1852
## 63       Australia              6114          4050          2064
## 64         Denmark              4558          2978          1580
## 65   United States             5818          3826          1992
##      Cost.Per.Month...Basic.... Cost.Per.Month...Standard....
## 1                         3.74                          6.30
## 2                         9.03                         14.67
## 3                         7.99                         10.99
## 4                         9.03                         11.29
## 5                         7.07                          9.91
## 6                         4.31                          6.86
## 7                         8.99                         12.99
## 8                         9.03                         11.29
## 9                         8.83                         11.49
## 10                        7.99                         10.99
## 11                        9.03                         11.29
## 12                       10.16                         15.24
## 13                        9.03                         14.67
## 14                        9.03                         14.67
## 15                        9.03                         12.42
## 16                        7.99                         10.99
## 17                        7.99                         10.99
## 18                        8.08                         10.00
## 19                        9.03                         14.67
## 20                        2.64                          6.61
## 21                       10.56                         15.05
## 22                        9.03                         14.67
## 23                        8.73                         13.13
## 24                       12.88                         20.46
## 25                        8.29                         10.65
## 26                        6.62                         10.43
## 27                        9.03                         11.29
## 28                        9.03                         13.54
## 29                        9.94                         12.17
## 30                        8.29                         11.49
## 31                        6.11                          8.56
## 32                        7.35                          9.14
## 33                        7.13                         10.58
## 34                        9.03                         11.29
## 35                        8.13                         10.84
## 36                        9.03                         14.67
## 37                        9.03                         11.29
## 38                        6.26                         10.05
## 39                        8.07                         11.47
## 40                        9.74                         11.90
## 41                        8.34                         10.43
## 42                        1.97                          3.00
## 43                        5.64                          8.46
## 44                        8.99                         12.99
```

```
## 45                    7.99                         10.99
## 46                   10.16                         15.24
## 47                    9.51                         12.81
## 48                    9.03                         13.54
## 49                    9.03                         11.29
## 50                    8.80                         12.53
## 51                    7.64                         10.71
## 52                    9.03                         13.54
## 53                    9.03                         13.54
## 54                   10.90                         14.20
## 55                    7.91                         11.87
## 56                    9.03                         11.29
## 57                    9.03                         14.67
## 58                    7.91                         13.20
## 59                    8.36                         10.66
## 60                    4.61                          7.11
## 61                    9.03                         14.67
## 62                   12.88                         20.46
## 63                    7.84                         12.12
## 64                   12.00                         15.04
## 65                    8.99                         13.99
##      Cost.Per.Month...Premium....
## 1                         9.26
## 2                        20.32
## 3                        13.99
## 4                        13.54
## 5                        12.74
## 6                         9.93
## 7                        15.99
## 8                        13.54
## 9                        14.15
## 10                       13.99
## 11                       13.54
## 12                       20.32
## 13                       20.32
## 14                       20.32
## 15                       15.80
## 16                       13.99
## 17                       13.99
## 18                       11.93
## 19                       20.32
## 20                        8.60
## 21                       19.54
## 22                       20.32
## 23                       17.45
## 24                       26.96
## 25                       13.02
## 26                       14.24
## 27                       13.54
## 28                       18.06
## 29                       17.75
## 30                       14.69
## 31                       11.01
## 32                       10.93
## 33                       14.76
## 34                       13.54
```

```
## 35                          13.56
## 36                          20.32
## 37                          13.54
## 38                          12.58
## 39                          14.45
## 40                          14.07
## 41                          12.52
## 42                           4.02
## 43                          11.29
## 44                          15.99
## 45                          13.99
## 46                          20.32
## 47                          16.11
## 48                          18.06
## 49                          13.54
## 50                          16.94
## 51                          13.78
## 52                          18.06
## 53                          18.06
## 54                          19.70
## 55                          15.03
## 56                          13.54
## 57                          20.32
## 58                          18.48
## 59                          12.96
## 60                           9.96
## 61                          20.32
## 62                          26.96
## 63                          16.39
## 64                          19.60
## 65                          17.99
```

#2.Descriuptive Analytics

```
summary(yashu)
```

```
##      Country        Total.Library.Size No..of.TV.Shows No..of.Movies
## Length:65           Min.   :2274       Min.   :1675    Min.   : 373
## Class :character    1st Qu.:4948       1st Qu.:3154    1st Qu.:1628
## Mode  :character    Median :5195       Median :3512    Median :1841
##                     Mean   :5314       Mean   :3519    Mean   :1795
##                     3rd Qu.:5952       3rd Qu.:3832    3rd Qu.:1980
##                     Max.   :7325       Max.   :5234    Max.   :2387
## Cost.Per.Month...Basic.... Cost.Per.Month...Standard....
## Min.   : 1.970             Min.   : 3.00
## 1st Qu.: 7.990             1st Qu.:10.71
## Median : 8.990             Median :11.49
## Mean   : 8.368             Mean   :11.99
## 3rd Qu.: 9.030             3rd Qu.:13.54
## Max.   :12.880             Max.   :20.46
## Cost.Per.Month...Premium....
## Min.   : 4.02
## 1st Qu.:13.54
## Median :14.45
## Mean   :15.61
## 3rd Qu.:18.06
## Max.   :26.96
```

```
str(yashu)
```

```
## 'data.frame':    65 obs. of  7 variables:
##  $ Country                  : chr  "Argentina" "Austria" "Bolivia" "Bulgaria" ...
##  $ Total.Library.Size       : int  4760 5640 4991 6797 4994 4991 4988 2274 7325 4992 ...
##  $ No..of.TV.Shows          : int  3154 3779 3155 4819 3156 3156 3152 1675 5234 3155 ...
##  $ No..of.Movies            : int  1606 1861 1836 1978 1838 1835 1836 599 2091 1837 ...
##  $ Cost.Per.Month...Basic....   : num  3.74 9.03 7.99 9.03 7.07 4.31 8.99 9.03 8.83 7.99 ...
##  $ Cost.Per.Month...Standard....: num  6.3 14.67 10.99 11.29 9.91 ...
##  $ Cost.Per.Month...Premium.... : num  9.26 20.32 13.99 13.54 12.74 ...
```
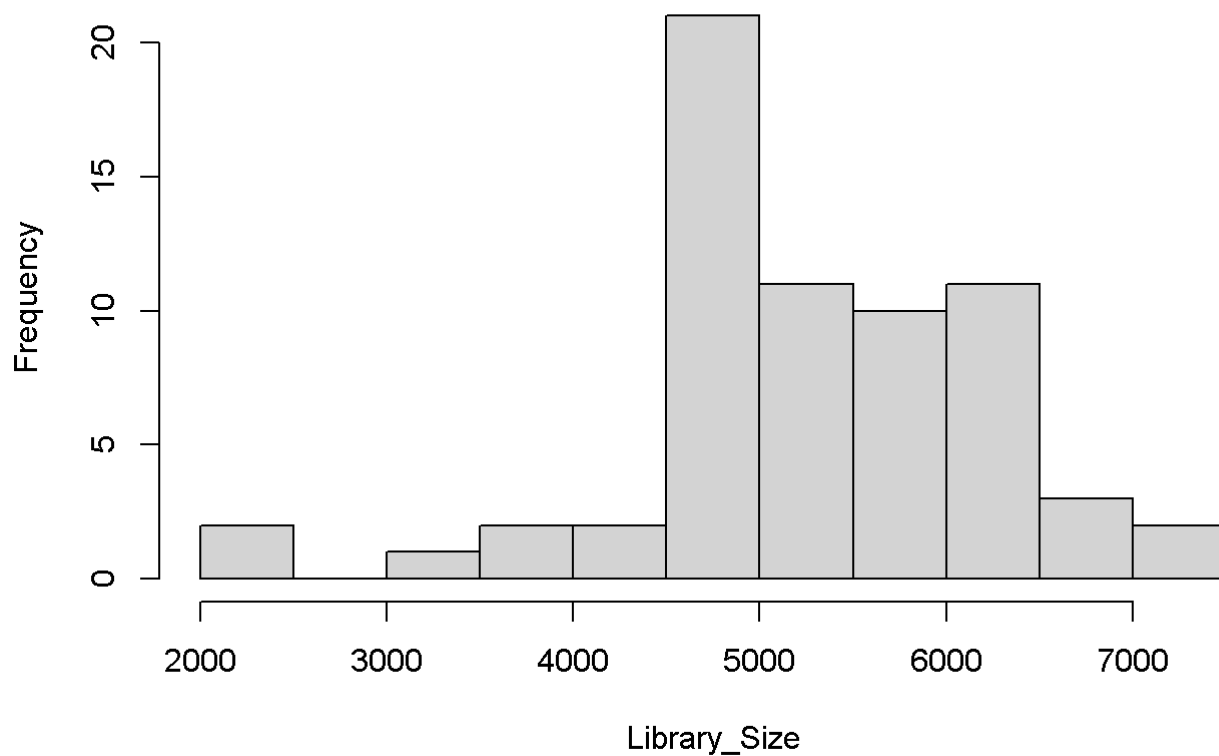
#3.Log Transformation

```
yash = log(yashu$Total.Library.Size)
yash
```

```
##  [1] 8.468003 8.637639 8.515392 8.824237 8.515992 8.515392 8.514790 7.729296
##  [9] 8.899048 8.515592 8.772765 8.602453 8.642592 8.726968 8.470521 8.469472
## [17] 8.514991 8.465057 8.762020 8.673000 8.650500 8.553139 8.607948 8.022241
## [25] 8.691483 8.515792 8.278174 8.666303 8.418036 8.475746 8.514389 8.758098
## [33] 8.538759 8.576028 8.650149 7.745003 8.858653 8.654517 8.555452 8.537976
## [41] 8.506739 8.442254 8.582232 8.514991 8.475746 8.515191 8.748781 8.305237
## [49] 8.771835 8.713418 8.836955 8.526549 8.589700 8.380457 8.738575 8.773694
## [57] 8.561975 8.801319 8.265393 8.511577 8.777401 8.613594 8.718337 8.424639
## [65] 8.668712
```

#4.Histogram

```
hist(yashu$Total.Library.Size,xlab = "Library_Size")
```

Histogram of yashu$Total.Library.Size

#5.ScatterPlot

```
x=yashu$Total.Library.Size
y=yashu$No..of.TV.Shows
plot(x,y,xlab = "Total_library_size",ylab = "No_of_Tv_shows", main = "LibrarySize-TvShows(Scatt
erPlot)")
```

LibrarySize-TvShows(ScatterPlot)