**MODULE 3 ASSIGNMENT**

**INTRODUCTION TO DATA.FRAME**

**This is an explanation about the conversion of given values of data into data frame and matrix and obtaining mean from them.**

**Name of the candidates outlined in the data frame is Jeb, Donald, Ted, Marco, Carly, Hillary and Bernie. Sources of the polls here are ABC and CBS.**

**Data of the names and political results of both polls are added to the environment.**

> Name <- c("Jeb", "Donald", "Ted", "Marco", "Carly", "Hillary", "Berine")

> ABC\_political\_poll\_results <- c(4, 62, 51, 21, 2, 14, 15)

> CBS\_political\_poll\_results <- c(12, 75, 43, 19, 1, 21, 19)

**By applying ‘cbind’ to the values, merged data with all three columns of the values into data 'poll\_results' is obtained.**

> poll\_results<-cbind(Name,ABC\_political\_poll\_results,CBS\_political\_poll\_results)

> poll\_results

     Name      ABC\_political\_poll\_results CBS\_political\_poll\_results

[1,] "Jeb"     "4"                        "12"

[2,] "Donald"  "62"                       "75"

[3,] "Ted"     "51"                       "43"

[4,] "Marco"   "21"                       "19"

[5,] "Carly"   "2"                        "1"

[6,] "Hillary" "14"                       "21"

[7,] "Berine"  "15"                       "19"

**Following, a data frame ‘poll\_results.df’ is created by using following code**

> poll\_results.df<- data.frame(Name,ABC\_political\_poll\_results,CBS\_political\_poll\_results)

> poll\_results.df

     Name ABC\_political\_poll\_results CBS\_political\_poll\_results

1     Jeb                          4                         12

2  Donald                         62                         75

3     Ted                         51                         43

4   Marco                         21                         19

5   Carly                          2                          1

6 Hillary                         14                         21

7  Berine                         15                         19

**With ‘colMeans’ implemented in both poll results, mean for ABC political poll results as 24.14 and CBS political poll results as 27.14 is obtained.**

> colMeans(poll\_results.df[, 2:3])

ABC\_political\_poll\_results CBS\_political\_poll\_results

                  24.14286                   27.14286

**After this, the code to convert the data frame to the matrix is executed.**

> mat<-as.matrix(poll\_results.df)

> mat

**In order to get the means of overall poll results from the matrix, ‘new\_mat’ is created from the matrix ‘mat’, which contains now only poll results of ABC and CBS.**

> new\_mat=matrix(as.numeric(mat[,2:3]))

> mean(new\_mat)

[1] 25.64286

Mean of the ABC political poll results is **24.14286**.

Mean of the CBS political poll results is **27.14286**.

Overall Mean of the poll results is **25.64286**.

Mean of the CBS political poll results is high compared to ABC political poll results.

**In this way, we can obtain mean from data by using codes for data frames and matrices.**