Write R program to:

a. Create two matrices and perform multiplication & division on the matrices.

b. Create a data frame and print the data frame, structure of data frame and summary of

data frame.

c. Create a Bar chart and sketch the Bar chart by taking months as input & plot it against

revenue. Also, add legend to the chart that includes regions.

a. Create two matrices and perform multiplication & division on the matrices.

Code:

matrix1<- matrix (c (3,9,-1,4,2,6), nrow=2)

print(matrix1)

matrix2<- matrix (c (5,2,0,9,3,4), nrow=2)

print(matrix2)

//Multiply two matrices

result<-matrix1\*matrix2

cat (“Result of multiplication”, ”\n”)

print(result)

// Divide two matrices

result<-matrix1/matrix2

cat (“Result of division”,”\n”)

print(result)

b. Create a data frame and print the data frame, structure of data frame and summary of

data frame.

Code:

//create the data frame

emp.data<- data.frame(

emp.id= c (1:5),

emp\_name = c(“suma”,”vatsala”,”usha”,”asha”,”swathi”),

salary = c (623.3, 515.2, 611.0, 729.0, 843.25),

start\_date= as.Date (c (“2012-01-01”,”2013-09-23”,”2014-11-15”,”2014-05-11”,”2015-03-27”)),

stringsAsFactors = FALSE

)

//Extract specific columns

result<-data.frame(emp.data$emp\_name, emp.data$salary)

print(result)

c. Create a Bar chart and sketch the Bar chart by taking months as input & plot it against

revenue. Also, add legend to the chart that includes regions.

Code:

//create the input vectors

colors<-c(“green”,”orange”,”brown”)

months<-c(“mar”,”apr”,”may”,”jun”,”jul”)

regions<-c(“east”,”west”,”north”)

//create the matrix of the values

Values<-matrix (c (2,9,3,11,9,4,8,7,3,12,5,2,8,10,11),nrow=3, ncol=5, byrow=TRUE)

//Give the chart file a name

png(file = “barchart\_stacked.png”)

//create the bar chart

barplot (Values,main= “total revenue”,names.arg= months, xlab= ”month”, ylab= “revenue”,col=colours)

//add the legend to the chart legend( “topleft”, regions, cex= 1.3,fill = colours)

//save the file

dev.off()