

**Module 1 Project**

Name: Parth Sawant

Course Name: ALY6000

Due Date: 22/01/2022

Title: Executive Summary Report 1

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**a. A scatter plot of the Sales~ temp data: -**

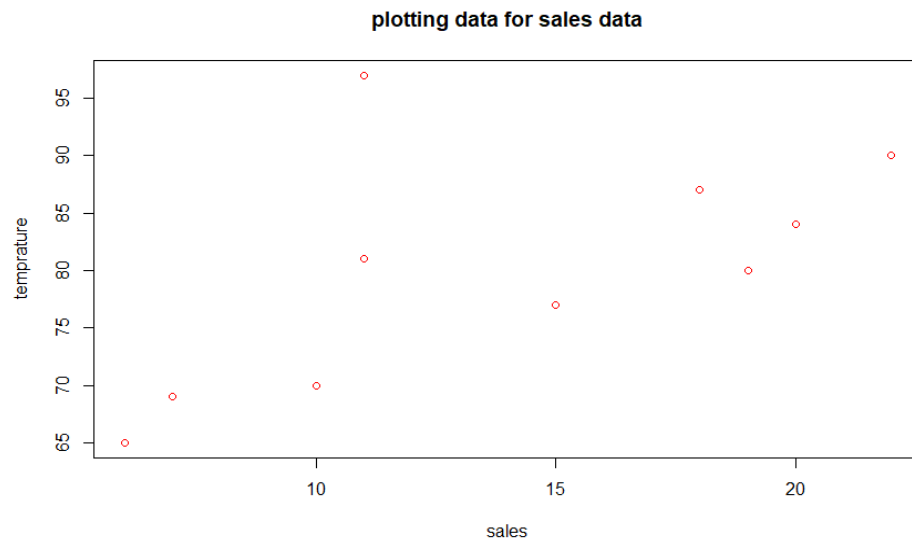
code: -

```
Salesdata <- c(7,11,15,20,19,11,18,10,6,22)
```

```
Temperaturedata <- c(69,81,77,84,80,97,87,70,65,90)
```

```
plot(Salesdata, Temperaturedata, col='red', main = "plotting data for sales  
data", xlab = "sales", ylab = "temprature")
```

output: -



**b. The mean temperature: -**

code: -

```
mean_temp <- mean(Temperaturedata)
```

```
print(paste("The mean temperature is", mean_temp))
```

output: -

```
[1] "The mean temperature is 80"
```

**c. Display the data after step 6 and 7: -**

code & output: -

**6. Delete the 3<sup>rd</sup> element from the sales vector**

```
Salesdata[-3]
```

```
[1] 7 11 20 19 11 18 10 6 22
```

**7. Insert 16 as the 3<sup>rd</sup> element into the sales vector**

```
Salesdata[3] <- 16
```

```
> print(Salesdata)
```

```
[1] 7 11 16 20 19 11 18 10 6 22
```

**d. Display the names vector: -**

code: -

```
names <- c('Tom','Dick','Harry')
```

```
print(names)
```

output: -

```
[1] "Tom" "Dick" "Harry"
```

**e. Display the 5 row by 2 column of 10 integers: - <sup>[2][4]</sup>**

Code: -

```
matrix(1:10,nrow=5, ncol=2,byrow=TRUE)
```

```
matrix(1:10,nrow=5, ncol=2,byrow=FALSE)
```

output: -

```
> matrix(1:10,nrow=5, ncol=2,byrow=TRUE)
```

```
 [,1] [,2]
```

```
[1,]  1  2
```

```
[2,]  3  4
```

```
[3,]  5  6
```

```
[4,]  7  8
```

```
[5,]  9 10
```

```
> matrix(1:10,nrow=5, ncol=2,byrow=FALSE)
```

```
 [,1] [,2]
```

```
[1,]  1  6
```

```
[2,]  2  7
```

```
[3,]  3  8
```

```
[4,]  4  9
```

[5,] 5 10

**f. Display the icScales data frame: -** <sup>[5]</sup>

code: -

**10.create a data frame icScales with sales and temp attributes**

```
icScales <- data.frame(Salesdata, Temperaturedata)
```

**11. Display the data frame structures of icScales**

```
print(icScales)
```

output: -

	Salesdata	Temperaturedata
1	7	69
2	11	81
3	16	77
4	20	84
5	19	80
6	11	97
7	18	87
8	10	70
9	6	65
10	22	90

**g. Display the summary of the icScales Data Frame: -**

code & output: -

```
summary(icScales)
Salesdata  Temperaturedata
Min.   :6.00  Min.   :65.00
1st Qu.:10.25 1st Qu.:71.75
Median :13.50 Median :80.50
Mean   :14.00 Mean   :80.00
3rd Qu.:18.75 3rd Qu.:86.25
Max.   :22.00 Max.   :97.00
```

**h. Display the variables only from the student.csv data set: -**

code & output: -

```
colnames(student)
[1] "StudentID"  "First"      "Last"       "Math"       "Science"
[6] "Social.Studies"
```

**i. Summary**

There are two variables, sales and temperature, each of which contains data with ten observations and is of numeric type. The minimums for sales and temperature are 6 and 65 degrees, respectively, with maximums of 22 and 90 degrees. The temperature data's mean temperature was discovered to be 80 degrees. The student data includes student IDs, names, and math, science, and social studies grades. Mary had the highest grades in all three subjects, whereas Bob received the lowest in social studies.

**Bibliography: -**

- [1] <https://www.geeksforgeeks.org/printing-output-of-an-r-program/>
- [2] <https://www.datamentor.io/r-programming/matrix/>
- [3] <https://datatofish.com/import-csv-r/>
- [4] <https://www.rdocumentation.org/packages/base/versions/3.6.2/topics/matrix>
- [5] [https://www.tutorialspoint.com/r/r\\_data\\_frames.htm](https://www.tutorialspoint.com/r/r_data_frames.htm)

**Appendix: -**

1. print("Parth Sawant")

[1] "Parth Sawant"

```
2.> r=getOption("repos")
> r["CRAN"]="http://cran.us.r-project.org"
> options(repos=r)
> install.packages("vcd")
https://cran.rstudio.com/bin/windows/Rtools/
Installing package into 'C:/Users/Parth/Documents/R/win-library/4.1'
(as 'lib' is unspecified)
trying URL 'http://cran.us.r-project.org/bin/windows/contrib/4.1/vcd_1.4-9.zip'
Content type 'application/zip' length 1293820 bytes (1.2 MB)
downloaded 1.2 MB
```

package 'vcd' successfully unpacked and MD5 sums checked

The downloaded binary packages are in

C:\Users\Parth\AppData\Local\Temp\RtmpgT0djX\downloaded\_packages

```
3.> library(vcd)
```

Loading required package: grid

```
4.> Salesdata <- c(7,11,15,20,19,11,18,10,6,22)
> Temperatedata <- c(69,81,77,84,80,97,87,70,65,90)
> plot(Salesdata, Temperatedata, col='red', main = "plotting data for sales data",xlab =
"sales",ylab = "temprature")
```

```
5.> mean_temp <- mean(Temperatedata)
> print(paste("The mean temperature is",mean_temp))
[1] "The mean temperature is 80"
```

```
6.> Salesdata[-3]
```

```
[1] 7 11 20 19 11 18 10 6 22
```

```
7.> Salesdata[3] <- 16
```

```
> print(Salesdata)
```

```
[1] 7 11 16 20 19 11 18 10 6 22
```

```
8.> names <- c('Tom','Dick','Harry')
```

```
> print(names)
```

```
[1] "Tom" "Dick" "Harry"
```

```
9.> ?matrix
```

```
> matrix(1:10,nrow=5, ncol=2,byrow=TRUE)
```

```
  [,1] [,2]
```

```
[1,]  1  2
```

```
[2,]  3  4
```

```
[3,]  5  6
```

```
[4,]  7  8
```

```
[5,]  9 10
```

```
> matrix(1:10,nrow=5, ncol=2,byrow=FALSE)
```

```
  [,1] [,2]
```

```
[1,]  1  6
```

```
[2,]  2  7
```

```
[3,]  3  8
```

```
[4,]  4  9
```

```
[5,]  5 10
```

```
10.> icScales <- data.frame(Salesdata, Temperaturedata)
```

```
11.> print(icScales)
```

```
  Salesdata Temperaturedata
```

1	7	69
2	11	81
3	16	77
4	20	84
5	19	80
6	11	97
7	18	87
8	10	70
9	6	65
10	22	90

12.> summary(icScales)

```

Salesdata  Temperatedata
Min.   : 6.00  Min.   :65.00
1st Qu.:10.25  1st Qu.:71.75
Median :13.50  Median :80.50
Mean   :14.00  Mean   :80.00
3rd Qu.:18.75  3rd Qu.:86.25
Max.   :22.00  Max.   :97.00

```

13.> student<- read.csv("C:/Users/Parth/Desktop/Introduction to Analytics/Student.csv")

Warning message:

In read.table(file = file, header = header, sep = sep, quote = quote, :

incomplete final line found by readTableHeader on 'C:/Users/Parth/Desktop/Introduction to Analytics/Student.csv'

> print(student)

	StudentID	First	Last	Math	Science	Social.Studies
1	11	Bob	Smith	90	80	67
2	12	Jane	Weary	75	NA	80

3	10	Dan Thornton, III	65	75	70
4	40	Mary O'Leary	90	95	92

14.> colnames(student)

[1] "StudentID" "First" "Last" "Math" "Science" "Social.Studies"

My Github username: - parthh03

Github repository: - [https://github.com/parthh03/ALY6000\\_module1.git](https://github.com/parthh03/ALY6000_module1.git)