Module 1 Executive Summary Report 1

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ALY6000: Introduction to Data Analytics

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09-26-2021

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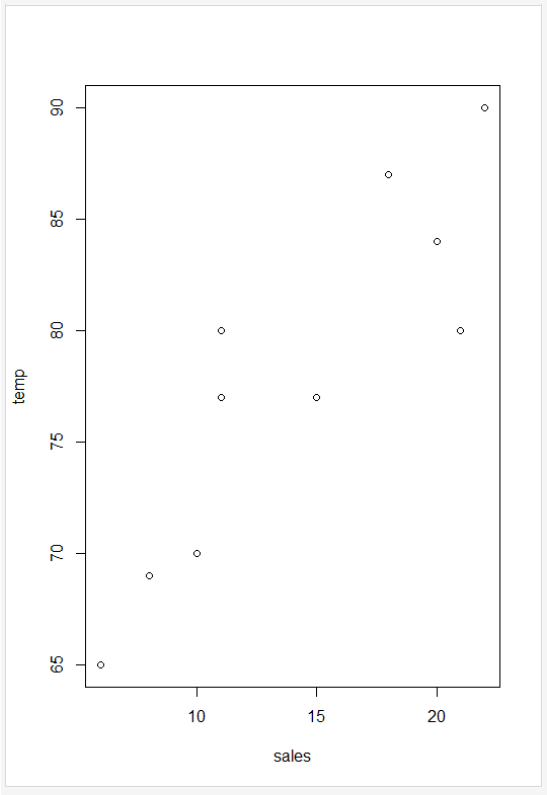
Key findings of the data based on the Dataset Instruction document

a. A scatter plot of the Sales ~ temp data



The scatter plot reveals a general trend of increase in sales with the increase in temperature.

b. The mean temperature

The mean temperature of the given data is 77.9
This was obtained using the mean() function

c. Display the data after steps 6 and 7

```
> # Delete 3rd element of the sales vector
> sales <- sales[-c(3)]
> #After deleting the 3 value in the vector
> sales
[1]  8 11 20 21 11 18 10  6 22
> # Inserting 16 as the 3rd element into the sales vector
> # using append() function
> sales <- append(sales, 16, 5)
> #After appending 16 to the 6th position
> sales
 [1]  8 11 20 21 11 16 18 10  6 22
```

d. **Display the names vector**

```
> # Create vector names
> name <- c('Tom','Dick','Harry')
> name
[1] "Tom"   "Dick"  "Harry"
```

e. **Display the 5 rows by 2 columns of 10 integers**

```
> # Create a 5 row and 2 column matrix of 10 integers
> ten <- matrix(1:10, nrow=5, ncol=2)
> ten
     [,1] [,2]
[1,]    1    6
[2,]    2    7
[3,]    3    8
[4,]    4    9
[5,]    5   10
```

f. **Display the icSales data frame**

```
> # Create a data frame icSales with sales and temp attributes
> icSales <- data.frame(sales,temp)
> icSales
   sales temp
1      8   69
2     11   80
3     20   77
4     21   84
5     11   80
6     16   77
7     18   87
8     10   70
9      6   65
10    22   90
```

g. **Display the summary of the icSales data frame**

```
> # Display a summary of the icSales data frame
> # using summary() function
> summary(icSales)
     sales            temp
 Min.   : 6.00   Min.   :65.00
 1st Qu.:10.25   1st Qu.:71.75
 Median :13.50   Median :78.50
 Mean   :14.30   Mean   :77.90
 3rd Qu.:19.50   3rd Qu.:83.00
 Max.   :22.00   Max.   :90.00
```

h. **Display the variables only from the Student.csv data set.**

```
> # Import the dataset Student.csv
> # Check the working directory
> getwd()
[1] "C:/Study/ALY6000-Introduction to Analytics"
> stud <- read.csv('Student.csv', header=TRUE, sep="," , row.names)
Error in read.table(file = file, header = header, sep = sep, quote =
e,   :
  invalid quote symbol set
> stud
[1] StudentID      First          Last           Math
[5] Science        Social.Studies
```

An error message is displayed for " invalid quote symbol set ", but the output displays what is asked from the script, i.e the variable names of the dataset.

i. To summarize the datasets we used here were introductory to say the least and the scripts need commenting for future use

Bibliography

1. tutorialkart. (n.d.). Retrieved September 26, 2021, from https://www.tutorialkart.com/r-tutorial/r-vector-delete-items-at-specific-index/

2. Kabacoff, R. (n.d.). R in Action, Third Edition [E-book]. In *R in Action* (pp. 9–37). Manning.

3. *Insert Value at a position*. (n.d.). Geeksforgeeks. Retrieved September 26, 2021, from https://www.geeksforgeeks.org/adding-elements-in-a-vector-in-r-programming-append-method/

Appendix

```
#Desai_M1_Project1


# Print Name
print("Rhythm A. Desai")
# Install vcd Package
install.packages("vcd")
#Import the vcd library
library(vcd)
# Assign Sales Data and Temperature data values
# as to vector with variable name sales and temp respectively
sales <- c(8,11,15,20,21,11,18,10,6,22)
temp <- c(69,80,77,84,80,77,87,70,65,90)
# Plotting sales-temp scatter plot
plot(sales,temp)
# To find mean value of temperatures
# Use mean function and pass temps as a parameter
mean(temp)
# Delete 3rd element of the sales vector
sales <- sales[-c(3)]
#After deleting the 3 value in the vector
sales
# Inserting 16 as the 3rd element into the sales vector
# using append() function
sales <- append(sales, 16, 5)
#After appending 16 to the 6th position
sales
# Create vector names
name <- c('Tom','Dick','Harry')
name
# Create a 5 row and 2 column matrix of 10 integers
ten <- matrix(1:10, nrow=5, ncol=2)
ten
# Create a data frame icSales with sales and temp attributes
```

```
icSales <- data.frame(sales,temp)
icSales
# Display a summary of the icSales data frame
# using summary() function
summary(icSales)
# Import the dataset Student.csv
# Check the working directory
getwd()
stud <- read.csv('Student.csv', header=TRUE, sep="," , row.names)
stud
```