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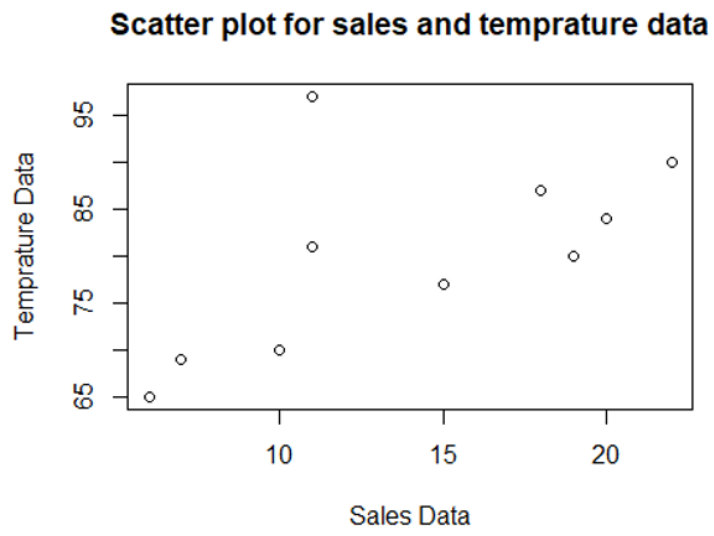
ALY6000: Executive Summary Report 1

January 21, 2022

Please find below key findings based on data provided by the Dataset Instruction Document.

a. A scatter plot of the Sales ~ temp data

```
Sales_data <- c(7,11,15,20,19,11,18,10,6,22)
Temperature_data <- c(69,81,77,84,80,97,87,70,65,90)
plot(Sales_data,Temperature_data, type = 'p', xlab = 'Sales Data', ylab = 'Temprature Data',main
= 'Scatter plot for sales and temprature data')
```



b. The mean temperature

```
mean(Temperature_data)

## [1] 80
```

c. Display the data after steps 6 and 7

```
#6. Delete the 3rd element from the sales vector
updated_sales_data <- c(Sales_data[ - 3])
updated_sales_data

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

#7. Insert 16 as the 3rd element into the sales vector
Inserted_sales_data <- append(Sales_data,16,2)
Inserted_sales_data
```

d. Display the names vector

```
#8. Create a vector <names> with elements Tom, Dick, Harry
names<- c("Tom","Dick","Harry")
names

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

e. Display the 5 row by 2 column of 10 integers

```
#9. Create a 5 row and 2 column matrix of 10 integers
dimensions<- list(c("row1","row2","row3","row4","row5"),c("col1","col2"))
mat<- matrix(1:10,nrow = 5,ncol = 2,byrow = TRUE,dimnames = dimensions)
mat

##      col1 col2
## row1    1    2
## row2    3    4
## row3    5    6
## row4    7    8
## row5    9   10
```

f. Display the icSales data frame

```
#10. Create a data frame <icSales> with sales and temp attributes
icSales<- data.frame(Sales_data,Temperature_data)
icSales
```

```
##    Sales_data Temperature_data
## 1           7               69
## 2          11               81
## 3          15               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 icSales data frame

```
#12. Display a summary of the icScales data frame
summary(icSales)
```

```
##    Sales_data    Temperature_data
##  Min.   : 6.00   Min.   :65.00
##  1st Qu.:10.25   1st Qu.:71.75
##  Median :13.00   Median :80.50
##  Mean   :13.90   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.

Molude_1_ALY6000.R | RE compiled.R | df

Filter

	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. Display only the variable names of the Student.csv dataset
colnames(df)

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

i. A summary of the information you learned about the data sets based on the instructions you followed.

From the above data collection, we get to know the information of Sales and Temperature, just as the characteristics of each of the four understudies in three unique subjects.

Utilizing the R scripts referenced over, the mean temperature is viewed as 77.9

Different other central issues are noted like the base and greatest Sales and temperature values, mean, middle, and so forth.

Nonetheless, we can't actually let know if the deals and temperature have a positive or a negative connection.

Bibliography

- **Youtube Videos:** NA
- **Instruction Modules:**

  Learning to use R Module 1 - Getting Started with R Learning to use R

  Learning to use R - Instructor Videos: ALY6000 22279 Introduction to Analytics SEC 21 Winter 2022 CPS [TOR-A-HY] (instructure.com)

- **Google Search Results:**

  Error in contrib.url(repos, "source") in R trying to use CRAN without setting a mirror Calls: install.packages -> contrib.url Execution halted - Stack Overflow

  How to Remove Specific Elements from Vector in R - Statology

  Adding elements in a vector in R programming - append() method - GeeksforGeeks

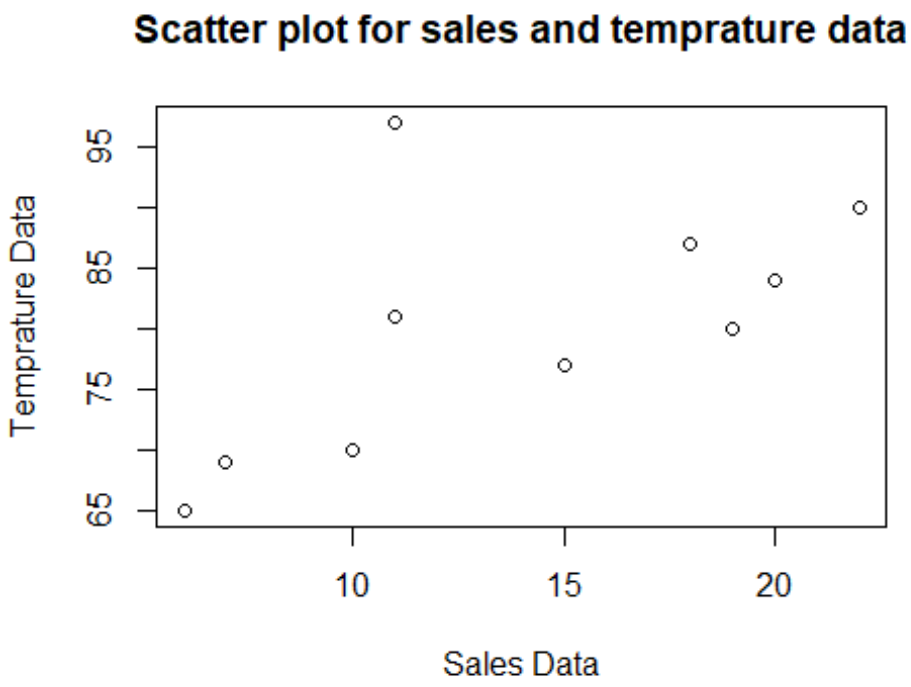
  R Matrix - How to create, name and modify matrices in R? - TechVidvan

  Plot Function in R | TYpes of Plot Function in R with Examples (educba.com)

Appendix: The R Script

Please find the R script executed below.

```
print("JATIN CHOPRA")

## [1] "JATIN CHOPRA"

#2. Install the vcd package
install.packages('vcd', repos = "http://cran.us.r-project.org")

##
##   There is a binary version available but the source version is
##   later:
##     binary source needs_compilation
## vcd  1.4-8  1.4-9             FALSE

## installing the source package 'vcd'

#3. Import the vcd library
library(vcd)

## Loading required package: grid

#4. Plot a sales ~ temp scatter plot using the data below:
#  Sales data: (7,11,15,20,19,11,18,10,6,22)
#Temperature data: (69,81,77,84,80,97,87,70,65,90)
Sales_data <- c(7,11,15,20,19,11,18,10,6,22)
Temperature_data <- c(69,81,77,84,80,97,87,70,65,90)

plot(Sales_data,Temperature_data, type = 'p', xlab = 'Sales Data', ylab = 'Temprature Data',main
= 'Scatter plot for sales and temprature data')
```




```
#5. Find the mean temperature
mean(Temperature_data)

## [1] 80

#6. Delete the 3rd element from the sales vector
#https://www.statology.org/remove-element-from-vector-r/
updated_sales_data <- c(Sales_data[ - 3])
updated_sales_data

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

#7. Insert 16 as the 3rd element into the sales vector
#https://www.geeksforgeeks.org/adding-elements-in-a-vector-in-r-programming-append-method/
Inserted_sales_data <- append(Sales_data,16,2)
Inserted_sales_data

##  [1]  7 11 16 15 20 19 11 18 10  6 22

#8. Create a vector <names> with elements Tom, Dick, Harry
names<- c("Tom","Dick","Harry")
names

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

```
#9. Create a 5 row and 2 column matrix of 10 integers
dimensions<- list(c("row1","row2","row3","row4","row5"),c("col1","col2"))
mat<- matrix(1:10,nrow = 5,ncol = 2,byrow = TRUE,dimnames = dimensions)
mat
```

```
##      col1 col2
## row1    1    2
## row2    3    4
## row3    5    6
## row4    7    8
## row5    9   10
```

```
#10. Create a data frame <icSales> with sales and temp attributes
icSales<- data.frame(Sales_data,Temperature_data)
icSales
```

```
##    Sales_data Temperature_data
## 1           7              69
## 2          11              81
## 3          15              77
## 4          20              84
## 5          19              80
## 6          11              97
## 7          18              87
## 8          10              70
## 9           6              65
## 10         22              90
```

```
#11. Display the data frame structure of icScales

str(icSales)
```

```
## 'data.frame':    10 obs. of  2 variables:
##  $ Sales_data      : num  7 11 15 20 19 11 18 10 6 22
##  $ Temperature_data: num  69 81 77 84 80 97 87 70 65 90
```

```
#12. Display a summary of the icScales data frame
summary(icSales)
```

```
##    Sales_data    Temperature_data
##  Min.   : 6.00   Min.   :65.00
##  1st Qu.:10.25   1st Qu.:71.75
##  Median :13.00   Median :80.50
##  Mean   :13.90   Mean   :80.00
##  3rd Qu.:18.75   3rd Qu.:86.25
##  Max.   :22.00   Max.   :97.00
```

```
#13. Import the dataset Student.csv

df<- read.csv("C:\\Users\\jatin\\Documents\\ALY 6000\\R script\\Student.csv", header = TRUE)

## Warning in read.table(file = file, header = header, sep = sep, quote
## = quote, : incomplete final line found by readTableHeader on 'C:
## \Users\jatin\Documents\ALY 6000\R script\Student.csv'

df

##   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. Display only the variable names of the Student.csv dataset
colnames(df)

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

#15. Commit your code in your github/gitlab repo.

https://github.com/jatinc2617/ALY6000_JATIN.git
```