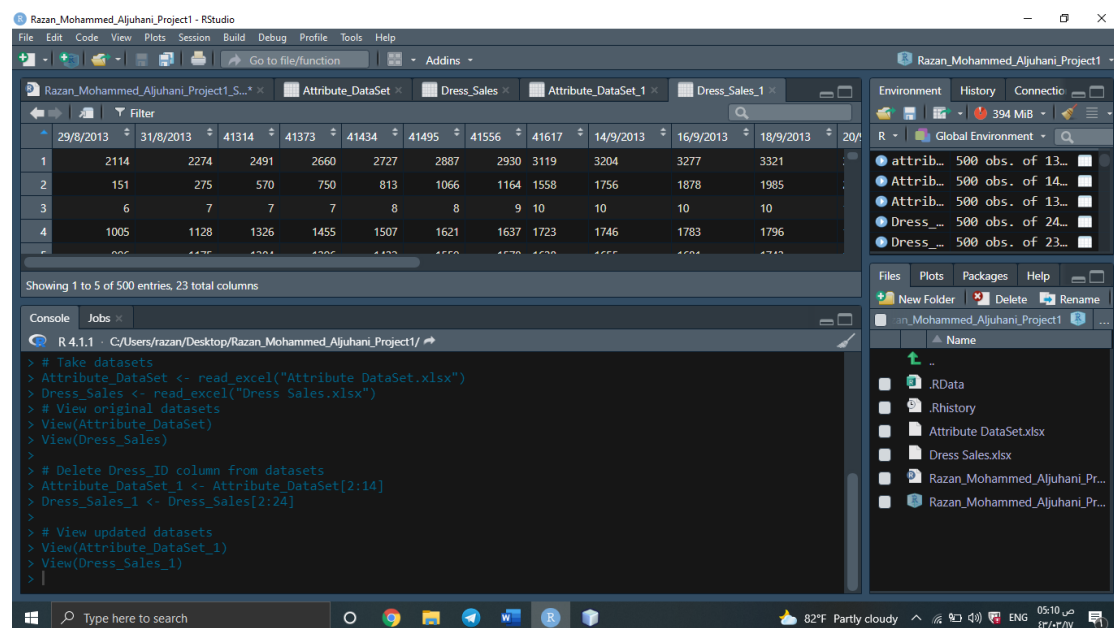
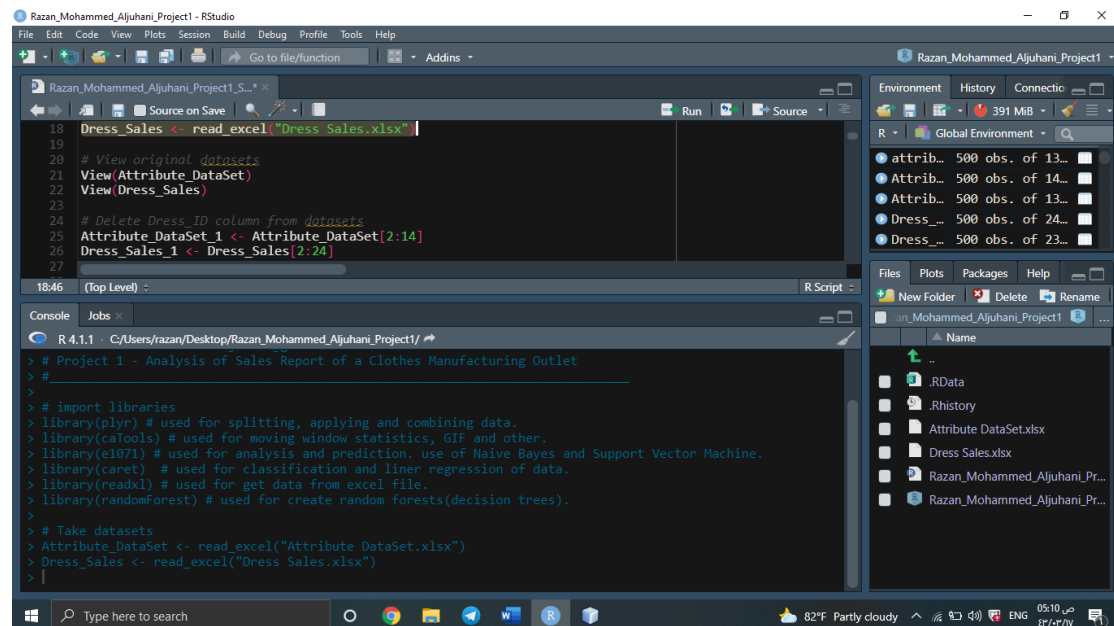
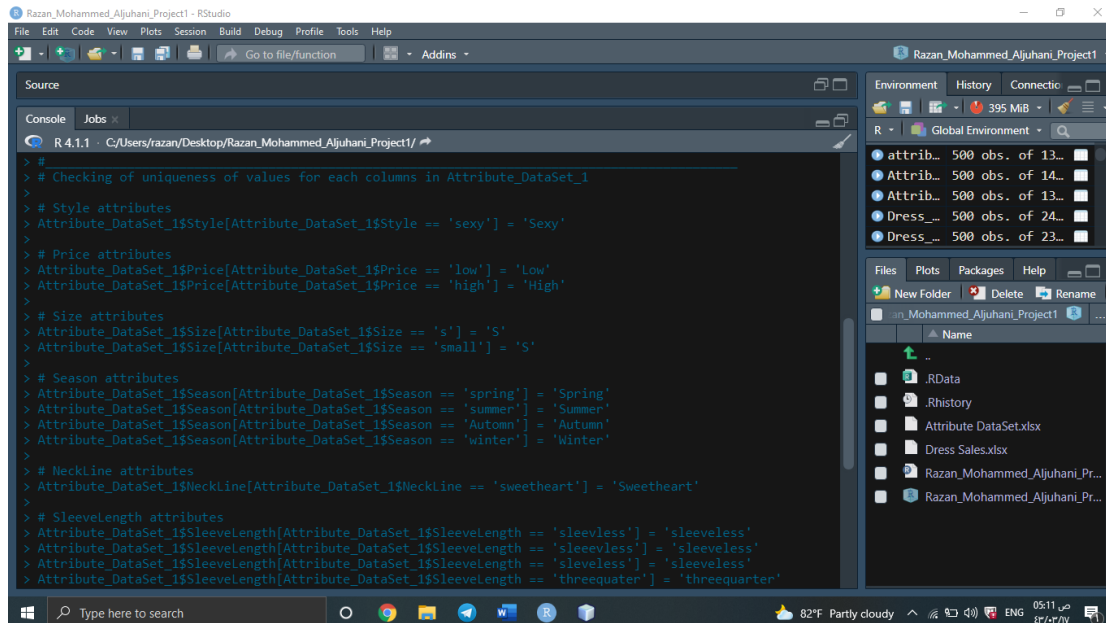


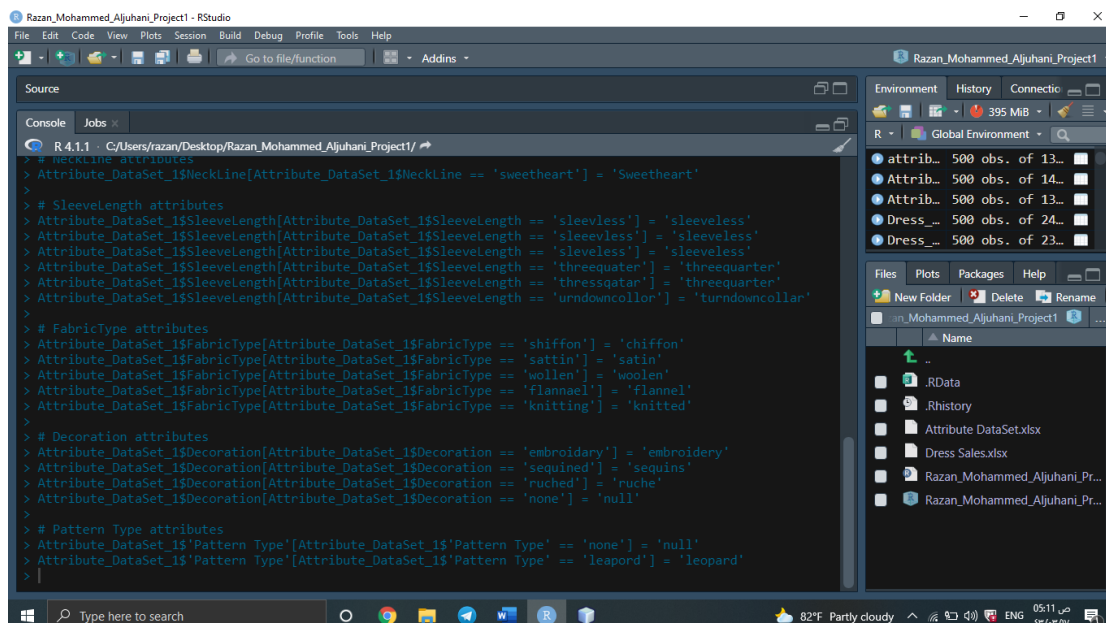
# Screenshots - By: Razan Aljuhani



# Screenshots - By: Razan Aljuhani



```
> #  
> # Checking of uniqueness of values for each columns in Attribute_DataSet_1  
>  
> # Style attributes  
> Attribute_DataSet_1$Style[Attribute_DataSet_1$Style == 'sexy'] = 'Sexy'  
>  
> # Price attributes  
> Attribute_DataSet_1$Price[Attribute_DataSet_1$Price == 'low'] = 'Low'  
> Attribute_DataSet_1$Price[Attribute_DataSet_1$Price == 'high'] = 'High'  
>  
> # Size attributes  
> Attribute_DataSet_1$Size[Attribute_DataSet_1$Size == 's'] = 'S'  
> Attribute_DataSet_1$Size[Attribute_DataSet_1$Size == 'small'] = 'S'  
>  
> # Season attributes  
> Attribute_DataSet_1$Season[Attribute_DataSet_1$Season == 'spring'] = 'Spring'  
> Attribute_DataSet_1$Season[Attribute_DataSet_1$Season == 'summer'] = 'Summer'  
> Attribute_DataSet_1$Season[Attribute_DataSet_1$Season == 'Autumn'] = 'Autumn'  
> Attribute_DataSet_1$Season[Attribute_DataSet_1$Season == 'winter'] = 'Winter'  
>  
> # Neckline attributes  
> Attribute_DataSet_1$NeckLine[Attribute_DataSet_1$NeckLine == 'sweetheart'] = 'Sweetheart'  
>  
> # SleeveLength attributes  
> Attribute_DataSet_1$SleeveLength[Attribute_DataSet_1$SleeveLength == 'sleeveless'] = 'sleeveless'  
> Attribute_DataSet_1$SleeveLength[Attribute_DataSet_1$SleeveLength == 'sleeveless'] = 'sleeveless'  
> Attribute_DataSet_1$SleeveLength[Attribute_DataSet_1$SleeveLength == 'sleeveless'] = 'sleeveless'  
> Attribute_DataSet_1$SleeveLength[Attribute_DataSet_1$SleeveLength == 'threequarter'] = 'threequarter'
```



```
> # Neckline attributes  
> Attribute_DataSet_1$NeckLine[Attribute_DataSet_1$NeckLine == 'sweetheart'] = 'Sweetheart'  
>  
> # SleeveLength attributes  
> Attribute_DataSet_1$SleeveLength[Attribute_DataSet_1$SleeveLength == 'sleeveless'] = 'sleeveless'  
> Attribute_DataSet_1$SleeveLength[Attribute_DataSet_1$SleeveLength == 'sleeveless'] = 'sleeveless'  
> Attribute_DataSet_1$SleeveLength[Attribute_DataSet_1$SleeveLength == 'sleeveless'] = 'sleeveless'  
> Attribute_DataSet_1$SleeveLength[Attribute_DataSet_1$SleeveLength == 'threequarter'] = 'threequarter'  
> Attribute_DataSet_1$SleeveLength[Attribute_DataSet_1$SleeveLength == 'threessqatar'] = 'threequarter'  
> Attribute_DataSet_1$SleeveLength[Attribute_DataSet_1$SleeveLength == 'urndowncollar'] = 'turndowncollar'  
>  
> # FabricType attributes  
> Attribute_DataSet_1$FabricType[Attribute_DataSet_1$FabricType == 'shiffon'] = 'chiffon'  
> Attribute_DataSet_1$FabricType[Attribute_DataSet_1$FabricType == 'sattin'] = 'satin'  
> Attribute_DataSet_1$FabricType[Attribute_DataSet_1$FabricType == 'woollen'] = 'woolen'  
> Attribute_DataSet_1$FabricType[Attribute_DataSet_1$FabricType == 'flannael'] = 'flannel'  
> Attribute_DataSet_1$FabricType[Attribute_DataSet_1$FabricType == 'knitting'] = 'knitted'  
>  
> # Decoration attributes  
> Attribute_DataSet_1$Decoration[Attribute_DataSet_1$Decoration == 'embroidary'] = 'embroidery'  
> Attribute_DataSet_1$Decoration[Attribute_DataSet_1$Decoration == 'sequined'] = 'sequins'  
> Attribute_DataSet_1$Decoration[Attribute_DataSet_1$Decoration == 'ruched'] = 'ruche'  
> Attribute_DataSet_1$Decoration[Attribute_DataSet_1$Decoration == 'none'] = 'null'  
>  
> # Pattern Type attributes  
> Attribute_DataSet_1$Pattern Type[Attribute_DataSet_1$Pattern Type == 'none'] = 'null'  
> Attribute_DataSet_1$Pattern Type[Attribute_DataSet_1$Pattern Type == 'leopard'] = 'leopard'  
>
```

# Screenendshots - By: Razan Aljuhani

This screenshot shows the RStudio interface with the following content:

- Source Editor:** Contains the first part of an R script defining factor variables for data attributes. The code includes comments and function calls for Style, Price, Size, Season, NeckLine, and SleeveLength attributes.
- Console:** Shows the execution of the R script, with the prompt > at the start of each line.
- Environment:** Lists the objects created in the environment, including attrib..., Attrib..., and Dress\_... with their respective observation counts.
- Files:** Shows the project files, including RData, .Rhistory, Attribute DataSet.xlsx, Dress Sales.xlsx, and Razan\_Mohammed\_Aljuhani\_Pr...

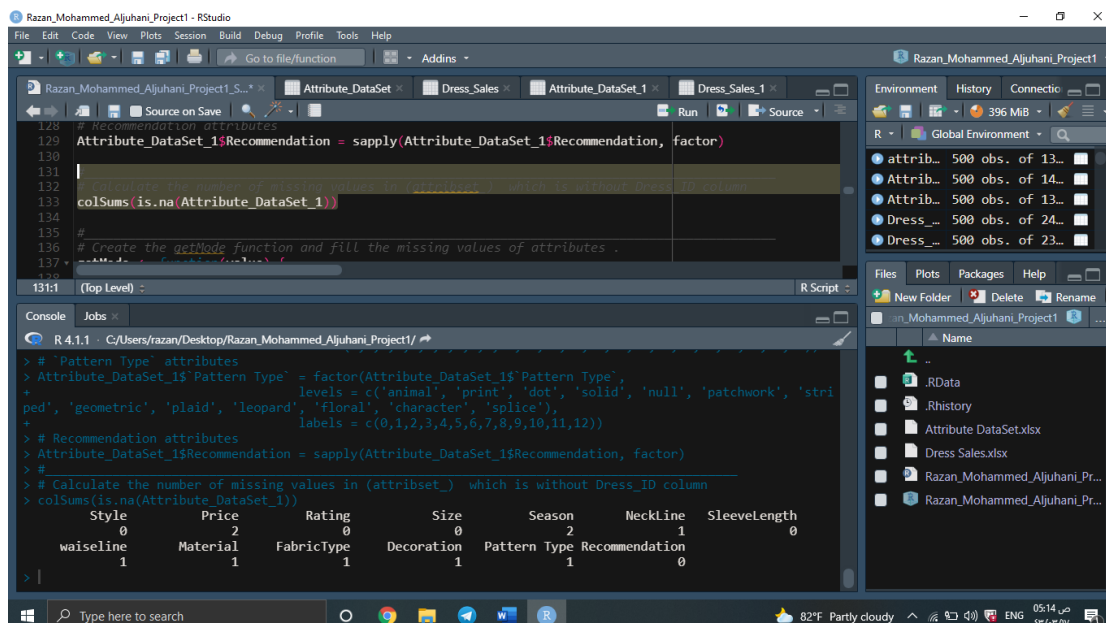
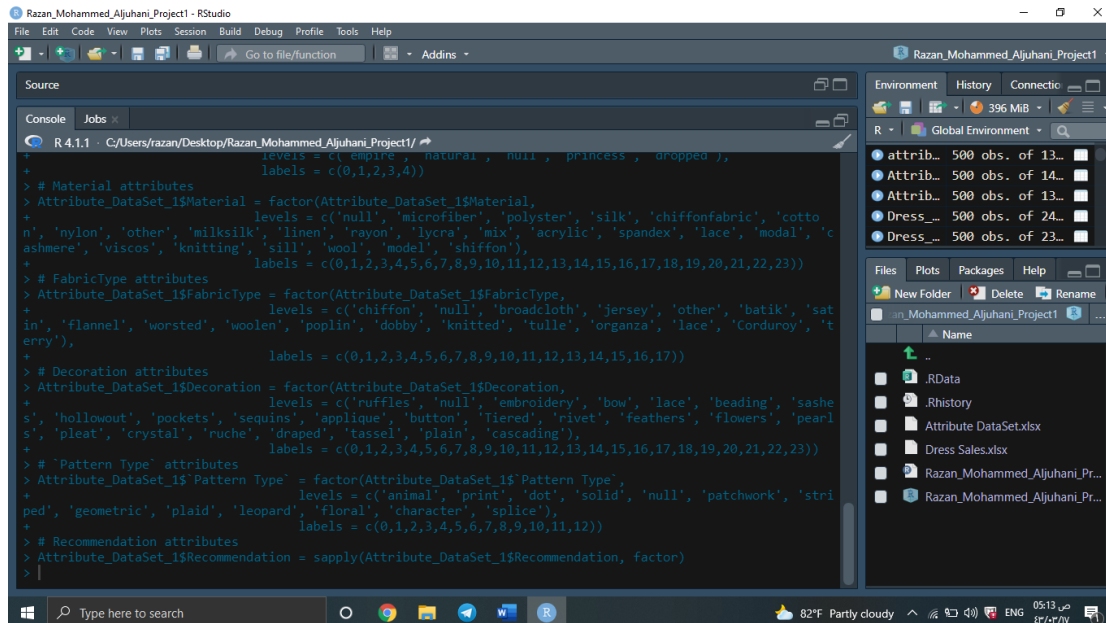
```
> #  
> # Factoring of data attributes.  
>  
> # Style attributes  
> Attribute_DataSet_1$Style = factor(Attribute_DataSet_1$Style,  
+ levels = c('Sexy', 'Casual', 'vintage', 'Brief', 'cute', 'bohemian', 'Novelty',  
+ 'Flare', 'party', 'work', 'OL', 'fashion'),  
+ labels = c(0,1,2,3,4,5,6,7,8,9,10,11))  
> # Price attributes  
> Attribute_DataSet_1$Price = factor(Attribute_DataSet_1$Price,  
+ levels = c('Low', 'High', 'Average', 'Medium', 'very-high'),  
+ labels = c(0,1,2,3,4))  
> # Size attributes  
> Attribute_DataSet_1$Size = factor(Attribute_DataSet_1$Size,  
+ levels = c('M', 'L', 'XL', 'free', 'S'),  
+ labels = c(0,1,2,3,4))  
> # Season attributes  
> Attribute_DataSet_1$Season = factor(Attribute_DataSet_1$Season,  
+ levels = c('Summer', 'Autumn', 'Spring', 'Winter'),  
+ labels = c(0,1,2,3))  
> # NeckLine attributes  
> Attribute_DataSet_1$NeckLine = factor(Attribute_DataSet_1$NeckLine,  
+ levels = c('o-neck', 'v-neck', 'boat-neck', 'peterpan-collor', 'ruffled', 'tur  
ndowncollor', 'slash-neck', 'mandarin-collor', 'open', 'square-collor', 'Sweetheart', 'Scoop', 'halter', 'back  
less', 'bowneck', 'NULL'),  
+ labels = c(0,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15))  
>  
> # SleeveLength attributes
```

This screenshot shows the RStudio interface with the following content:

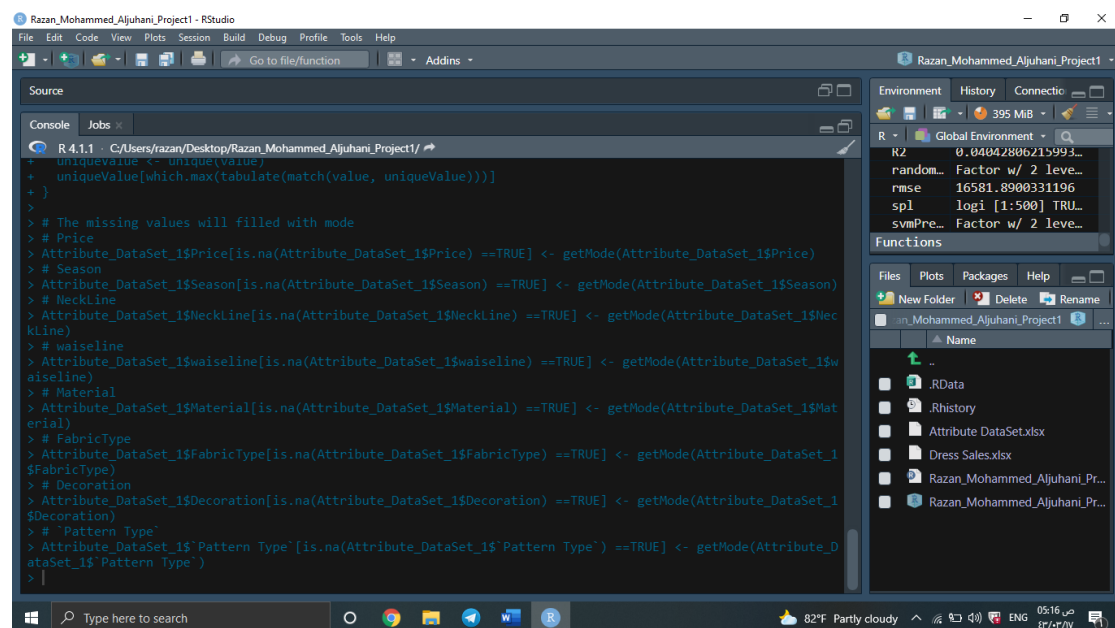
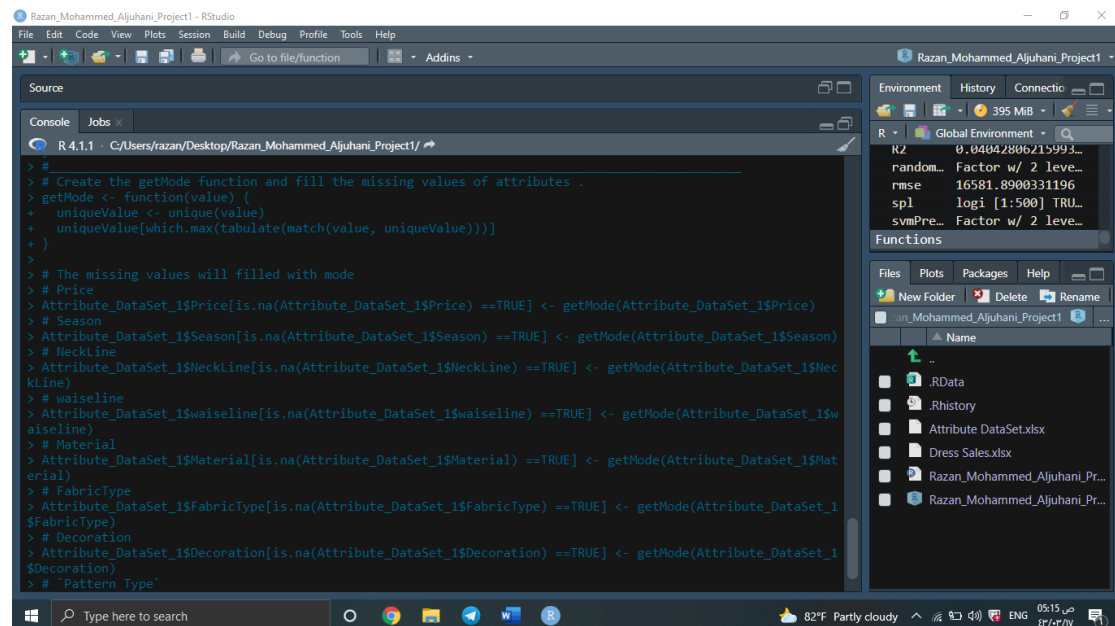
- Source Editor:** Contains the second part of an R script defining factor variables for data attributes. The code includes comments and function calls for SleeveLength, waiseline, Material, FabricType, and Decoration attributes.
- Console:** Shows the execution of the R script, with the prompt > at the start of each line.
- Environment:** Lists the objects created in the environment, including attrib..., Attrib..., and Dress\_... with their respective observation counts.
- Files:** Shows the project files, including RData, .Rhistory, Attribute DataSet.xlsx, Dress Sales.xlsx, and Razan\_Mohammed\_Aljuhani\_Pr...

```
> # SleeveLength attributes  
> Attribute_DataSet_1$SleeveLength = factor(Attribute_DataSet_1$SleeveLength,  
+ levels = c('sleeveless', 'Petal', 'full', 'butterfly', 'short', 'threequa  
ter', 'halfsleeve', 'cap-sleeves', 'turndowncollor', 'capsleeves', 'half', 'turndowncollar', 'NULL'),  
+ labels = c(0,1,2,3,4,5,6,7,8,9,10,11,12))  
> # waiseline attributes  
> Attribute_DataSet_1$waiseline = factor(Attribute_DataSet_1$waiseline,  
+ levels = c('empire', 'natural', 'null', 'princess', 'dropped'),  
+ labels = c(0,1,2,3,4))  
> # Material attributes  
> Attribute_DataSet_1$Material = factor(Attribute_DataSet_1$Material,  
+ levels = c('null', 'microfiber', 'polyester', 'silk', 'chiffonfabric', 'cotto  
n', 'nylon', 'other', 'milk silk', 'linen', 'rayon', 'lycra', 'mix', 'acrylic', 'spandex', 'lace', 'modal', 'c  
ashmere', 'viscos', 'knitting', 'sill', 'wool', 'model', 'shiffon'),  
+ labels = c(0,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23))  
> # FabricType attributes  
> Attribute_DataSet_1$FabricType = factor(Attribute_DataSet_1$FabricType,  
+ levels = c('chiffon', 'null', 'broadcloth', 'jersey', 'other', 'batik', 'sat  
in', 'flannel', 'worsted', 'woolen', 'poplin', 'dobby', 'knitted', 'tulle', 'organza', 'lace', 'Corduroy', 't  
erry'),  
+ labels = c(0,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17))  
> # Decoration attributes  
> Attribute_DataSet_1$Decoration = factor(Attribute_DataSet_1$Decoration,  
+ levels = c('ruffles', 'null', 'embroidery', 'bow', 'lace', 'beading', 'sashe  
s', 'hollowout', 'pockets', 'sequins', 'applique', 'button', 'Tiered', 'rivet', 'feathers', 'flowers', 'pearl  
s', 'pleat', 'crystal', 'ruche', 'draped', 'tassel', 'plain', 'cascading'),  
+ labels = c(0,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23))
```

# Screenshots - By: Razan Aljuhani



# Screenshots - By: Razan Aljuhani



# Screenendshots - By: Razan Aljuhani

This screenshot shows the RStudio interface with a script editor containing R code to load and inspect a dataset. The console displays the output of the code, showing the structure of the data frame.

```
# R 4.1.1 - C:/Users/razan/Desktop/Razan_Mohammed_Aljuhani_Project1/
# # FabricType
> Attribute_DataSet_1$FabricType[is.na(Attribute_DataSet_1$FabricType) == TRUE] <- getMode(Attribute_DataSet_1
$FabricType)
# # Decoration
> Attribute_DataSet_1$Decoration[is.na(Attribute_DataSet_1$Decoration) == TRUE] <- getMode(Attribute_DataSet_1
$Decoration)
# # Pattern Type
> Attribute_DataSet_1$Pattern_Type[is.na(Attribute_DataSet_1$Pattern_Type) == TRUE] <- getMode(Attribute_D
ataSet_1$Pattern_Type)
# # Checking
> attrisetOfData <- data.frame(Attribute_DataSet_1)
> str(attrisetOfData)
'data.frame': 500 obs. of 13 variables:
 $ Style      : Factor w/ 12 levels "0","1","2","3",...: 1 2 3 4 5 6 2 7 8 6 ...
 $ Price      : Factor w/ 5 levels "0","1","2","3",...: 1 1 2 3 1 1 3 3 3 1 ...
 $ Rating     : num 4.6 0 0 4.6 4.5 0 0 0 0 0 ...
 $ Size       : Factor w/ 5 levels "0","1","2","3",...: 1 2 2 2 1 1 3 4 4 4 ...
 $ Season     : Factor w/ 4 levels "0","1","2","3",...: 1 1 2 3 1 1 1 2 3 1 ...
 $ Neckline   : Factor w/ 16 levels "0","1","2","3",...: 1 1 1 1 1 2 1 1 2 2 ...
 $ SleeveLength : Factor w/ 13 levels "0","1","2","3",...: 1 2 3 3 4 1 3 5 5 1 ...
 $ waistline  : Factor w/ 5 levels "0","1","2","3",...: 1 2 2 2 2 1 3 2 1 2 ...
 $ Material   : Factor w/ 24 levels "0","1","2","3",...: 1 2 3 4 5 1 6 3 6 7 ...
 $ FabricType : Factor w/ 18 levels "0","1","2","3",...: 1 2 2 1 1 2 2 3 3 1 ...
 $ Decoration : Factor w/ 24 levels "0","1","2","3",...: 1 1 2 3 4 2 2 5 6 2 ...
 $ Pattern_Type : Factor w/ 13 levels "0","1","2","3",...: 1 1 2 2 3 2 4 5 4 5 ...
 $ Recommendation: Factor w/ 2 levels "1","0": 1 2 2 1 2 2 2 2 1 1 ...
```

This screenshot shows the RStudio interface with a script editor containing R code to rename columns in a dataset. The console displays the output of the code, showing the structure of the data frame.

```
# R 4.1.1 - C:/Users/razan/Desktop/Razan_Mohammed_Aljuhani_Project1/
# # Change columns name in Dress_Sales_1 dataset
> Dress_Sales_1 = rename(Dress_Sales_1,c("41314"="2/9/2013"))
> Dress_Sales_1 = rename(Dress_Sales_1,c("41373"="4/9/2013"))
> Dress_Sales_1 = rename(Dress_Sales_1,c("41434"="6/9/2013"))
> Dress_Sales_1 = rename(Dress_Sales_1,c("41495"="8/9/2013"))
> Dress_Sales_1 = rename(Dress_Sales_1,c("41556"="10/9/2013"))
> Dress_Sales_1 = rename(Dress_Sales_1,c("41617"="12/9/2013"))
> Dress_Sales_1 = rename(Dress_Sales_1,c("41315"="2/10/2013"))
> Dress_Sales_1 = rename(Dress_Sales_1,c("41374"="4/10/2013"))
> Dress_Sales_1 = rename(Dress_Sales_1,c("41435"="6/10/2013"))
> Dress_Sales_1 = rename(Dress_Sales_1,c("40400"="8/10/2013"))
> Dress_Sales_1 = rename(Dress_Sales_1,c("41557"="10/10/2013"))
> Dress_Sales_1 = rename(Dress_Sales_1,c("41618"="12/10/2013"))
>
```

# Screenshots - By: Razan Aljuhani

RStudio interface showing R code and output. The code calculates the mean row and the sum of all values on row on total\_sales. The output displays a table of results.

```
> # Calculating the mean row
> Dress_Sales_1 = as.matrix(Dress_Sales_1)
> i <- which(is.na(Dress_Sales_1), arr.ind=TRUE)
> Dress_Sales_1[i] <- rowMeans(Dress_Sales_1, na.rm=TRUE)[i[,1]]
> Dress_Sales_1 = as.data.frame(Dress_Sales_1)
>
> # Calculating the sum of all values on row on total_sales
> Dress_Sales_1$total_sales = rowSums(Dress_Sales_1)
> head(Dress_Sales_1)
```

	29/8/2013	31/8/2013	2/9/2013	4/9/2013	6/9/2013	8/9/2013	10/9/2013	12/9/2013	14/9/2013	16/9/2013
1	2114	2274	2491	2660	2727	2887	2930	3119	3204	3277
2	151	275	570	750	813	1066	1164	1558	1756	1878
3	6	7	7	7	8	9	10	10	10	10
4	1005	1128	1326	1455	1507	1621	1637	1723	1746	1783
5	996	1175	1304	1396	1432	1559	1570	1638	1655	1681
6	4	5	11	13	13	13	16	18	19	20

	18/9/2013	20/9/2013	22/9/2013	24/9/2013	26/9/2013	28/9/2013	30/9/2013	2/10/2013	4/10/2013	6/10/2013
1	3321	3386	3479	3554	3624	3706	3746	3795	3832	3897
2	1985	2106	2454	2710	2942	3258	3354	3475	3654	3911
3	10	10	11	11	11	11	11	11	11	11
4	1796	1812	1845	1878	1892	1914	1924	1929	1941	1952
5	1743	1824	1919	2032	2156	2252	2312	2387	2459	2544
6	20	21	22	25	25	26	26	26	26	27

	8/10/2013	10/10/2013	12/10/2013	total_sales
1	3923	3985	4048	75979
2	4024	4125	4277	52256
3	11	11	11	223

RStudio interface showing R code and output. The code merges data of two datasets. The output displays a table of results.

```
> # Merging of data of the two datasets
> Merged_Data <- data.frame(Attribute_DataSet_1 ,Dress_Sales_1)
> head(Merged_Data)
```

Style	Price	Rating	Size	Season	NeckLine	SleeveLength	waisseline	Material	FabricType	Decoration
1	0	0	4.6	0	0	0	0	0	0	0
2	1	0	0.0	1	0	0	1	1	1	0
3	2	1	0.0	1	1	0	2	1	2	1
4	3	2	4.6	1	2	0	2	1	3	0
5	4	0	4.5	0	0	0	3	1	4	0
6	5	0	0.0	0	0	1	0	0	0	1

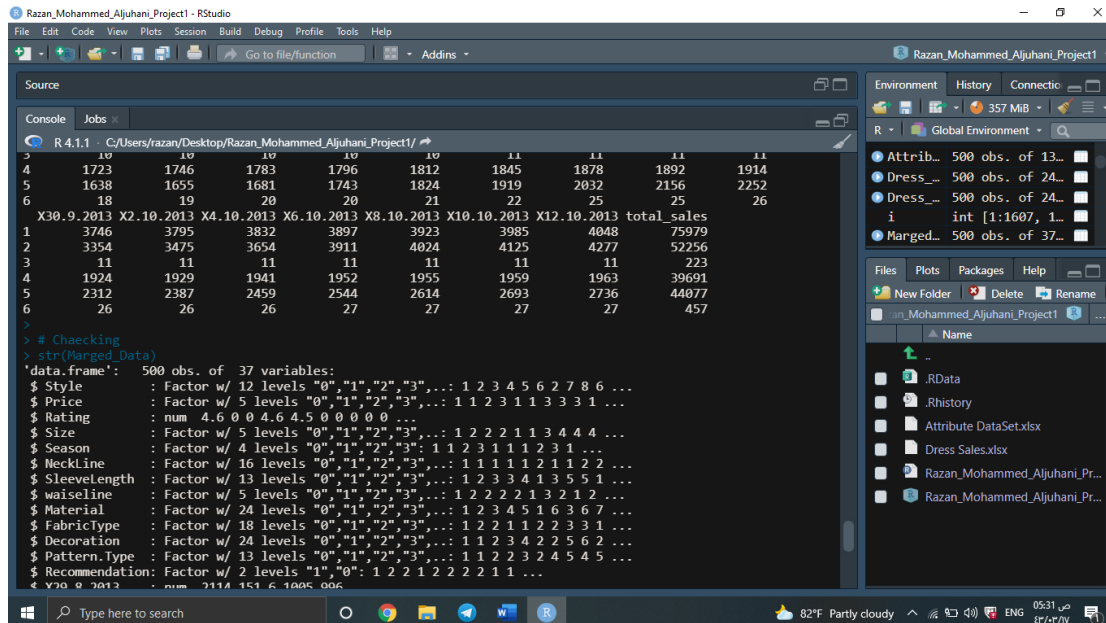
Pattern.Type	Recommendation	X29.8.2013	X31.8.2013	X2.9.2013	X4.9.2013	X6.9.2013	X8.9.2013	X10.9.2013
1	0	2114	2274	2491	2660	2727	2887	2930
2	0	151	275	570	750	813	1066	1164
3	1	0	6	7	7	8	9	10
4	1	1	1005	1128	1326	1455	1507	1621
5	2	0	996	1175	1304	1396	1432	1559
6	1	0	4	5	11	13	13	13

	X12.9.2013	X14.9.2013	X16.9.2013	X18.9.2013	X20.9.2013	X22.9.2013	X24.9.2013	X26.9.2013	X28.9.2013
1	3119	3204	3277	3321	3386	3479	3554	3624	3706
2	1558	1756	1878	1985	2106	2454	2710	2942	3258
3	10	10	10	10	10	11	11	11	11
4	1723	1746	1783	1796	1812	1845	1878	1892	1914



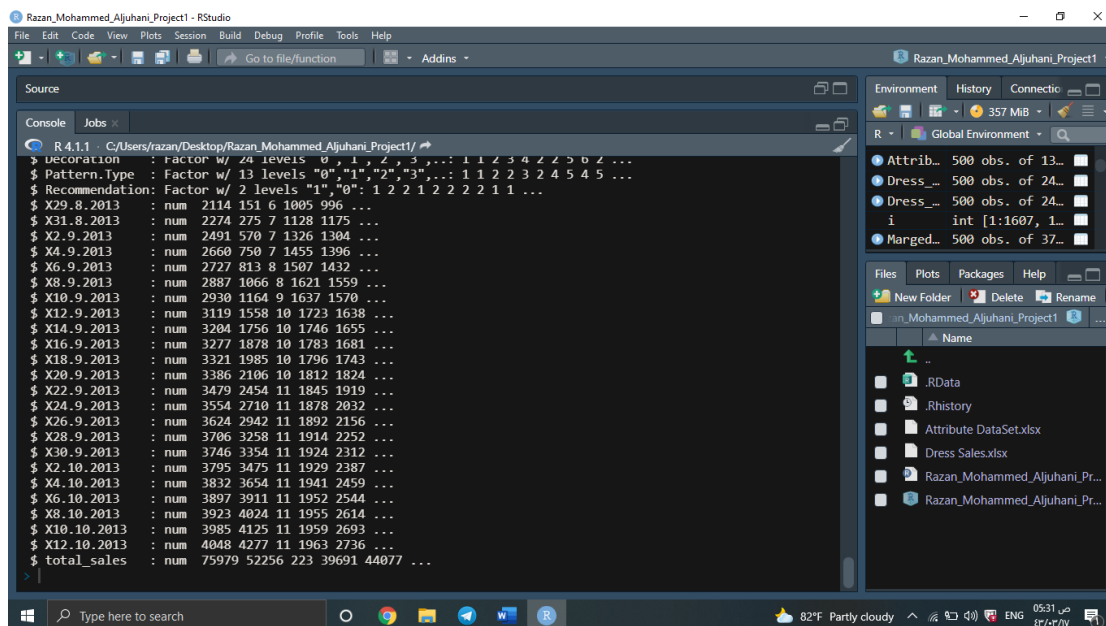
# Screenshots - By: Razan Aljuhani



This screenshot shows the RStudio interface with the following details:

- Source Panel:** Contains R code for loading data from a CSV file and inspecting its structure.
- Console Panel:** Displays the output of the R code, including a data frame with 500 observations and 37 variables.
- Environment Panel:** Shows the loaded data frame and its variables.
- Files Panel:** Lists the files in the project directory.

```
R 4.1.1 - C:/Users/razan/Desktop/Razan_Mohammed_Aljuhani_Project1/
> read.csv("Dress_Sales.xlsx")
> str(Merged_Data)
'data.frame': 500 obs. of 37 variables:
 $ Style      : Factor w/ 12 levels "0","1","2","3",...: 1 2 3 4 5 6 2 7 8 6 ...
 $ Price      : Factor w/ 5 levels "0","1","2","3",...: 1 1 2 3 1 1 1 3 3 1 ...
 $ Rating     : num 4.6 0 0 4.6 4.5 0 0 0 0 0 ...
 $ Size       : Factor w/ 5 levels "0","1","2","3",...: 1 2 2 2 1 1 1 3 4 4 ...
 $ Season     : Factor w/ 4 levels "0","1","2","3",...: 1 1 2 3 1 1 1 2 3 1 ...
 $ Neckline   : Factor w/ 16 levels "0","1","2","3",...: 1 1 1 1 1 2 1 1 2 2 ...
 $ SleeveLength : Factor w/ 5 levels "0","1","2","3",...: 1 2 3 3 4 1 3 5 5 1 ...
 $ waistline  : Factor w/ 24 levels "0","1","2","3",...: 1 2 2 2 2 1 3 2 1 2 ...
 $ Material   : Factor w/ 18 levels "0","1","2","3",...: 1 2 3 4 5 1 6 3 6 7 ...
 $ FabricType : Factor w/ 18 levels "0","1","2","3",...: 1 2 2 1 1 2 2 3 3 1 ...
 $ Decoration : Factor w/ 24 levels "0","1","2","3",...: 1 1 2 3 4 2 2 5 6 2 ...
 $ Pattern.Type : Factor w/ 13 levels "0","1","2","3",...: 1 1 2 2 3 2 4 5 4 5 ...
 $ Recommendation : Factor w/ 2 levels "1","0": 1 2 2 1 2 2 2 2 1 1 ...
 $ total_sales : num 2114 151 6 1005 996 ...
```



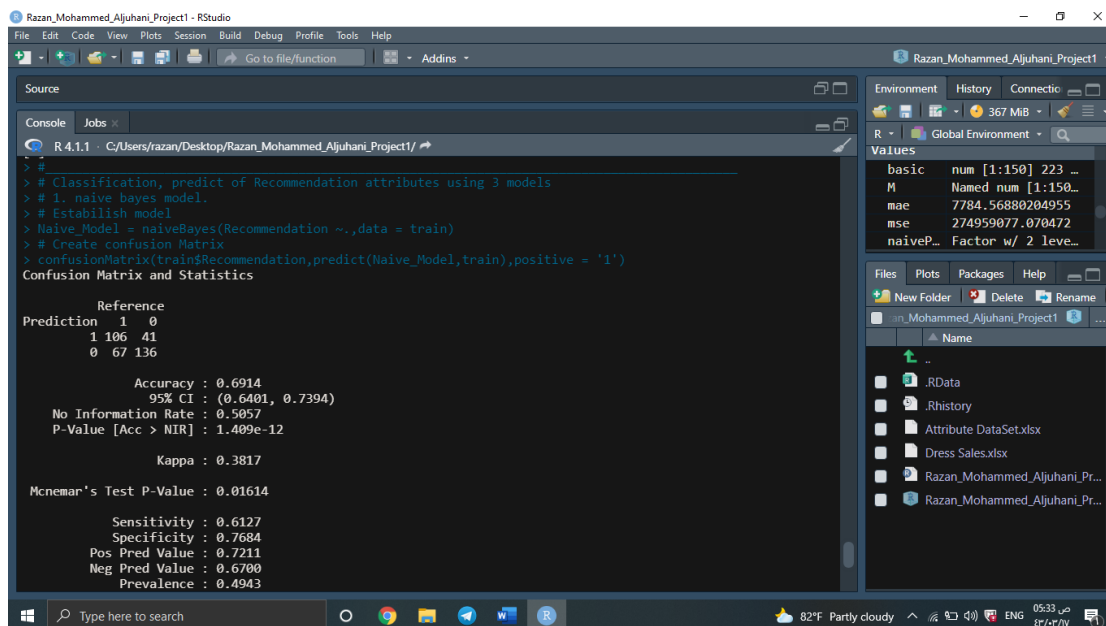
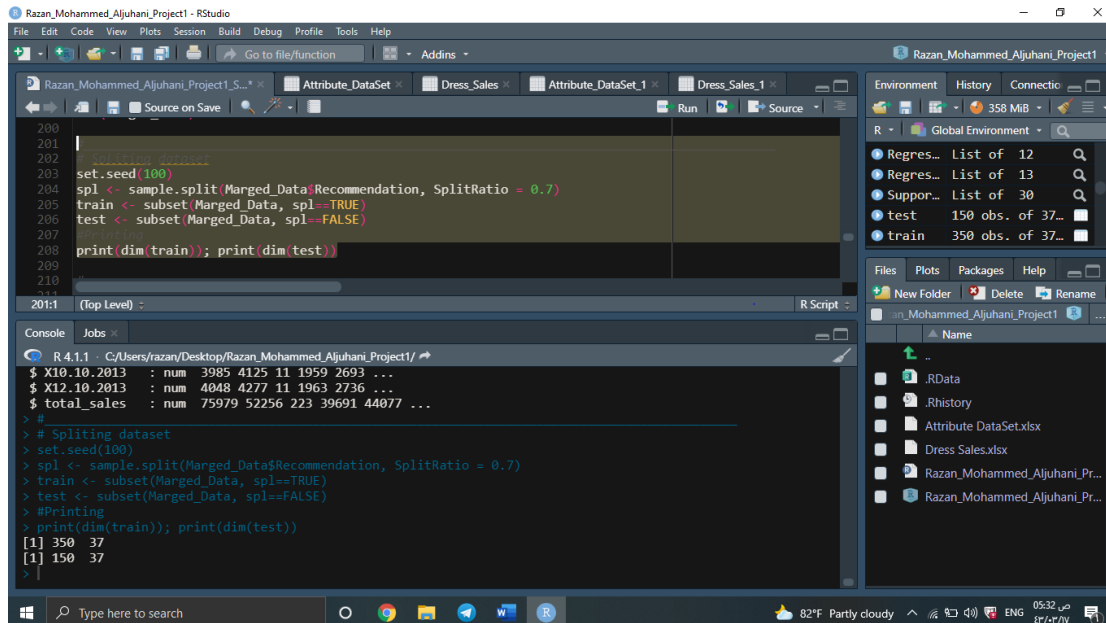
This screenshot shows the RStudio interface with the following details:

- Source Panel:** Contains R code for inspecting the structure of the data frame and calculating summary statistics.
- Console Panel:** Displays the output of the R code, including the structure of the data frame and summary statistics.
- Environment Panel:** Shows the loaded data frame and its variables.
- Files Panel:** Lists the files in the project directory.

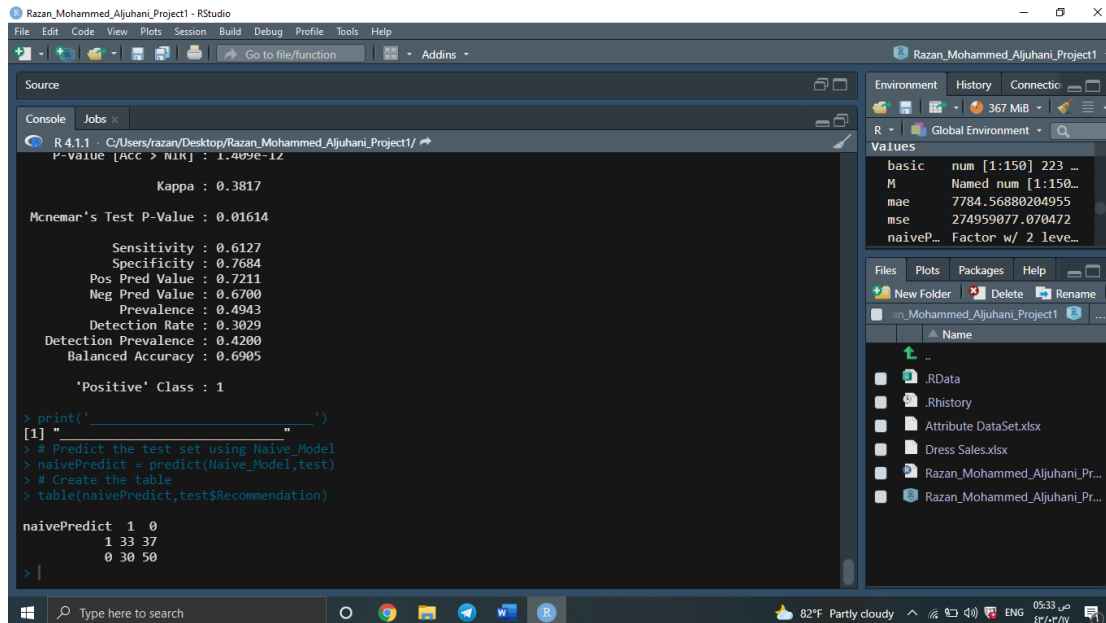
```
R 4.1.1 - C:/Users/razan/Desktop/Razan_Mohammed_Aljuhani_Project1/
> str(Merged_Data)
'data.frame': 500 obs. of 37 variables:
 $ Decoration : Factor w/ 24 levels "0","1","2","3",...: 1 1 2 3 4 2 2 5 6 2 ...
 $ Pattern.Type : Factor w/ 13 levels "0","1","2","3",...: 1 1 2 2 3 2 4 5 4 5 ...
 $ Recommendation : Factor w/ 2 levels "1","0": 1 2 2 1 2 2 2 2 1 1 ...
 $ X29.8.2013 : num 2114 151 6 1005 996 ...
 $ X31.8.2013 : num 2274 275 7 1128 1175 ...
 $ X2.9.2013 : num 2491 570 7 1326 1304 ...
 $ X4.9.2013 : num 2660 750 7 1455 1396 ...
 $ X6.9.2013 : num 2727 813 8 1507 1432 ...
 $ X8.9.2013 : num 2887 1066 8 1621 1559 ...
 $ X10.9.2013 : num 2930 1164 9 1637 1570 ...
 $ X12.9.2013 : num 3119 1558 10 1723 1638 ...
 $ X14.9.2013 : num 3204 1756 10 1746 1655 ...
 $ X16.9.2013 : num 3277 1878 10 1783 1681 ...
 $ X18.9.2013 : num 3321 1985 10 1796 1743 ...
 $ X20.9.2013 : num 3386 2106 10 1812 1824 ...
 $ X22.9.2013 : num 3479 2454 11 1845 1919 ...
 $ X24.9.2013 : num 3554 2710 11 1878 2032 ...
 $ X26.9.2013 : num 3624 2942 11 1892 2156 ...
 $ X28.9.2013 : num 3706 3258 11 1914 2252 ...
 $ X30.9.2013 : num 3746 3354 11 1924 2312 ...
 $ X2.10.2013 : num 3795 3475 11 1929 2387 ...
 $ X4.10.2013 : num 3832 3654 11 1941 2459 ...
 $ X6.10.2013 : num 3897 3911 11 1952 2544 ...
 $ X8.10.2013 : num 3923 4024 11 1955 2614 ...
 $ X10.10.2013 : num 3985 4125 11 1959 2693 ...
 $ X12.10.2013 : num 4048 4277 11 1963 2736 ...
 $ total_sales : num 75979 52256 223 39691 44077 ...
```



# Screenendshots - By: Razan Aljuhani



# Screenendshots - By: Razan Aljuhani



This screenshot shows the RStudio interface with the following content:

**Console:**

```
R 4.1.1: C:/Users/razan/Desktop/Razan_Mohammed_Aljuhani_Project1/
r-value [Acc > NIR] : 1.409e-12

Kappa : 0.3817

McNemar's Test P-Value : 0.01614

Sensitivity : 0.6127
Specificity : 0.7684
Pos Pred Value : 0.7211
Neg Pred Value : 0.6700
Prevalence : 0.4943
Detection Rate : 0.3029
Detection Prevalence : 0.4200
Balanced Accuracy : 0.6905

'Positive' Class : 1

> print('_____')
[1] "
> # Predict the test set using Naive_Model
> naivePredict = predict(Naive_Model,test)
> # Create the table
> table(naivePredict,test$Recommendation)

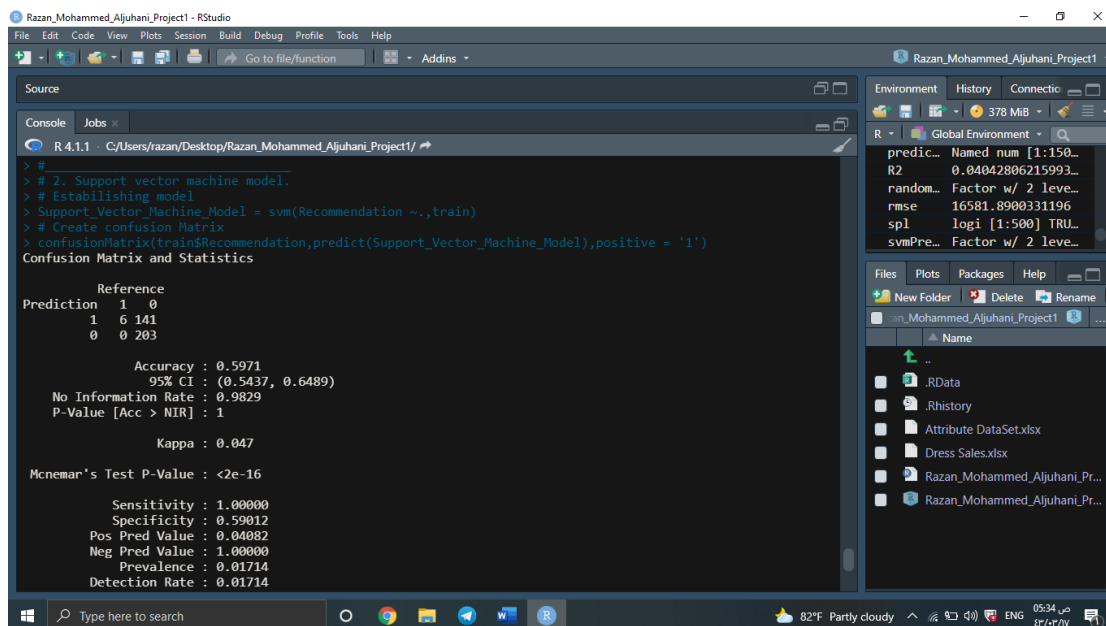
naivePredict 1 0
             1 33 37
             0 30 50
> |
```

**Environment:** 367 MB, Global Environment

**Values:**

basic	num [1:150]	223 ..
M	Named num [1:150]	
mae	7784.56880204955	
mse	274959077.070472	
naiveP...	Factor w/ 2 leve...	

**Files:** .RData, .Rhistory, Attribute DataSet.xlsx, Dress Sales.xlsx, Razan\_Mohammed\_Aljuhani\_Pr..., Razan\_Mohammed\_Aljuhani\_Pr...



This screenshot shows the RStudio interface with the following content:

**Console:**

```
> #
> # 2. Support vector machine model.
> # Establishing model
> Support_Vector_Machine_Model = svm(Recommendation ~.,train)
> # Create confusion Matrix
> confusionMatrix(train$Recommendation,predict(Support_Vector_Machine_Model),positive = '1')
Confusion Matrix and Statistics

      Reference
Prediction 1 0
          1 6 141
          0 0 203

Accuracy : 0.5971
 95% CI : (0.5437, 0.6489)
No Information Rate : 0.9829
P-Value [Acc > NIR] : 1

Kappa : 0.047

McNemar's Test P-Value : <2e-16

Sensitivity : 1.00000
Specificity : 0.59012
Pos Pred Value : 0.04082
Neg Pred Value : 1.00000
Prevalence : 0.01714
Detection Rate : 0.01714
```

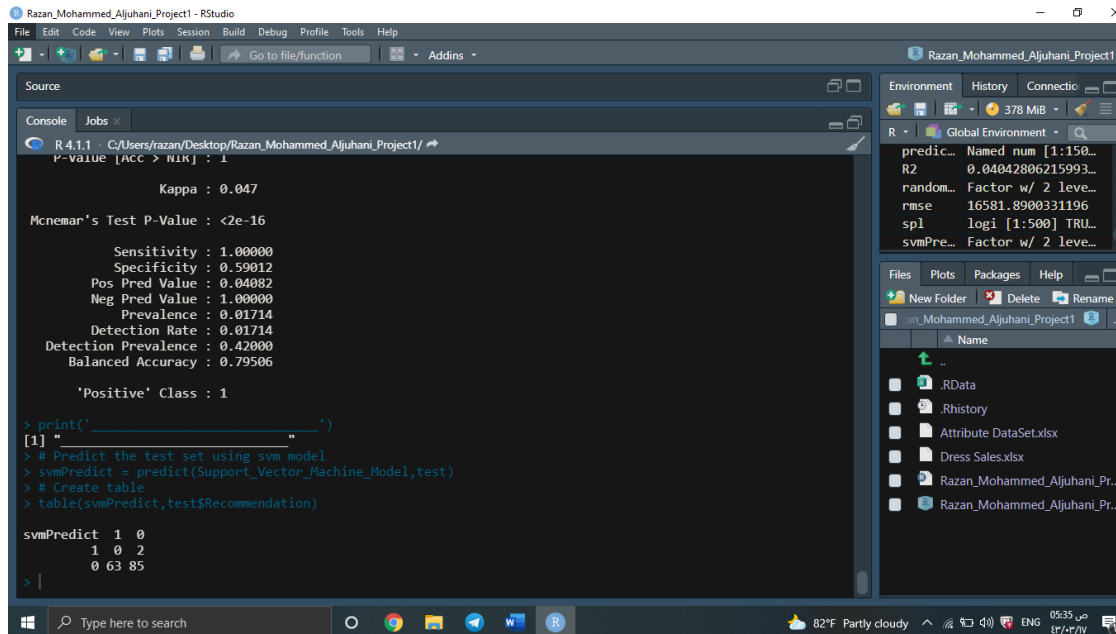
**Environment:** 378 MB, Global Environment

**Values:**

predic...	Named num [1:150]	
R2	0.04042806215993...	
random...	Factor w/ 2 leve...	
rmse	16581.8900331196	
spl	logi [1:500] TRUL	
svmPre...	Factor w/ 2 leve...	

**Files:** .RData, .Rhistory, Attribute DataSet.xlsx, Dress Sales.xlsx, Razan\_Mohammed\_Aljuhani\_Pr..., Razan\_Mohammed\_Aljuhani\_Pr...

# Screenendshots - By: Razan Aljuhani



This screenshot shows the RStudio interface with the following content:

**Source:**

```
R 4.1.1 - C:/Users/razan/Desktop/Razan_Mohammed_Aljuhani_Project1/
P-VALUE [Acc > NIR] : 1

Kappa : 0.047

McNemar's Test P-Value : <2e-16

Sensitivity : 1.00000
Specificity : 0.59012
Pos Pred Value : 0.04082
Neg Pred Value : 1.00000
Prevalence : 0.01714
Detection Rate : 0.01714
Detection Prevalence : 0.42000
Balanced Accuracy : 0.79506

'Positive' Class : 1

> print('_____')
[1] "
> # Predict the test set using svm model
> svmPredict = predict(Support_Vector_Machine_Model,test)
> # Create table
> table(svmPredict,test$Recommendation)

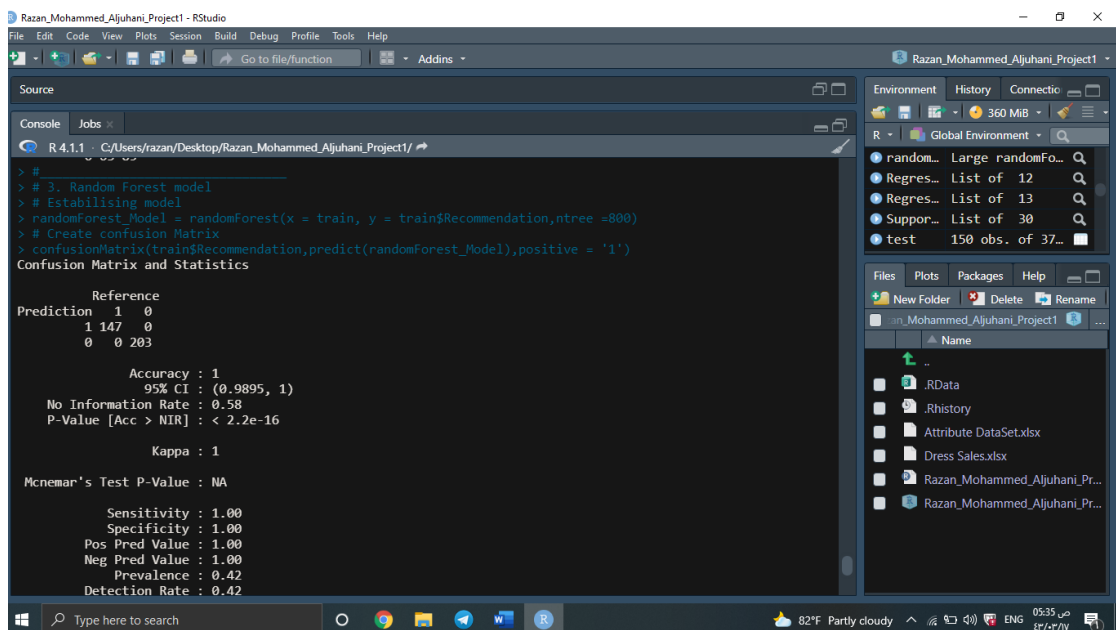
svmPredict 1 0
          1 0 2
          0 63 85
> |
```

**Environment:**

Object	Class	Attributes
predic...	Named num	[1:150]
R2	num	0.04042806215993...
random...	Factor w/ 2 leve...	
rmse	num	16581.8900331196
spl	logi	[1:500] TRU...
svmPre...	Factor w/ 2 leve...	

**Files:**

- .RData
- .Rhistory
- Attribute DataSet.xlsx
- Dress Sales.xlsx
- Razan\_Mohammed\_Aljuhani\_Pr...
- Razan\_Mohammed\_Aljuhani\_Pr...



This screenshot shows the RStudio interface with the following content:

**Source:**

```
R 4.1.1 - C:/Users/razan/Desktop/Razan_Mohammed_Aljuhani_Project1/
> #
> # 3. Random Forest model
> # Establisling model
> randomForest_Model = randomForest(x = train, y = train$Recommendation,ntree =800)
> # Create confusion Matrix
> confusionMatrix(train$Recommendation,predict(randomForest_Model),positive = '1')
Confusion Matrix and Statistics

          Reference
Prediction 1 0
          1 147 0
          0 0 203

Accuracy : 1
95% CI : (0.9895, 1)
No Information Rate : 0.58
P-Value [Acc > NIR] : < 2.2e-16

Kappa : 1

McNemar's Test P-Value : NA

Sensitivity : 1.00
Specificity : 1.00
Pos Pred Value : 1.00
Neg Pred Value : 1.00
Prevalence : 0.42
Detection Rate : 0.42
```

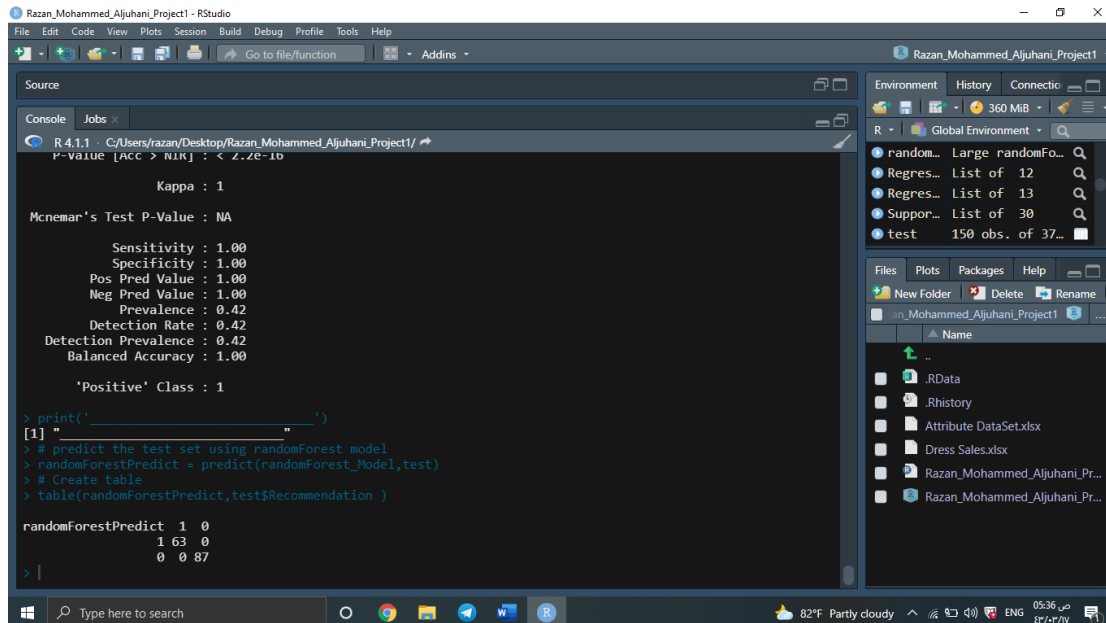
**Environment:**

Object	Class	Attributes
random...	Large randomFo...	
Regres...	List of 12	
Regres...	List of 13	
Suppor...	List of 30	
test	150 obs. of 37...	

**Files:**

- .RData
- .Rhistory
- Attribute DataSet.xlsx
- Dress Sales.xlsx
- Razan\_Mohammed\_Aljuhani\_Pr...
- Razan\_Mohammed\_Aljuhani\_Pr...

# Screenshots - By: Razan Aljuhani



RStudio interface showing the console output of a random forest model evaluation. The console displays the following results:

```
R 4.1.1 > C:/Users/razan/Desktop/Razan_Mohammed_Aljuhani_Project1/
r-value [acc > nlik] : < 2.2e-10

Kappa : 1

McNemar's Test P-Value : NA

Sensitivity : 1.00
Specificity : 1.00
Pos Pred Value : 1.00
Neg Pred Value : 1.00
Prevalence : 0.42
Detection Rate : 0.42
Detection Prevalence : 0.42
Balanced Accuracy : 1.00

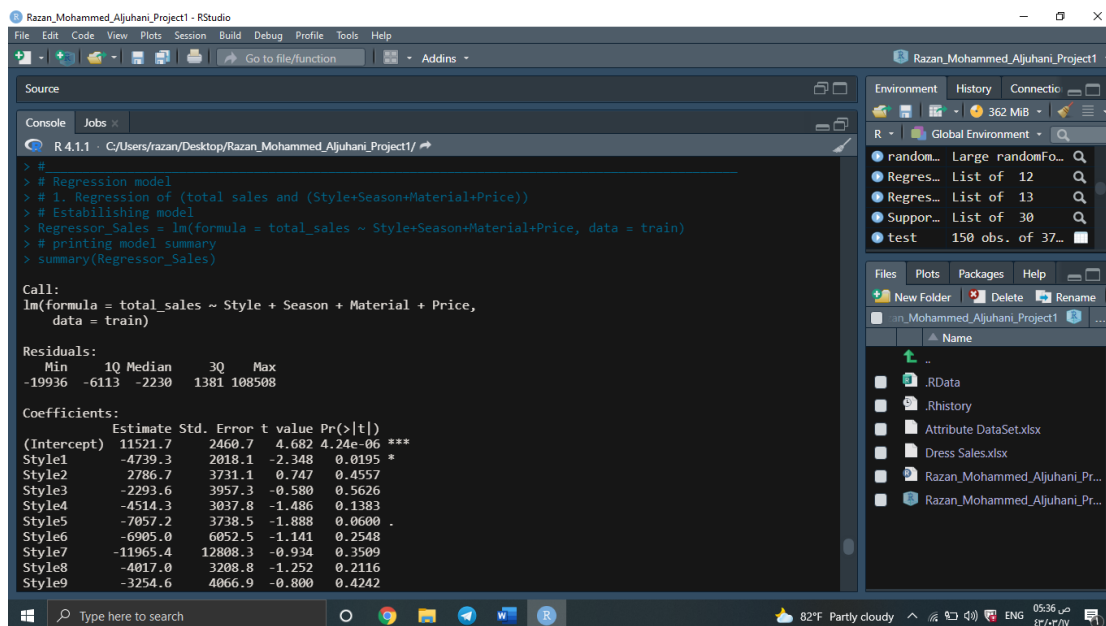
'Positive' Class : 1

> print('_____')
[1] "_____
> # predict the test set using randomForest model
> randomForestPredict = predict(randomForest_Model,test)
> # Create table
> table(randomForestPredict,test$Recommendation )

randomForestPredict 1 0
                   1 63 0
                   0 0 87
> |
```

The Environment pane on the right shows the following objects:

- random... Large randomFo...
- Regres... List of 12
- Regres... List of 13
- Suppor... List of 30
- test 150 obs. of 37...



RStudio interface showing the console output of a linear regression model. The console displays the following results:

```
R 4.1.1 > C:/Users/razan/Desktop/Razan_Mohammed_Aljuhani_Project1/
> #
> # Regression model
> # 1. Regression of (total sales and (Style+Season+Material+Price))
> # Establishing model
> Regressor_Sales = lm(formula = total_sales ~ Style+Season+Material+Price, data = train)
> # printing model summary
> summary(Regressor_Sales)

Call:
lm(formula = total_sales ~ Style + Season + Material + Price,
    data = train)

Residuals:
    Min       1Q   Median       3Q      Max
-19936  -6113  -2230   1381 108508

Coefficients:
            Estimate Std. Error t value Pr(>|t|)
(Intercept) 11521.7    2460.7   4.682 4.24e-06 ***
Style1      -4739.3    2018.1   -2.348  0.0195 *
Style2       2786.7    3731.1    0.747  0.4557
Style3      -2293.6    3957.3   -0.580  0.5626
Style4      -4514.3    3037.8   -1.486  0.1383
Style5      -7057.2    3738.5   -1.888  0.0600 .
Style6      -6905.0    6052.5   -1.141  0.2548
Style7     -11965.4   12808.3   -0.934  0.3509
Style8      -4017.0    3208.8   -1.252  0.2116
Style9     -3254.6    4066.9   -0.800  0.4242

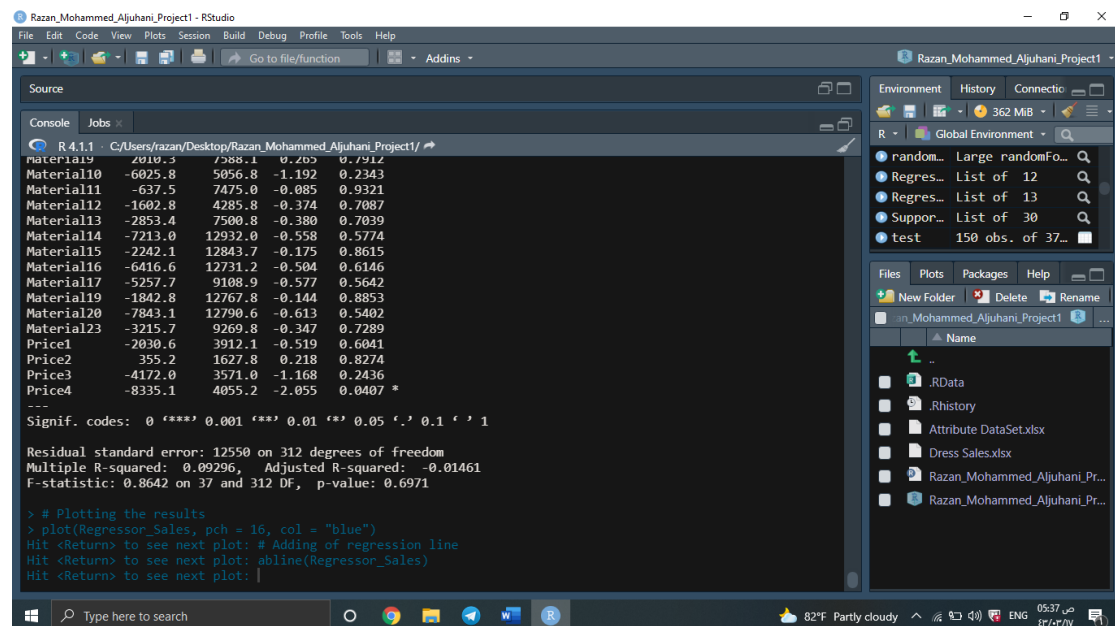
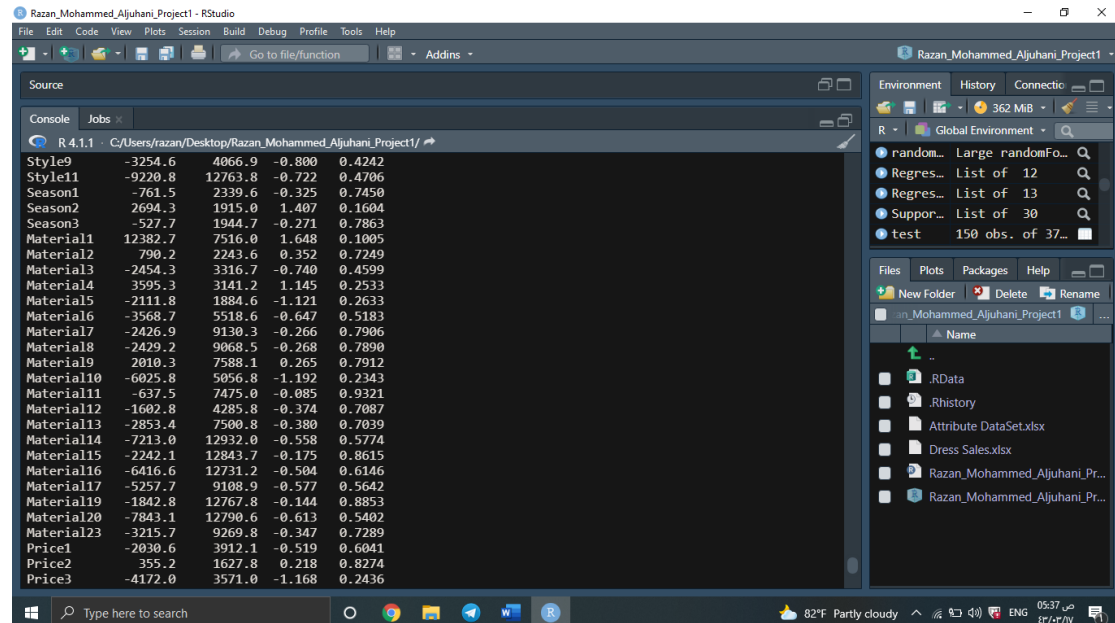
---
Signif. codes:  0.001 '***' 0.01 '*' 0.05 '.' 0.1 ' ' 1.

> |
```

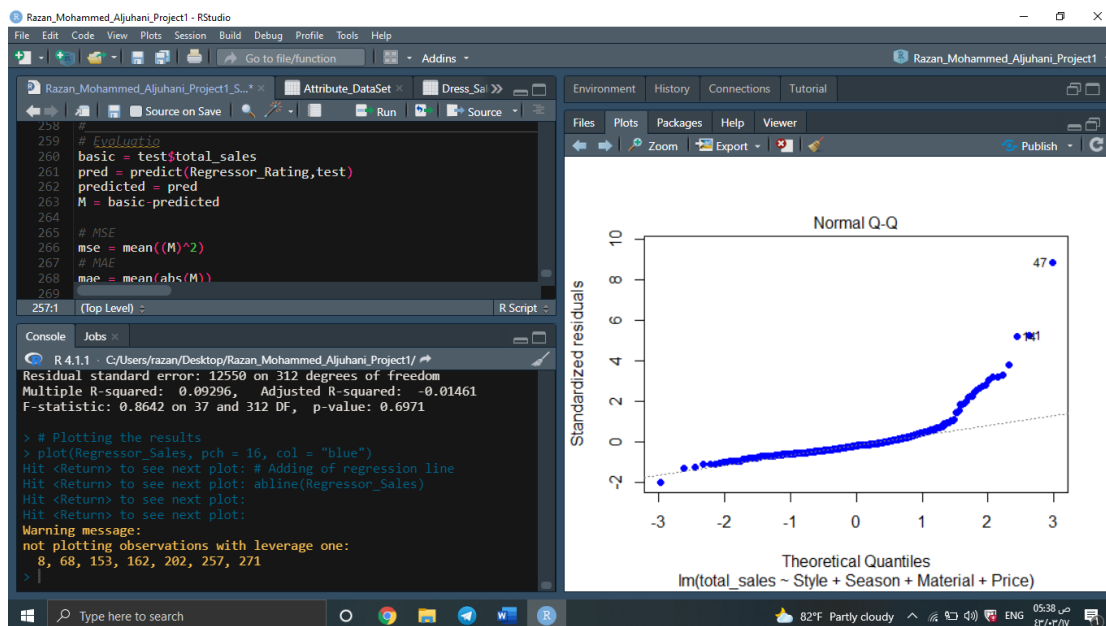
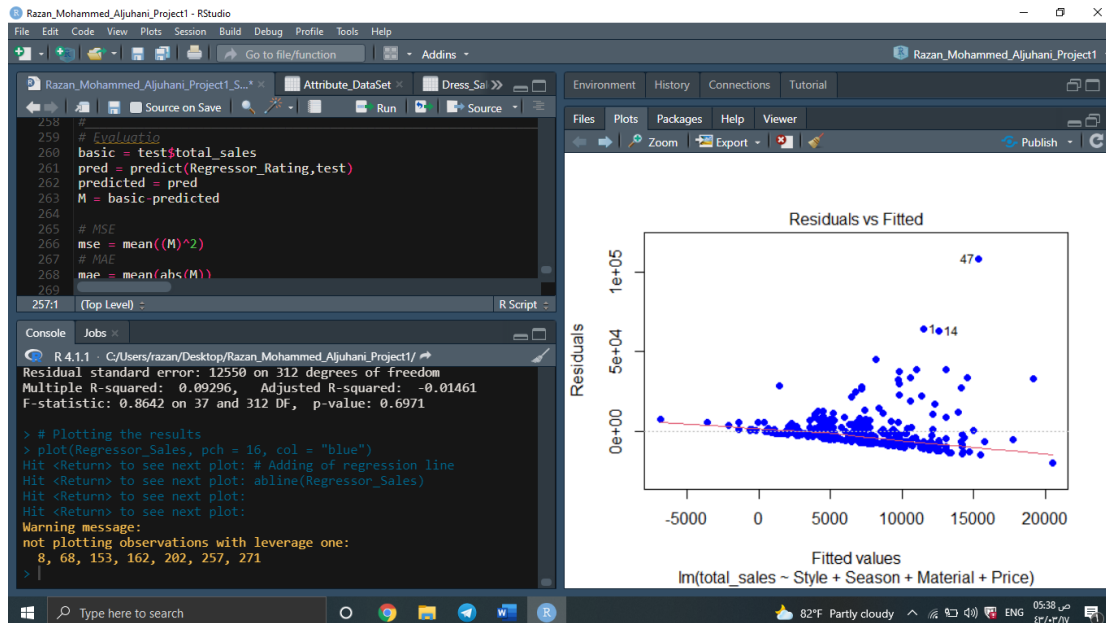
The Environment pane on the right shows the following objects:

- random... Large randomFo...
- Regres... List of 12
- Regres... List of 13
- Suppor... List of 30
- test 150 obs. of 37...

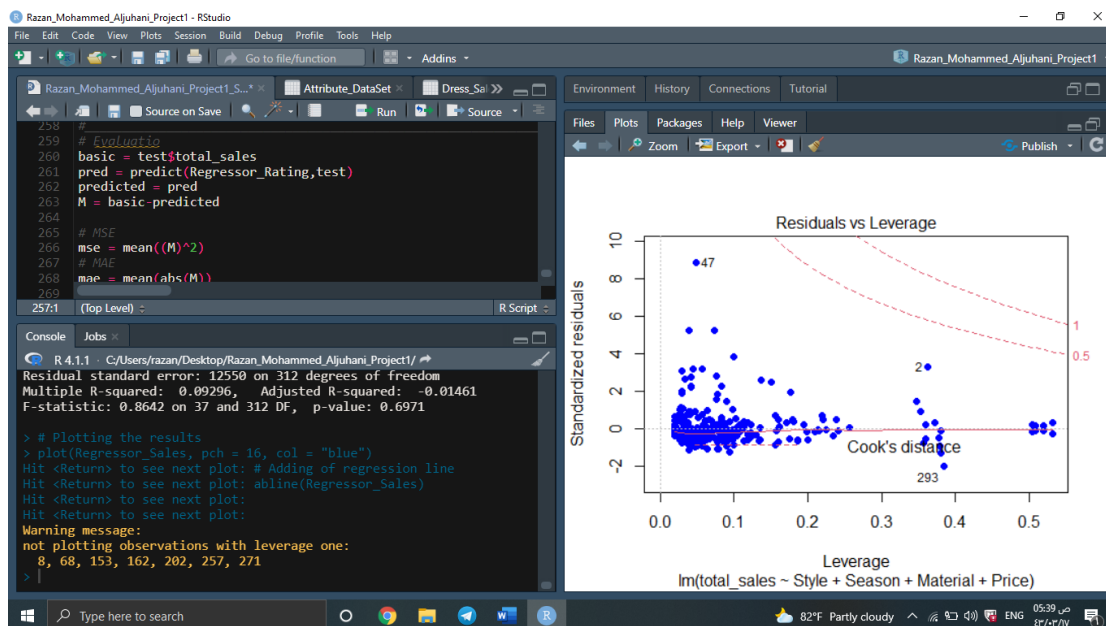
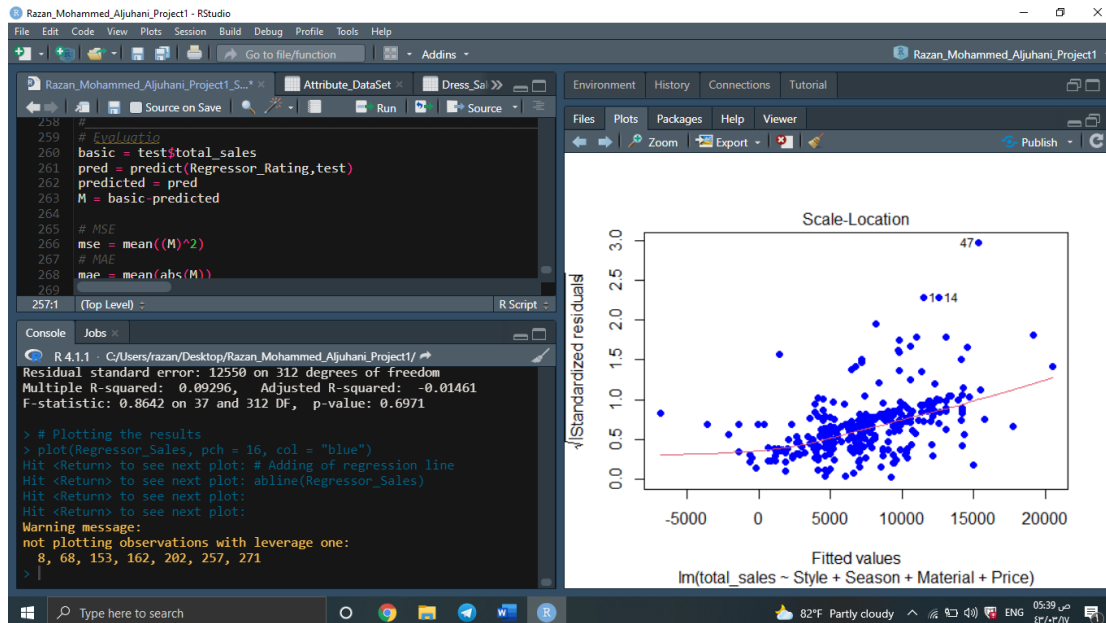
# Screenshots - By: Razan Aljuhani



# Screenendshots - By: Razan Aljuhani



# Screenendshots - By: Razan Aljuhani





# Screenshots - By: Razan Aljuhani

