

R / آر

هي لغة برمجة تُستخدم بشكل رئيسي لتحليل البيانات والإحصاءات

للمبتدئين: بعض المفاهيم الأساسية في لغة آر

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In [1]:

```
تعريف المتغيرات # يمكن استخدام اي من الاشارات <- ' OR '='
a = 9      #numeric رقمي
x <- 5.5    #numeric رقمي
y = "one"   #character نص
z= TRUE     #boolean TRUE or FALSE - you can writing T or F / لوجك - صح او خطأ
q = a + 9+5.5 # you can add multi variables
a      # you can writing print (a or x ...)
```

9

5.5

'one'

TRUE

23.5

In [2]:

```
معرفه نوع الداتا/ المتغير # class(x) # you can writing class(a or y or z)
```

'numeric'

In [3]:

```
إنشاء سلسلة من العناصر# seq(1,10)
x <- seq(1,10)
x
y <- seq(1,10,3) يمكن اضافه خطوات#
y
```

الترتيب يبدأ في آر من 1 ليس من صفر

```
x[3] # index 3
x[-1] # في المثال سالب 1 لم يظهر في الطابعه #
```

1·2·3·4·5·6·7·8·9·10

1·4·7·10

3

2·3·4·5·6·7·8·9·10

In [4]:

يمكنك إنشاء أي معادلة رياضية #

```
x + y
x * y
x - y
```

Warning message in x + y:

“longer object length is not a multiple of shorter object length”

2·6·10·14·6·10·14·18·10·14

Warning message in $x * y$:
 "longer object length is not a multiple of shorter object length"
 $1 \cdot 8 \cdot 21 \cdot 40 \cdot 5 \cdot 24 \cdot 49 \cdot 80 \cdot 9 \cdot 40$

Warning message in $x - y$:
 "longer object length is not a multiple of shorter object length"
 $0 \cdot 2 \cdot 4 \cdot 6 \cdot 4 \cdot 2 \cdot 0 \cdot 2 \cdot 8 \cdot 6$

In [5]:

```
#تعريف لیست list
x <- list (1 : 10)
#or
y<- list ( 5,9, 15 ,1)
x
y
```

$1 \cdot 1 \cdot 2 \cdot 3 \cdot 4 \cdot 5 \cdot 6 \cdot 7 \cdot 8 \cdot 9 \cdot 10$

1. 5
2. 9
3. 15
4. 1

In [6]:

```
#تعريف فاكتور Factors باستخدام الفاكتور مع بيانات الفنوية *
F <- c("M", "M", "F", "M", "F")
F<-factor(F)
summary(F)
```

F: 2 M: 3

In [7]:

```
#تعريف فكتور
# يمكن انشاء الفكتور مع مختلف انوع من الاداتا يبدا في حرف سي و وضع فاصله بين العناصر #
x <- c(10, 5, 7, 15,7 )      #number رقم
y <- c("A","XX","one")        #string حروف
z = c(10, 1.5, "Cat", TRUE , seq(5,9)) #you can add any type مختلف الانواع للبيانات
```

x
y
z

$10 \cdot 5 \cdot 7 \cdot 15 \cdot 7$

'A' · 'XX' · 'one'
 '10' · '1.5' · 'Cat' · 'TRUE' · '5' · '6' · '7' · '8' · '9'

In [8]:

عمل جمع او معرف اعلى و اقل القيم و ترتيب القيم #

```
R <- c(10, 5, 7, 15,7,1,5) #تعريف متغير على شكل فكتور
sort( R ) # sort the emelent #ترتيب العناصر
mean( R ) # the average معرفة المتوسط
```

```
max (R)    # the maximum    أعلى قيمة
min (R)    # the minimum    اقل قيمة
```

1 · 5 · 5 · 7 · 7 · 10 · 15

7.14285714285714

15

1

In [9]:

```
#انشاء مصفوفه في آر#
#The arguments to this      = matrix(data, number of rows, number of columns ,filling
# ، تعيين الاعداد ل الاعمده = تعريف اسم المصفوفه
# عدد الاعمده تبعه البيانات صف صف امر عامود عمود و وضع اسماء ل الاعمده
# هنا تعريف اسماء الصفوف يمكن اختبار اي اسم # ريف اسماء الاعمده يمكن كتابه اي اسم # Mat <- matrix(c(1:20), nrow= 4, ncol =5 , byrow = T , dimnames =list(row,col))
# Mat
```

A matrix: 4 × 5 of type int

	col 1	col 2	col 3	col 4	col 5
A	1	2	3	4	5
B	6	7	8	9	10
C	11	12	13	14	15
P	16	17	18	19	20

In [10]:

اختار عنصر معين فقط ضع اسم المصفوفه و موقع الصف و موقع العامود #

موقع صف ثم موقع العامود#

يمكن تغير اي قيمة ل العنصر فقط تحديد الموقع و القيمة الجديدة # 100
Mat

12

A matrix: 4 × 5 of type dbl

	col 1	col 2	col 3	col 4	col 5
A	1	2	3	4	5
B	6	7	8	9	100
C	11	12	13	14	15
P	16	17	18	19	20

In [11]:

جمل اف الشرط

M <- 75

```
if (M >= 50){
  print ("Good")          # you can writing if Like = if(x>=90 && x<100 ) ...
}else {                   يمكن كتابه اي شرط#}
```

```
    print ("Bad")
}
```

[1] "Good"

In [12]:

```
# while Loop / حلقة التكرار
L =1
while (L<10){
  print (L)
  L<- L+4
}
```

يمكن كتابة حلقة التكرار داخل جمل الشرط #

[1] 1
[1] 5
[1] 9

In [13]:

```
# for Loop / عمل فور لوب التكرار
for (i in 1:10) # this loop print from range 1 to 10
  print (i)
```

[1] 1
[1] 2
[1] 3
[1] 4
[1] 5
[1] 6
[1] 7
[1] 8
[1] 9
[1] 10

In [14]:

```
# Define the Function
# name on function <- writing function (here the argument) { here the body function w
اسم الفنكشن = كلمة فنكشن وبين الاقواس المتغيرات

Fun <- function (y ){
  return (y * 50) # حلقة التكرار او شرط اف او معادله اي
}
Fun(10) # 10 this = y
```

يمكن الكتابة داخل الفنكشن اي معادله او شرط اف او حلقة التكرار #

500

Import Data Set

In [15]:

```
# Import Data / رفع البيانات الى لغه آر لعمل التحليل
# يوجد الكثير من المصادر التي تدعمها لغه آر
# يمكن دمج اكثر من جدول وعمل جوين
# يمكن رفع الملف الى ادخل الجيتور او ادخل موقع كاكيل
df = read.csv('/kaggle/input/task-sales/Task-1.csv') # now, import from CSV , first upl
```

In [16]:

```
عرض الداتا#
df
```

A data.frame: 9648 × 12

Retailer	Retailer.ID	Invoice.Date	Region	State	City	Product	Price.per.Unit	Units.Sold
<chr>	<int>	<chr>	<chr>	<chr>	<chr>	<chr>	<int>	<int>
Foot Locker	1185732	01-01-20	Northeast	New York	New York	Men's Street Footwear	50	1200
Foot Locker	1185732	02-01-20	Northeast	New York	New York	Men's Athletic Footwear	50	1000
Foot Locker	1185732	03-01-20	Northeast	New York	New York	Women's Street Footwear	40	1000
Foot Locker	1185732	04-01-20	Northeast	New York	New York	Women's Athletic Footwear	45	850
Foot Locker	1185732	05-01-20	Northeast	New York	New York	Men's Apparel	60	900
Foot Locker	1185732	06-01-20	Northeast	New York	New York	Women's Apparel	50	1000
Foot Locker	1185732	07-01-20	Northeast	New York	New York	Men's Street Footwear	50	1250
Foot Locker	1185732	08-01-20	Northeast	New York	New York	Men's Athletic Footwear	50	900
Foot Locker	1185732	21-01-20	Northeast	New York	New York	Women's Street Footwear	40	950
Foot Locker	1185732	22-01-20	Northeast	New York	New York	Women's Athletic Footwear	45	825
Foot Locker	1185732	23-01-20	Northeast	New York	New York	Men's Apparel	60	900
Foot Locker	1185732	24-01-20	Northeast	New York	New York	Women's Apparel	50	1000
Foot Locker	1185732	25-01-20	Northeast	New York	New York	Men's Street Footwear	50	1220
Foot Locker	1185732	26-01-20	Northeast	New York	New York	Men's Athletic Footwear	50	925
Foot Locker	1185732	27-01-20	Northeast	New York	New York	Women's Street Footwear	40	950
Foot Locker	1185732	28-01-20	Northeast	New York	New York	Women's Athletic Footwear	45	800

Retailer	Retailer.ID	Invoice.Date	Region	State	City	Product	Price.per.Unit	Units.Sold
<chr>	<int>	<chr>	<chr>	<chr>	<chr>	<chr>	<int>	<int>
Foot Locker	1185732	29-01-20	Northeast	New York	New York	Men's Apparel	NA	850
Foot Locker	1185732	30-01-20	Northeast	New York	New York	Women's Apparel	50	950
Foot Locker	1185732	31-01-20	Northeast	New York	New York	Men's Street Footwear	50	1200
Foot Locker	1185732	01-02-20	Northeast	New York	New York	Men's Athletic Footwear	50	900
Foot Locker	1185732	02-02-20	Northeast	New York	New York	Women's Street Footwear	40	900
Foot Locker	1185732	03-02-20	Northeast	New York	New York	Women's Athletic Footwear	45	825
Foot Locker	1185732	04-02-20	Northeast	New York	New York	Men's Apparel	60	825
Foot Locker	1185732	05-02-20	Northeast	New York	New York	Women's Apparel	50	950
Foot Locker	1185732	06-02-20	Northeast	New York	New York	Men's Street Footwear	60	1220
Foot Locker	1185732	07-02-20	Northeast	New York	New York	Men's Athletic Footwear	55	925
Foot Locker	1185732	08-02-20	Northeast	New York	New York	Women's Street Footwear	50	900
Foot Locker	1185732	09-02-20	Northeast	New York	New York	Women's Athletic Footwear	50	850
Foot Locker	1185732	10-02-20	Northeast	New York	New York	Men's Apparel	60	875
Foot Locker	1185732	03-03-20	Northeast	New York	New York	Women's Apparel	65	1000
:	:	:	:	:	:	:	:	:
Amazon	1185732	17-09-21	Northeast	New Hampshire	Manchester	Women's Athletic Footwear	41	74
Amazon	1185732	17-09-21	Northeast	New Hampshire	Manchester	Men's Apparel	48	70
Amazon	1185732	17-09-21	Northeast	New Hampshire	Manchester	Women's Apparel	53	104

Retailer	Retailer.ID	Invoice.Date	Region	State	City	Product	Price.per.Unit	Units.Sold
<chr>	<int>	<chr>	<chr>	<chr>	<chr>	<chr>	<int>	<int>
Foot Locker	1185732	19-10-21	Northeast	New Hampshire	Manchester	Men's Street Footwear	52	162
Foot Locker	1185732	19-10-21	Northeast	New Hampshire	Manchester	Men's Athletic Footwear	44	99
Foot Locker	1185732	19-10-21	Northeast	New Hampshire	Manchester	Women's Street Footwear	52	60
Foot Locker	1185732	19-10-21	Northeast	New Hampshire	Manchester	Women's Athletic Footwear	44	61
Foot Locker	1185732	19-10-21	Northeast	New Hampshire	Manchester	Men's Apparel	50	58
Foot Locker	1185732	19-10-21	Northeast	New Hampshire	Manchester	Women's Apparel	64	90
Foot Locker	1185732	18-11-21	Northeast	New Hampshire	Manchester	Men's Street Footwear	59	149
Foot Locker	1185732	18-11-21	Northeast	New Hampshire	Manchester	Men's Athletic Footwear	42	114
Foot Locker	1185732	18-11-21	Northeast	New Hampshire	Manchester	Women's Street Footwear	51	114
Foot Locker	1185732	18-11-21	Northeast	New Hampshire	Manchester	Women's Athletic Footwear	43	114
Foot Locker	1185732	18-11-21	Northeast	New Hampshire	Manchester	Men's Apparel	59	96
Foot Locker	1185732	18-11-21	Northeast	New Hampshire	Manchester	Women's Apparel	61	120
Foot Locker	1185732	17-12-21	Northeast	New Hampshire	Manchester	Men's Street Footwear	49	200
Foot Locker	1185732	17-12-21	Northeast	New Hampshire	Manchester	Men's Athletic Footwear	49	128
Foot Locker	1185732	17-12-21	Northeast	New Hampshire	Manchester	Women's Street Footwear	47	128
Foot Locker	1185732	17-12-21	Northeast	New Hampshire	Manchester	Women's Athletic Footwear	49	116

Retailer	Retailer.ID	Invoice.Date	Region	State	City	Product	Price.per.Unit	Units.Sold
<chr>	<int>	<chr>	<chr>	<chr>	<chr>	<chr>	<int>	<int>
Foot Locker	1185732	17-12-21	Northeast	New Hampshire	Manchester	Men's Apparel	50	123
Foot Locker	1185732	17-12-21	Northeast	New Hampshire	Manchester	Women's Apparel	61	144
Foot Locker	1185732	24-01-21	Northeast	New Hampshire	Manchester	Men's Street Footwear	36	165
Foot Locker	1185732	24-01-21	Northeast	New Hampshire	Manchester	Men's Athletic Footwear	36	93
Foot Locker	1185732	24-01-21	Northeast	New Hampshire	Manchester	Women's Street Footwear	35	99
Foot Locker	1185732	24-01-21	Northeast	New Hampshire	Manchester	Women's Athletic Footwear	33	51
Foot Locker	1185732	24-01-21	Northeast	New Hampshire	Manchester	Men's Apparel	50	64
Foot Locker	1185732	24-01-21	Northeast	New Hampshire	Manchester	Women's Apparel	41	105
Foot Locker	1185732	22-02-21	Northeast	New Hampshire	Manchester	Men's Street Footwear	41	184
Foot Locker	1185732	22-02-21	Northeast	New Hampshire	Manchester	Men's Athletic Footwear	42	70
Foot Locker	1185732	22-02-21	Northeast	New Hampshire	Manchester	Women's Street Footwear	29	83

In [17]:

عرض اسماء الاعمال مع نوع الداتا ل كل عاصمة

str(df)

```
'data.frame': 9648 obs. of 12 variables:
 $ Retailer      : chr "Foot Locker" "Foot Locker" "Foot Locker" ...
 $ Retailer.ID   : int 1185732 1185732 1185732 1185732 1185732 1185732 1185732 ...
 $ Invoice.Date  : chr "01-01-20" "02-01-20" "03-01-20" "04-01-20" ...
 $ Region        : chr "Northeast" "Northeast" "Northeast" "Northeast" ...
 $ State         : chr "New York" "New York" "New York" "New York" ...
 $ City          : chr "New York" "New York" "New York" "New York" ...
 $ Product       : chr "Men's Street Footwear" "Men's Athletic Footwear" "Women's Street Footwear" "Women's Athletic Footwear" ...
 $ Price.per.Unit: int 50 50 40 45 60 50 50 40 45 ...
 $ Units.Sold    : int 1200 1000 1000 850 900 1000 1250 900 950 825 ...
 $ Total.Sales   : int 60000 50000 40000 38250 54000 50000 62500 45000 38000 37125
 ...'
```

```
$ Operating.Profit: int 30000 15000 14000 13388 16200 12500 31250 13500 13300 12994
...
$ Sales.Method : chr "In-store" "In-store" "In-store" "In-store" ...
```

In [18]:

عرض شكل الداتا كم يوجد صف وكم عامود #
dim(df)

9648 · 12

In [19]:

عرض ملخص ل الداتا #
يمكن معرفه في الاعمده الرقميه المجموع المتوسط و اكبر و اقل الفيم والانحراف المعياري #
summary(df)

Retailer	Retailer.ID	Invoice.Date	Region
Length:9648	Min. :1128299	Length:9648	Length:9648
Class :character	1st Qu.:1185732	Class :character	Class :character
Mode :character	Median :1185732	Mode :character	Mode :character
	Mean :1173850		
	3rd Qu.:1185732		
	Max. :1197831		
State	City	Product	Price.per.Unit
Length:9648	Length:9648	Length:9648	Min. : 7.00
Class :character	Class :character	Class :character	1st Qu.: 35.00
Mode :character	Mode :character	Mode :character	Median : 45.00
			Mean : 45.22
			3rd Qu.: 55.00
			Max. :110.00
			NA's :2
Units.Sold	Total.Sales	Operating.Profit	Sales.Method
Min. : 0.0	Min. : 0.0	Min. : 0	Length:9648
1st Qu.: 106.0	1st Qu.: 425.8	1st Qu.: 192	Class :character
Median : 176.0	Median : 958.0	Median : 437	Mode :character
Mean : 256.9	Mean : 9327.4	Mean : 3443	
3rd Qu.: 350.0	3rd Qu.:15000.0	3rd Qu.: 5206	
Max. :1275.0	Max. :82500.0	Max. :39000	

In [20]:

فنكشن هد ياتي ب اول 6 صقوف#
head(df)

A data.frame: 6 × 12

	Retailer	Retailer.ID	Invoice.Date	Region	State	City	Product	Price.per.Unit	Units.Sold	Tota
	<chr>	<int>	<chr>	<chr>	<chr>	<chr>	<chr>	<int>	<int>	
1	Foot Locker	1185732	01-01-20	Northeast	New York	New York	Men's Street Footwear	50	1200	
2	Foot Locker	1185732	02-01-20	Northeast	New York	New York	Men's Athletic Footwear	50	1000	
3	Foot Locker	1185732	03-01-20	Northeast	New York	New York	Women's Street Footwear	40	1000	

	Retailer	Retailer.ID	Invoice.Date	Region	State	City	Product	Price.per.Unit	Units.Sold	Total
	<chr>	<int>	<chr>	<chr>	<chr>	<chr>	<chr>	<int>	<int>	
4	Foot Locker	1185732	04-01-20	Northeast	New York	New York	Women's Athletic Footwear	45	850	
5	Foot Locker	1185732	05-01-20	Northeast	New York	New York	Men's Apparel	60	900	
6	Foot Locker	1185732	06-01-20	Northeast	New York	New York	Women's Apparel	50	1000	

In [21]:

ل تغيير اسم عمود #
 rename(df, "new co"= "City")

In [22]:

معرفة مجموع الصفوف التي فيها تكرار #
 sum(duplicated(df))

0

In [23]:

معرفة الصفوف التي لا يوجد ترار فيها #
 unique(df)

In [24]:

معرفة كم يوجد قيمة فارغه في الداتا #
 sum(is.na(df))

2

In [25]:

حذف البيانات الفارغه #
 df <- na.omit(df)

In [26]:

معرفة اسماء الاعمده في الداتا #
 names(df)

'Retailer' · 'Retailer.ID' · 'Invoice.Date' · 'Region' · 'State' · 'City' · 'Product' · 'Price.per.Unit' ·
 'Units.Sold' · 'Total.Sales' · 'Operating.Profit' · 'Sales.Method'

In [27]:

بعد حذف البيانات الفارغه لا يوجد الان لدينا اي بيانات فارغه#
 sum(is.na(df))

0

In [28]:

يمكن عمل اي عمليات حسابيه بين الاعمده #
 يمكن وضع القيمه الجديدة في عمود جديد #
 df\$r <- df\$Price.per.Unit * df\$Units.Sold

In [29]: عرض اول 6 صفوف مع العامود الجديد #
head(df)

A data.frame: 6 × 13

	Retailer	Retailer.ID	Invoice.Date	Region	State	City	Product	Price.per.Unit	Units.Sold	Total
	<chr>	<int>	<chr>	<chr>	<chr>	<chr>	<chr>	<int>	<int>	<int>
1	Foot Locker	1185732	01-01-20	Northeast	New York	New York	Men's Street Footwear	50	1200	
2	Foot Locker	1185732	02-01-20	Northeast	New York	New York	Men's Athletic Footwear	50	1000	
3	Foot Locker	1185732	03-01-20	Northeast	New York	New York	Women's Street Footwear	40	1000	
4	Foot Locker	1185732	04-01-20	Northeast	New York	New York	Women's Athletic Footwear	45	850	
5	Foot Locker	1185732	05-01-20	Northeast	New York	New York	Men's Apparel	60	900	
6	Foot Locker	1185732	06-01-20	Northeast	New York	New York	Women's Apparel	50	1000	

dplyr

In [30]: لغه ار يوجد فيها مكتبات تسهل علينا العمل بها هذه المكتبه#
من خلال هذه المكتبه استطيع عمل العديد من الوظائف في ار #
dplyr
#is a grammar of data manipulation, providing a consistent set of verbs that help you s

```
# mutate() adds new variables that are functions of existing variables
# select() picks variables based on their names.
# filter() picks cases based on their values.
# summarise() reduces multiple values down to a single summary.
# arrange() changes the ordering of the rows.
# group by

#how you can install and load any library in r

#install.packages("dplyr") #install Library # تحميل المكتبه
#library(dplyr) # Load Library # رفع المكتبه
```

In [31]: install.packages("dplyr") # تحميل المكتبه

Installing package into ‘/usr/local/lib/R/site-library’
(as ‘lib’ is unspecified)

```
Warning message:
“unable to access index for repository http://cran.rstudio.com/src/contrib:
  cannot open URL ‘http://cran.rstudio.com/src/contrib/PACKAGES’”
Warning message:
“package ‘dplyr’ is not available for this version of R

A version of this package for your version of R might be available elsewhere,
see the ideas at
https://cran.r-project.org/doc/manuals/r-patched/R-admin.html#Installing-packages”
```

In [32]: `library(dplyr) # رفع المكتبة`

Attaching package: ‘dplyr’

The following objects are masked from ‘package:stats’:

`filter, lag`

The following objects are masked from ‘package:base’:

`intersect, setdiff, setequal, union`

In [33]: `عمل جروب بـاي اسم المتجر مع مجموع الارباح يمكن استخدام هذا الشكل #
df%>%
group_by(Retailer)%>%
summarize(sum(Operating.Profit))`

A tibble: 6 × 2

Retailer sum(Operating.Profit)

<chr>	<int>
Amazon	2881885
Foot Locker	8057050
Kohl's	3681153
Sports Direct	7427383
Walmart	2578226
West Gear	8566869

In [34]: `عمل متغيرات و عرض اعلى و اقل و متوسط القيمة #
df%>%
summarize(MAX = max(Price.per.Unit),MIN = min(Price.per.Unit),AVG = mean(Price.per.U`

A data.frame: 1 × 3

MAX MIN AVG

<int>	<int>	<dbl>
110	7	45.21563

In [35]:

عرض القيم الفريدة في عمود طرق البيع يوجد ثلاث قيم #
unique(df\$Sales.Method)

'In-store' · 'Outlet' · 'Online'

In [36]:

عمل فلتر على قيمتين و استثناء القيمة الثالثة #
اختيار ثلاث اعمده من الداتا و عرض اول ثلاث صفوف #

```
df %>%
filter(Sales.Method=="Online" || Sales.Method=="In-store" ) %>%
select(Region,Product,Price.per.Unit )%>%
head(3)
```

A data.frame: 3 × 3

	Region	Product	Price.per.Unit
	<chr>	<chr>	<int>
1	Northeast	Men's Street Footwear	50
2	Northeast	Men's Athletic Footwear	50
3	Northeast	Women's Street Footwear	40

In [37]:

ترتيب البيانات من خلال فنكشن ارینج تصاعدي حسب سعر المنتج #
df%>%
arrange(Price.per.Unit)%>%
head(3)

A data.frame: 3 × 13

	Retailer	Retailer.ID	Invoice.Date	Region	State	City	Product	Price.per.Unit	Units.Sold		
	<chr>	<int>	<chr>	<chr>	<chr>	<chr>	<chr>	<int>	<int>		
1	Sports Direct	1197831	25-08-21	South	Alabama	Birmingham	Men's Street Footwear	7	224		
2	West Gear	1185732	12-09-21	West	Utah	Salt Lake City	Women's Street Footwear	7	105		
3	West Gear	1185732	12-09-21	West	Utah	Salt Lake City	Women's Athletic Footwear	7	111		



In [38]:

ن استطيع عمل عمود جديد فيه قيمة من اعمده اخرى مع اجراء التغيير ايضا و اختيار اعمده وعرض 3 صفوف #
df%>%
mutate (new_c = Price.per.Unit * 1.5) %>%
select (Retailer,Product,Price.per.Unit,Sales.Method,new_c)%>%
head(3)

A data.frame: 3 × 5

Retailer	Product	Price.per.Unit	Sales.Method	new_c
<chr>	<chr>	<int>	<chr>	<dbl>
1 Foot Locker	Men's Street Footwear	50	In-store	75
2 Foot Locker	Men's Athletic Footwear	50	In-store	75
3 Foot Locker	Women's Street Footwear	40	In-store	60

In [39]: استخدام الفلتر و الجروب باي وعرض مجموع المبيعات ل متجر محدد بناء على طريق البيع # df%>%
filter(Retailer == "Foot Locker")%>%
group_by(Sales.Method)%>%
summarize(sum(Total.Sales))

A tibble: 3 × 2

Sales.Method sum(Total.Sales)

<chr>	<int>
In-store	7652500
Online	7294363
Outlet	7011665

ggplot

In [40]: مكتبه جي جي بلوت ل عرض الرسومات #

#install.packages("ggplot2") تحميل المكتبه
#library("ggplot2") رفع المكتبه

ggplot(dataframe, aes(x="column name",y="column nam"))+geom_ the na

In [41]: install.packages("ggplot2") # تحميل المكتبه

Installing package into ‘/usr/local/lib/R/site-library’
(as ‘lib’ is unspecified)

Warning message:
“unable to access index for repository http://cran.rstudio.com/src/contrib:
 cannot open URL ‘http://cran.rstudio.com/src/contrib/PACKAGES’”

Warning message:
“package ‘ggplot2’ is not available for this version of R

A version of this package for your version of R might be available elsewhere,
see the ideas at
<https://cran.r-project.org/doc/manuals/r-patched/R-admin.html#Installing-packages>”

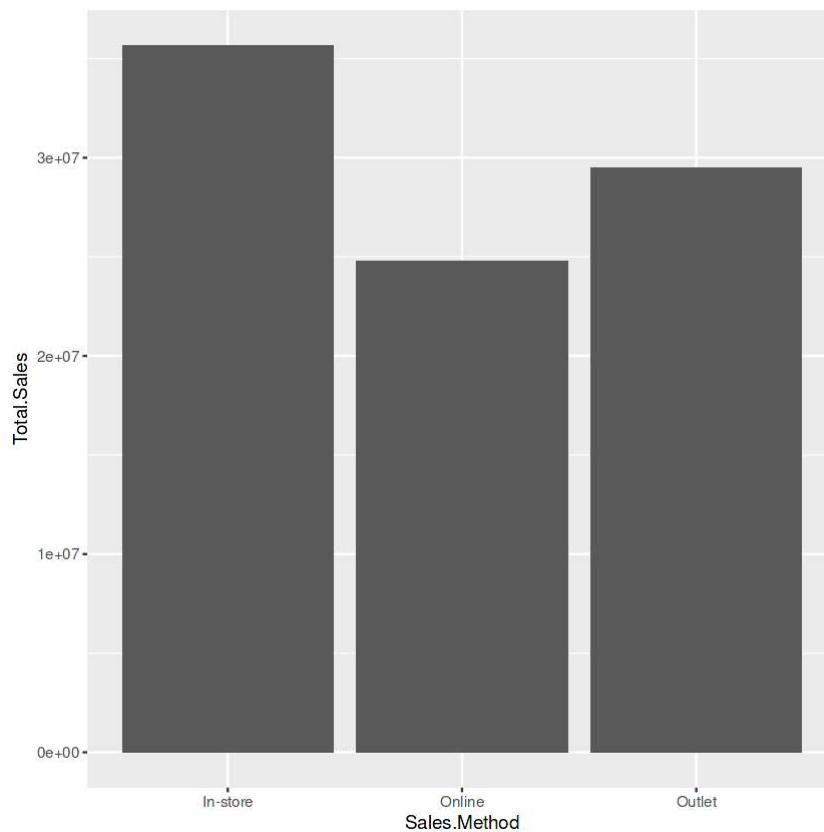
In [42]: library("ggplot2") # رفع المكتبه

In [43]:

عرض طريق البيع مع مجموع المبيعات على شكر البار شارت#

df%>%

ggplot(aes(x=Sales.Method,y= Total.Sales))+geom_bar(stat="identity")

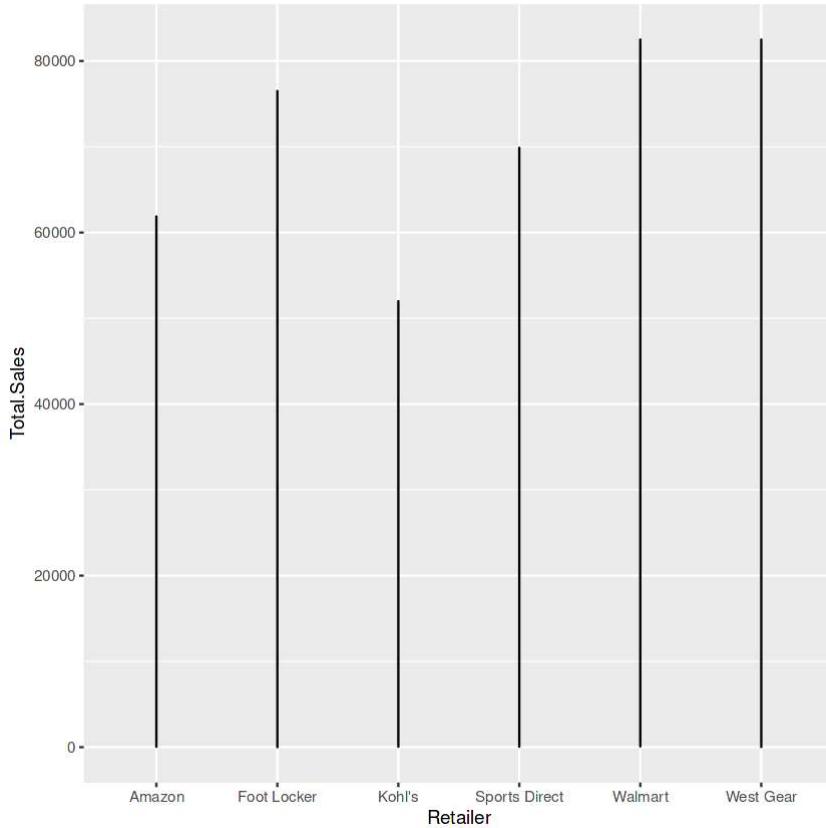


In [44]:

عرض طريق لайн شتارت يمكن استخدامه مع الوقت#

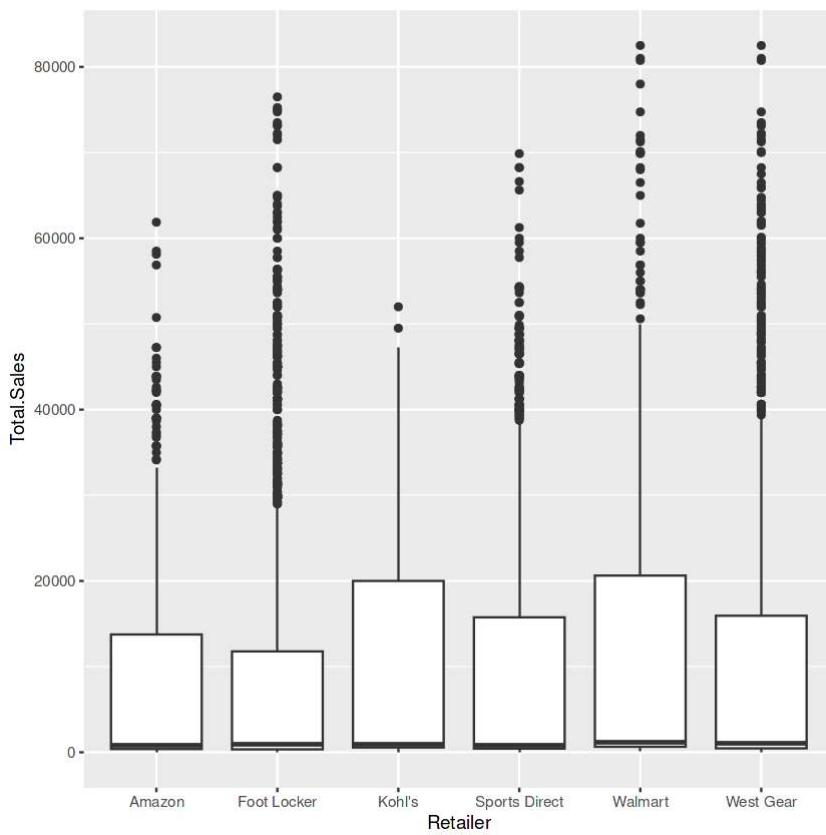
df%>%

ggplot(aes(x=Retailer,y= Total.Sales))+geom_line(stat="identity")



In [45]: عرض شكل البوكس بلوت لمعرفه القيم المتطرفة#

```
df%>%  
ggplot(aes(x=Retailer,y= Total.Sales))+geom_boxplot()
```

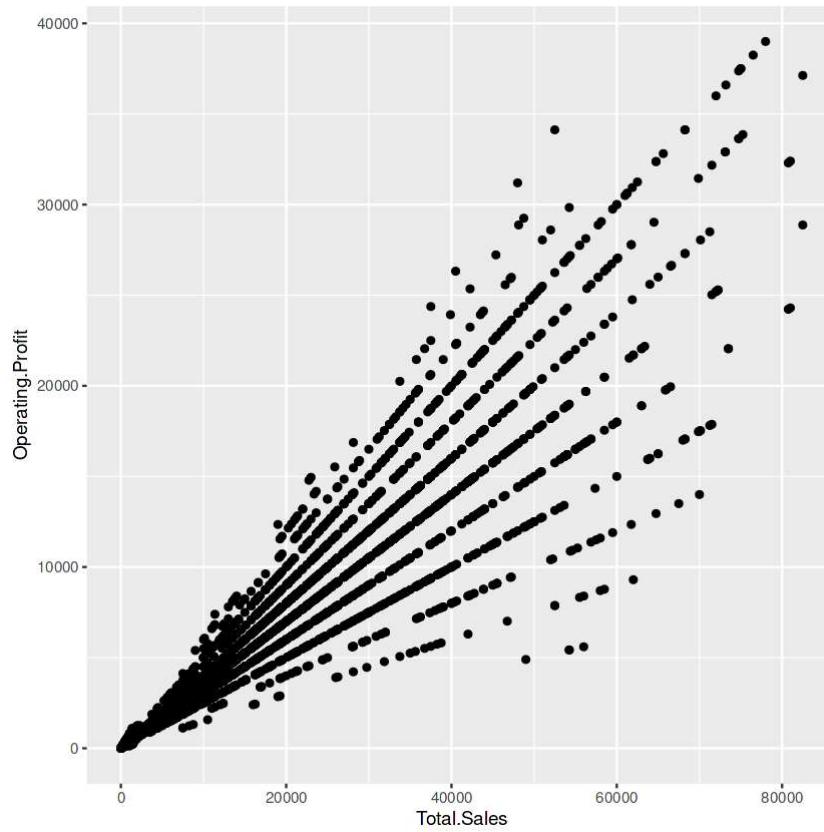


In [46]:

عرض شكل سكرر بلوت #

df%>%

ggplot(aes(x=Total.Sales,y= Operating.Profit))+geom_point()

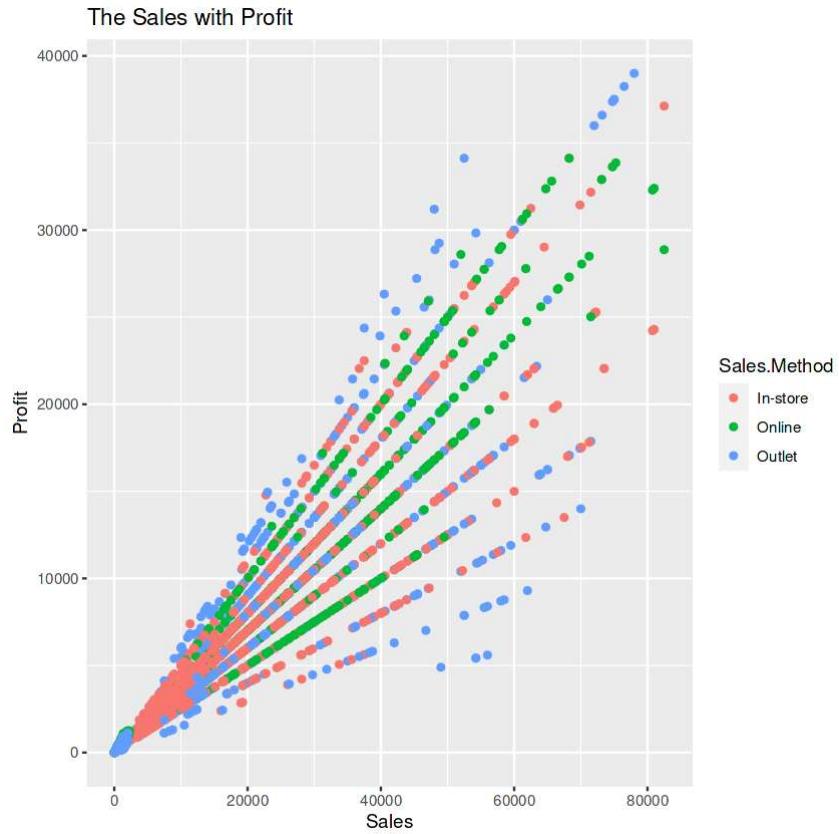


In [47]:

يمكن استخدام اي لون او حجم ل الشكل / بدل وضع عامود طريقة البيع اضع اللون معين مثل اخضر # اضافه لبييل ل عرض اسم العنوان او تغير اسم محور اكس او الواي #

df%>%

ggplot(aes(x=Total.Sales,y= Operating.Profit, color=Sales.Method))+geom_point() + labs(ti



انتهى اول اصدار

اذا كان لديك اي استفسار, لا تتردد في التواصل معي

Qusay AL-Btoush

<https://www.kaggle.com/quseybtoush1990>

<https://github.com/quseybtoush>

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