1>>Mastering DAX in Power BI | Intro.
2>>What Stakeholders want.
3>>Stakeholders want to answer questions About Business.
4>>Aيعني حقنا ربح اد اه مقارنة بالسنة اللي فاتت
5>>Best Quarter في حقنا ربح.
6>>Aايه العوامل الاثرت علي المبيعات بتاعتنا
7>>DAX answer the analysis questions
1.Aggregate function.
2.Time intelligence functions.
3.Text functions.
4.Date and time functions.
5.Power BI Dashboard with important insights.
6.Data Analyst Answer Business questions.
7.filter context in power bi.
8.row context in dax.
9.Equation For Measures&column&table.
—----------

>>Data Analysis Expressions DAX Functions<<

—----------

>>DAX Functions:-
1.Aggregation functions.
2.Date & time functions.
3.Text functions.
4.Logical functions.
5.Filter functions.
6.Time intelligence functions.
7.Table manipulation functions.
8.Relationship functions.
9.Statistical functions.
10.Information functions.
11.Financial functions.
12.Parent and child functions.
13.Other functions.

—----------

>>Data Analysts answer business questions.

—----------

1>>Aggregation functions.
1.SUM.
2.AVERAGE.
3.COUNT.
4.DISTINCTCOUNT.

5.MIN.
6.MAX.
7.SUMX.
8.AVERAGEX.
9.COUNTX.
10.MINX.
11.MAXX.
12.COUNTROWS.
13.COUNTBLANK.
14.PRODUCT.
15.COUNTA.
16.AVERAGEA.
17.MAXA.
18.MINA.
19.DISTINCTCOUNTNOBLANK.
20.PRODUCTX.
—----------
>>Lec1 Aggregation Functions | Basics<<
1>>Aggregation Functions.
2>>DAX Mastery: Transforming data into insights.
—----------
>>Lec1 Aggregation Functions | Basics<<
1>>Aggregation Functions.
2>>DAX Mastery: Transforming data into insights.
—----------
>>Power BI Desktop<<
—----------
1.Detect data type.
2.Applied steps.
3.Close & Apply.
4.Create measure table in power bi.
5.Home>>Enter data>>MeasuresTable>>Load.
6.MeasuresTable>>Right-Click>>New Measure.
7.Inclusive DAX Measure شامل:
TotalSales = SUM(Sales[Amount])
8.Exclusive DAX Measure حصري:
HighValueSales = CALCULATE(SUM(Sales[Amount]), Sales[Amount] > 1000)
—----------
>>Remove Auto Created Measures By Power BI.
9.Remove summation>>Model view>>Sales Table>>Choose Measures>>Shift+Select>>Advanced>>Summarize by>>None.

—--
10.Create Measures In Power BI Desktop.
>>Measure Table<<>>Right Click>>New Measure.
1.Total_Income = SUM(Sales_data[TotalPrice])
2.Total_Shipping_Cost = SUM(Sales_data[ShippingCost])
3.Unit_price(AVG) = AVERAGE(Sales_data[UnitPrice])
4.Rating(AVG) = AVERAGE(Sales_data[ProductRating])
5.TotalOrders = COUNT(Sales_data[OrderID])
6.Total_Products = DISTINCTCOUNT(Sales_data[ProductID])
7.Min_Orders_Qty = MIN(Sales_data[Quantity])
8.Highest-rate = MAX(Sales_data[ProductRating])
—--
Data Analyst (Power Bi).
—--
Lec2 DAX Iterator functions | Intermediate.
>>DAX Mastery:Transforming Data Into Insights.
>>Aإتقان DAX: تحويل البيانات إلى رؤى.A
>>Aggregate Function<<
1>>MeasuresTable>>Right-Click>>New-Measure:-
1.SUMXmeasure = SUMX(Sales_data,Sales_data[UnitPrice] * Sales_data[Quantity])
The measure calculates:-
10×2=20
20×3=60
15×4=60
And the final sum is
20+60+60=140
2.TotalIncome(Taxed) = SUMX(Sales_data,Sales_data[TotalPrice] +
Sales_data[TotalPrice] * Sales_data[TaxRate])
3.SUMX(<table>, <expression>)
Total_Shipping_Cancelled_Orders =
SUMX(FILTER(Sales_data,Sales_data[DeliveryStatus] =
“Cancelled”),[Total_Shipping_Cost])
4. TotalOnlineOrders = COUNTX(FILTER(Sales_data,Sales_data[PurchaseChannel] =
“Online”), Sales_data[OrderID])
5.Measure 2 = COUNTA(Sales_data[IsReturn])
>>Counts Non-Blank Values Only.
6.Product Count = COUNTA(Sales_data[Product Name])
Product Name
Apples
Bananas
(Blank)

Grapes
Product Count = COUNTA(Sales_data[Product Name])
>>The formula will return 3<<
7.Totalreturns = COUNTAX(FILTER(Sales_data, Sales_data[IsReturn] = TRUE()), Sales_data[IsReturn])
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
1>>Business Case>>Sales & Customer Analysis For the Retal X Company.
A دراسة حالة >>تحليل المبيعات والعملاء لشركة Retal X.A
>>دراسة حالة المبيعات وتحليل العملاء لشركة التأجير.>>
—---
Lec3 Logical functions | Intermediate.
—---
1>>Business meeting.
2>>Business requirements.
3>>Dashboard based on requirements.
4>>Make data driven decisions and make business insights.
Aاتخاذ القرارات بناءً على البيانات واستخلاص رؤى الأعمالA
—---
1>>Power BI data analyst.
2>>Sales and Customer Analysis تحليل المبيعات والعملاء.
3>>Business requirements.
—-----------------------------
#Scenario a retail company,سيناريو شركة التجزئة
"RetailX,"is looking to improve its decision-making regarding sales performance.
Aتسعى إلى تحسين عملية اتخاذ القرار فيما يتعلق بأداء المبيعات.A
>>The Goal Is To Improve-Sales-Performanceالهدف هو تحسين أداء المبيعات.
>>Improve decision making for sales performance تحسين عملية اتخاذ القرار لتحسين أداء المبيعات>>
—------------------------------
>>Business Requirements (KPIs):-
>>Business Requirements متطلبات العمل.
>>KPI>>key performance indicator مؤشر الأداء الرئيسي.
—--
1>>Flag sales Per Customer مبيعات العلم لكل عميل.
"High Value"if the SalesAmount is above $10K otherwise Low Value.
A"قيمة عالية" إذا كان مبلغ المبيعات أعلى من 10 آلاف دولار، وإلا تكون قيمة منخفضة.A
—--
2>>Customer Loyalty Segmentation تقسيم ولاء العملاء.
Segment customers as "New""Regular,"or"Loyal" based on CustomerTenure مدة العميل..
New (<=6 Months)
Regular(6-9 Months)
Loyal (9 Months) Use.

—----------

3>>Sales by Region Analysis تحليل المبيعات حسب المنطقة.

#>>Categorize regions as “High-Performing” or “Under-Performing” based on total SalesAmount compare to Sales Average.

Aقم بتصنيف المناطق على أنها "ذات أداء عالٍ" أو "ذات أداء ضعيف" استنادًا إلى إجمالي مبلغ المبيعات مقارنة بمتوسط المبيعاتA.

—----------

4>>Product Demand Indicator.

#>>”High Demand” if UnitsSold per product category surpasses 50 units within the current year

A"طلب مرتفع" إذا تجاوز عدد الوحدات المباعة لكل فئة منتج 50 وحدة خلال العام الحالي"A

,otherwise,

Label as “Low Demand.”تصنيف "الطلب المنخفض"

—----------

>>Sales and Customer Analysis For The Retailer Company<<

>>Aتحليل المبيعات والعملاء لشركة التجزئةA.<<

—----------

>>Business Requirements KPIs<<

>>Aمؤشرات الأداء الرئيسية لمتطلبات الأعمالA<<

—----------

Improve decision making and sales performance.

>>Aتحسين عملية اتخاذ القرار وأداء المبيعاتA.<<

—----------

Write Power BI Data Analysis Expressions (DAX):-

1>>Most Used Logical functions الوظائف المنطقية الأكثر استخداما.

2>>Logical Functions:-

1.AND.

2.OR.

3.IF.

4.Switch case .

5.True.

6.FALSE.

—----------

Learn DAX and Data Modeling.

—----------

1>>Create Table Display KPIS إنشاء جدول لعرض مؤشرات الأداء الرئيسية.

1.CustomerID Column.

2.Year Column.

3.Sum Of SalesAmount Column.

4.SalesAmount indicator Column.

5.Orderscount.

—----------

>>ID is a short form for identity ID هو اختصار لكلمة هوية.

—------------------------------

1>>Aمؤشر حجم المبيعاتA

SalesAmount_Indicator =

IF(SUM(RetailxData[SalesAmount]) > 10000,”High Value”,”Low Value”)

—------------------------------

2>>Choose Table Visualiza.

1.CustomerID.

2.SalesAmount_Indicator.

—-------------------------------

3>>SalesAmount_Indicator =

IF(SUM(RetailxData[SalesAmount]) > 10000,”🟢”,”🔴”)

—-------------------------------

4>>Symbols | ⋆. 𐙚 ˚⋆˚𐙚 **name** ϑϱ˚⋆୨୧♡ | Copy & Paste.

—-------------------------------

5>>Must {One-To-Many} To Use This.

—-------------------------------

6>>

—-------------------------------

1>>Filter context in power bi.

2>>Power bi default Aggregations.

3>>KPI Card.

4>>Key Performance Indicator (KPI) visuals - Power BI.

—--------------------------------

CustomerDuration = DATEDIFF(RELATED(CustomerDim[FirstPurchaseDate]), RELATED(CustomerDim[LastPurchaseDate]),MONTH)

—--------------------------------

One-to-many relationship.

—--------------------------------

CustomerDuration = DATEDIFF(RELATED(CustomerDim[FirstPurchaseDate]), RELATED(CustomerDim[LastPurchaseDate]),MONTH)

2022-01-15 - 2022-06-10 = 5 Months.

—---------------------------------

>>Allows you to fetch values from a related table without manually joining tables.

>>One-to-one or many-to-one relationship.

—---------------------------------

CustomerDuration =

Var FirstPurchaseDate = RELATED(CustomerDim[FirstPurchaseDate])

Var LastPurchaseDate = RELATED(CustomerDim[LastPurchaseDate])

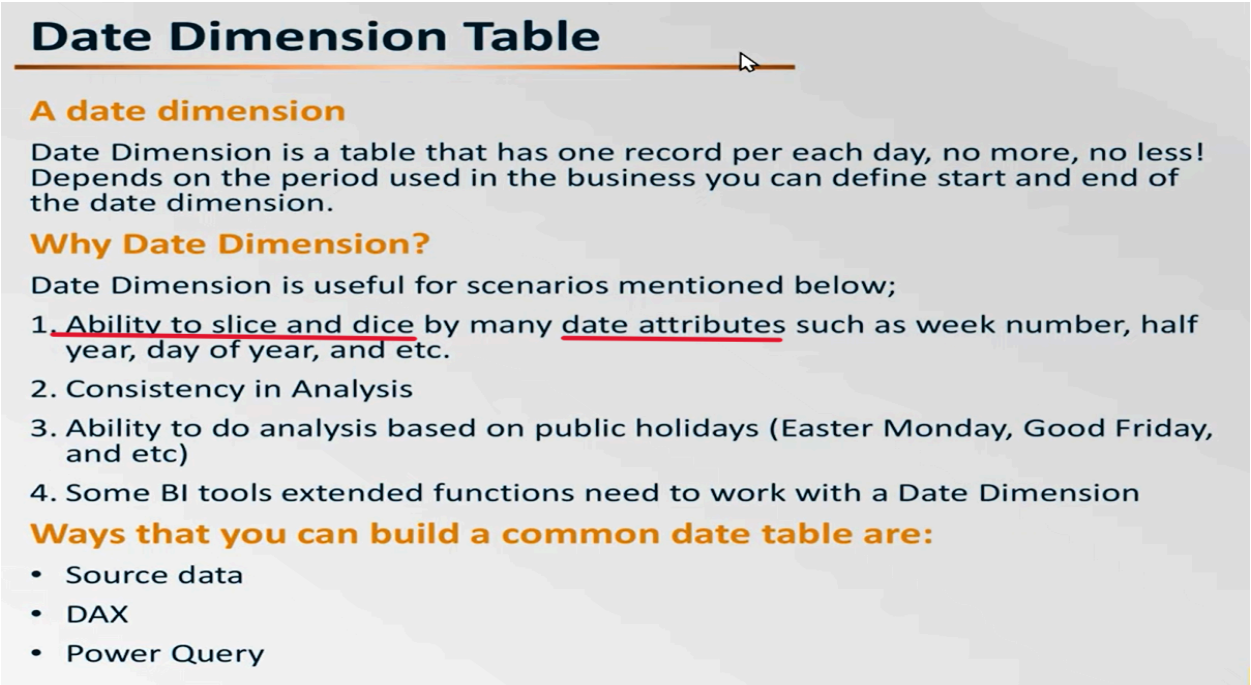
RETURN DATEDIFF(FirstPurchaseDate, LastPurchaseDate,MONTH)

—-------------------------------------

Customer Loyalty Segmentation تقسيم ولاء العملاء.
>>Segment customers as “New”,”Regular” and “Loyal” based on CustomerTenure.
>>Aإلى استنادًا "مخلصين" و"عاديين" و"جدد" إلى العملاء بتقسيم قم CustomerTenure العميل مدة..A
>>New(<= 6 Months) Regular(6 - 9 Months) Loyal(9 Months) Use.
—----------
IF And SWITCH.
—----------
Customer Segmentation =
IF(RetailxData[CustomerDuration] < 6 , “New”,
IF(RetailxData[CustomerDuration] > 6 &&
RetailxData[CustomerDuration] < 9, ”Regular”,
“Loyal”))
—----------
Customer Segmentation =
SWITCH(TRUE(),
RetailxData[CustomerDuration < 6,”New”,
AND(RetailxData[CustomerDuration] > 6,
RetailxData[CustomerDuration] < 9),”Regular”,”Loyal”)
—----------
SalesAmount(AVG) = AVERAGE(RetailxData[SalesAmount])
—----------
SalesAmount(AVG) =
CALCULATE(AVERAGE(RetailxData[SalesAmount]), ALL(RetailXData))
—----------
>>Ignoring any filters that might have been applied.
>>Aتجاهل أي مرشحات ربما تم تطبيقها.A
—----------
RegionBehaviour = IF(AVERAGE(RetailxData[SalesAmount]) >=
[SalesAmount(AVG)],”✅”,”❌”)
—----------
RegionBehaviour = IF(AVERAGE(RetailxData[SalesAmount]) >=
[SalesAmount(AVG)],”✅”,”❌”)
—----------
Task.
—----------
1>>VIP-Customer.
#>>Order Count Per Year > 10 And
Amount Per Year > 10K
Then True(), False().
—----------
2>>Sales by Region Analysis.

#>>Categorize regions as
“High-Performing” or
“Under-Performing”
based on total SalesAmount compare to Sales Average.
—----------------------------------
3>>Product Demand indicator.
#>>”High Demand” if UnitsSold per product category surpasses 50 units within the year, otherwise, label as “Low Demand.”
—----------------------------------
4>>Customer Feedback Satisfactionرضا العملاء عن التعليقات.
#>>Flag customer feedback as “Positive”
if CustomerFeedback is >=4,Otherwise “Negative”.
—----------------------------------
>>Lec4 Filter Context In Power BI | Intermediateمتوسط<<
—----------------------------------
Row context and filter context in Power BI.
>>Measure Context<<
—----------------------------------
>>Employee Budget Utilization Overview<<نظرة عامة على استخدام ميزانية الموظفين>>
1>>Total Budget الميزانية الإجمالية.
2>>Total Expenses إجمالي النفقات.
3>>Remaining متبقي.
—----------------------------------
1>>Total Budget by Employee إجمالي الميزانية حسب الموظف.
2>>Total Expenses by Employee إجمالي النفقات حسب الموظف.
3>>Remaining by Employee المتبقي من قبل الموظف.
—----------------------------------
>>You are tasked with conducting a comprehensive Expense and Budget Utillization Analysis for employees across multiple countries.
AAلقد تم تكليفك بإجراء تحليل شامل للنفقات واستخدام الميزانية للموظفين في بلدان متعددةAA.
—----------------------------------
1>>Remaining_M % = DIVIDE(
SUM(Employee_Expense[Expense]), Sum(Employee_Expense[Budget]))
2>>Aالمصروفات A/AميزانيةA
3>>Sum Expense مجموع المصروفات/ Sum Budget مجموع الميزانية.
—----------------------------------
1>>Remainnng Val EUR =
Sum(Employee_Expense[Budget]) - Sum(Emplyee_Expense[Expense])
2>>Sum(Employee_Expense[Budget]) - Sum(Employee_Expense[Expense])
—----------------------------------

3>>Remainning LC =
Var RemainEUR = (Employee_Expense[Budget] - Employee_Expense[Expense])
RETURN RemainEUR * RELATED(Exchange_Rates[Exchange Rate])
—----------
Lec5 Filter Context In Power BI | Inter_mediate.
—----------
1>>Total Budget الميزانية الإجمالية.
2>>Total Expenses إجمالي النفقات.
3>>Remaining متبقي.
—----------
Expenses % = DIVIDE(Employee_Expense[Expense],Employee_Expense[Budget])
—----------
RemainEUR =
Sum(Employee_Expense[Budget]) - Sum(Employee_Expense[Expense])
—----------
Return RemainEUR * RELATED(Exchage_Rates[Exchange Rate])
—----------
Remaining LC_M = SUMX(Employee_Expense,Employee_Expense[Budget] -
Employee_Expense[Expense] * RELATED(Exchage_Rates[Exchange Rate]))
—----------
Create Date Dimension Using DAX إنشاء بُعد التاريخ باستخدام DAX
—----------



Create Date Dimension Using DAX.

```
DateTable =
VAR startdate = DATE(2020,1,1)
var EndDate = DATE(2030,12,31)
VAR DateColumn =  CALENDAR( startdate,EndDate )
var Calender =
ADDCOLUMNS(
    DateColumn,
     "Year", YEAR([Date]),
     "Month", MONTH([Date]),
     "MonthName", FORMAT([Date], "MMMM"),
     "Day", DAY([Date]),
     "DayName", FORMAT([Date], "dddd"),
     "Quarter", "Q" & FORMAT([Date], "Q"),
     "WeekNum", WEEKNUM([Date]),
     "WeekdayNum", WEEKDAY([Date]),
     "IsWeekend", IF(WEEKDAY([Date], 2) > 5, TRUE, FALSE),
     "IsWeekday", IF(WEEKDAY([Date], 2) <= 5, TRUE, FALSE),
     "MonthYear", FORMAT([Date], "MMM YYYY"),
     "QuarterYear", "Q" & FORMAT([Date], "Q") & " " & YEAR([Date]),
     "YearMonthDay", FORMAT([Date], "YYYY-MM-DD")
)
return
Calender
```

```
Date(Dim)=

var MinDate = MIN('Sales SalesOrderHeader'[OrderDate])
var MaxDate = MAX('Sales SalesOrderHeader'[OrderDate])

var minYear = YEAR(MinDate)
var MaxYear = YEAR(MaxDate)

var StartDate = DATE(minYear, 1 , 1)
Var EndDate = DATE(MaxYear, 12 , 31)

VAR CalenderTable =

ADDCOLUMNS(

    CALENDAR(StartDate , EndDate) ,
    "Year" , YEAR([Date]) ,
    "Quarter" , "Q." & QUARTER(Date

)
```

```
Var EndDate = DATE(MaxYear, 12 , 31)

VAR CalenderTable =

ADDCOLUMNS(

    CALENDAR(StartDate , EndDate) ,
    "Year" , YEAR([Date]) ,
    "Quarter" , "Q." & QUARTER([Date]) ,
    "Month.No" , MONTH([Date]),
    "Month Name " , FORMAT([Date] , "mmm" ) ,
    "Day" , FORMAT([Date] , "DD" ) ,
    "DayName" , FORMAT([Date] , "ddd" ) ,
    "DateKey" , FORMAT([Date] , "YYYYMMDD" ),
    "IsWeekend" , IF( WEEKNUM([Date] ,1) <= 5 , FALSE() , TRUE())
)

RETURN
CalenderTable

```
