Data Modeling in Power BI

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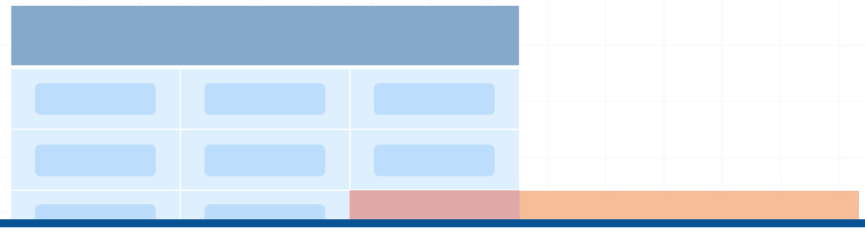

Creating a Calculated Column

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Calculated Columns

Additional column of information – **put into our dataset by writing a formula**

FOUMULA SYNTAX

Column Name = → Amount of commission a trader will receive → Commission Value =

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Mathematical Equation - Operators

+	-	*	/
Add	Subtract	Multiply	Divide

*Asterix

! Syntax requires symbols to function !

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Field Names

Table Name [Field Name]

Trades [Stock Cash Value]

[FIELD NAME MUST BE IN SQUARE BRACKETS]

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Stock Cash Value	Trader Commission
100000	5.00%
200000	5.00%
300000	3.00%
400000	6.00%
500000	2.00%
600000	9.00%
700000	6.00%
800000	4.00%
900000	3.00%
150000	1.10%

Commission Value = Trades [Stock Cash Value] * Trades [Trader Commission]

MULTIPLY (Asterix)

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ACTUAL	THRESHOLD
35028	43455
22954	43455
86411	43455
52769	43455
77856	43455

Using an IF Function

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Flexibility in how we calculate our data

DAX Function

Advanced calculations and derive information from all sorts of data

TEXT NUMBERS DATES

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Function Syntax

BRACKETS REQUIRED — **COMMA** REQUIRED

Column Name = **FunctionName** (Argument,Argument2,Argument3...)

One of the **most common** and **powerful functions** in DAX is the **IF function**

Column Name = **IF** (Logical Test, Value if True, Value if False)

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IF FUNCTION

Logical Operators return **TRUE** or **FALSE**

<	=	>
Less than	Equal to	Greater than

5<10 **TRUE**

5>10 **FALSE**

5=10 **FALSE**

Returns **1 of 2 answers** depending on result of test

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IF FUNCTION

ACTUAL	THRESHOLD
35028	43455
22954	43455
38804	43455
79617	43455
86411	43455
52769	43455
77856	43455
28070	43455

Threshold Met = IF (TradeValues[Actual] > = TradeValues[Threshold], “Yes”, “No”)

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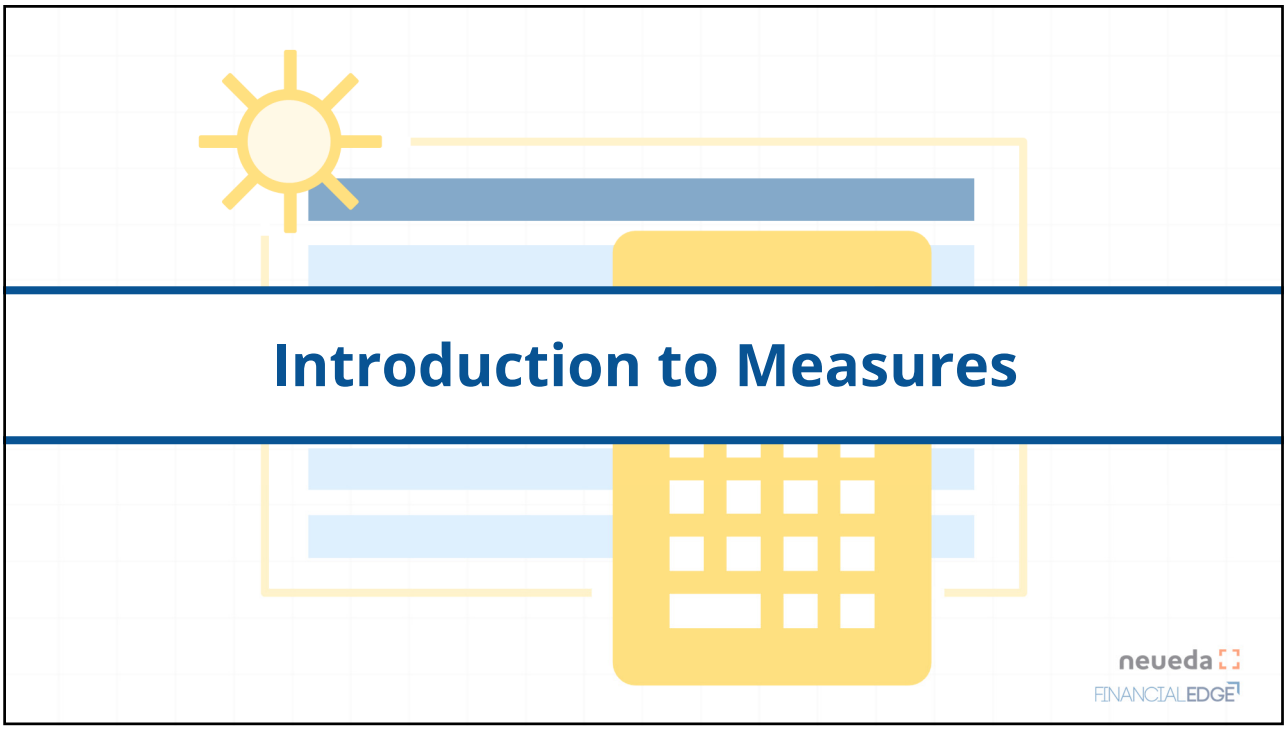
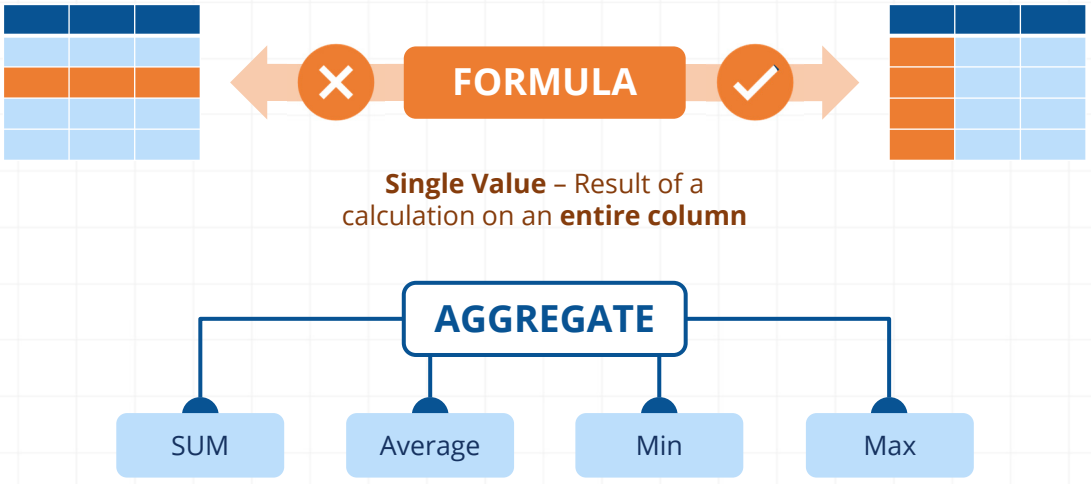


Measures



Single Value – Result of a calculation on an **entire column**

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2 Types of Measures

IMPLICIT	EXPLICIT
Easy to use	Requires a formula to be written
No formula writing	Can be complex
Built-in to the report	Greater flexibility when combined with other DAX functions
Limited range of options	

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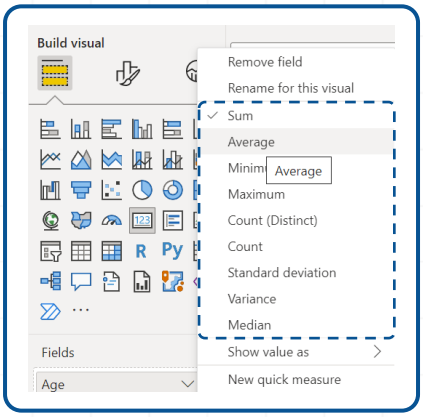
Implicit Measure

8567
AGE

CHANGE ON VISUALIZATIONS PANE

47.33
AVERAGE AGE

AGE
38
53
41
62



AGE
38
53
41
62

Default calculation on a numeric field is **SUM**

No formula required

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Explicit Measure

More efficient if being used regularly

1

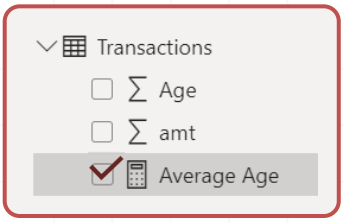
WRITE FORMULA

Average age =

Average(Transactions[Age])

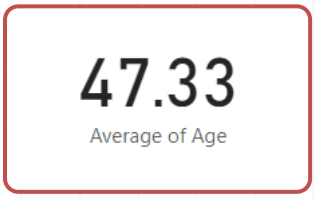
2

ADAPT FIELD LIST



3

INSERT VISUAL



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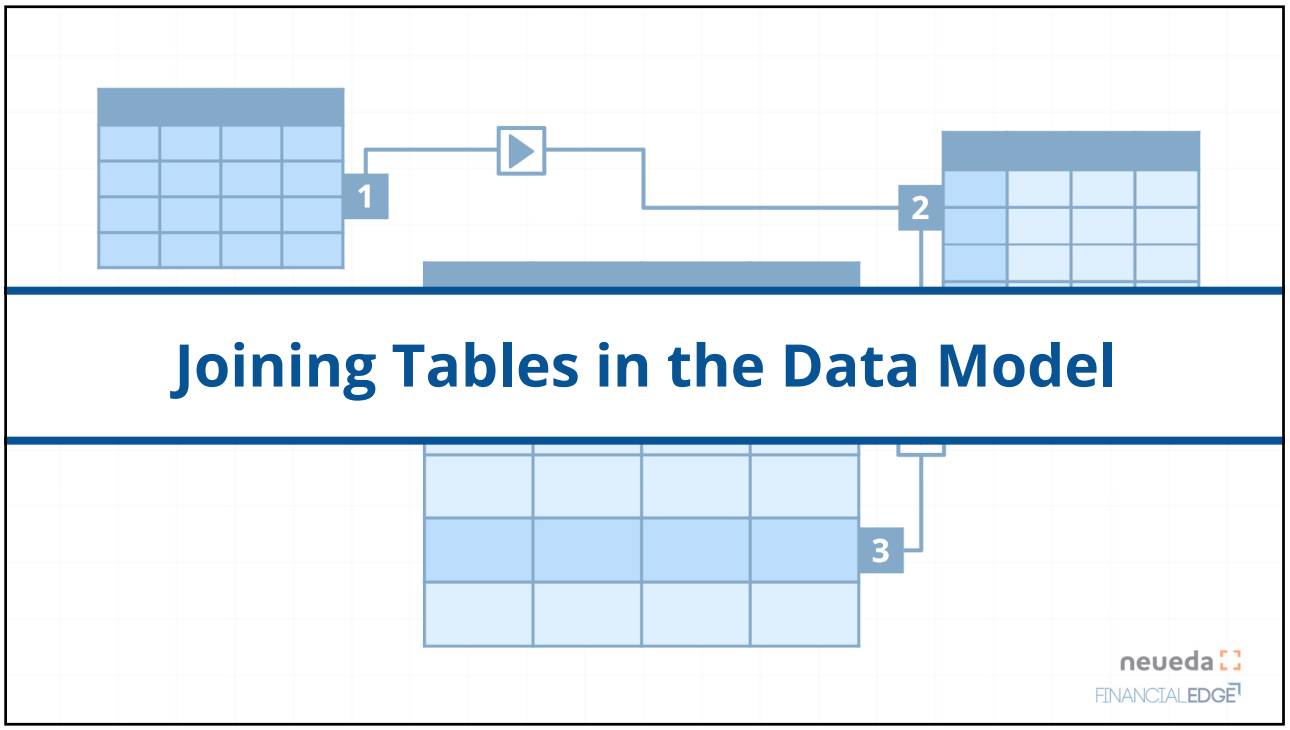
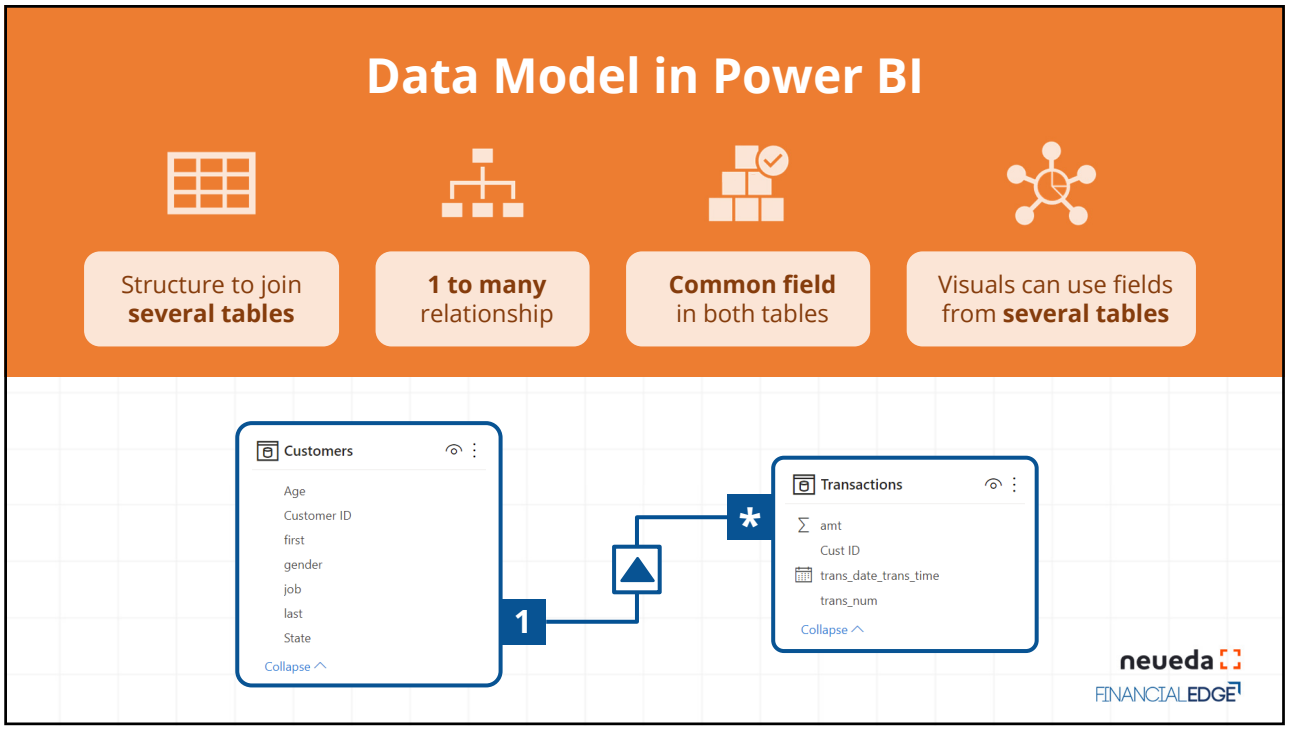
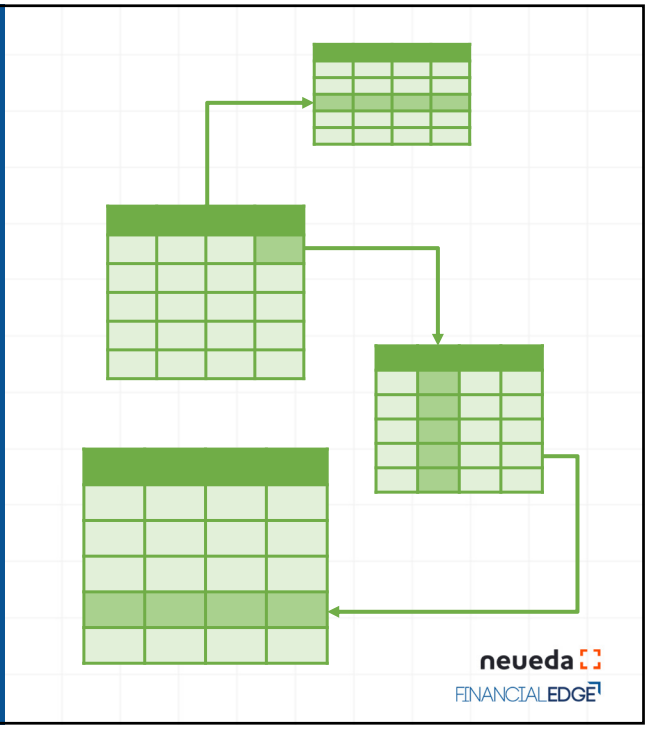




Creating a 1 to many Relationship

- Use **data view**
- Drag and drop
- Requires data to be **unique (1) in one table** but can be **duplicated (many times) in the other**



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