

# POWER PIVOT

---

DAX – DATA ANALYSIS EXPRESSIONS

# M vs DAX (Data Analysis Expressions)

	Description	Application
M	Power Query Formula Language	Data Preparation
	Data Transformation	Before Data Model
DAX	<b>D</b> ata <b>A</b> nalysis <b>E</b> xpression Language	Create Insights
	Analytical Data Calculations	In Data Model
	Comparable to Excel Functions	

# DAX Basics

DAX Reference

<https://docs.microsoft.com/en-us/dax/>

Syntax

Formula = ...

Data Types

String

Number

...

Operators

+

-

...

Functions

CONCATENATE()

Basics



Advanced

DAX Statements

DEFINE

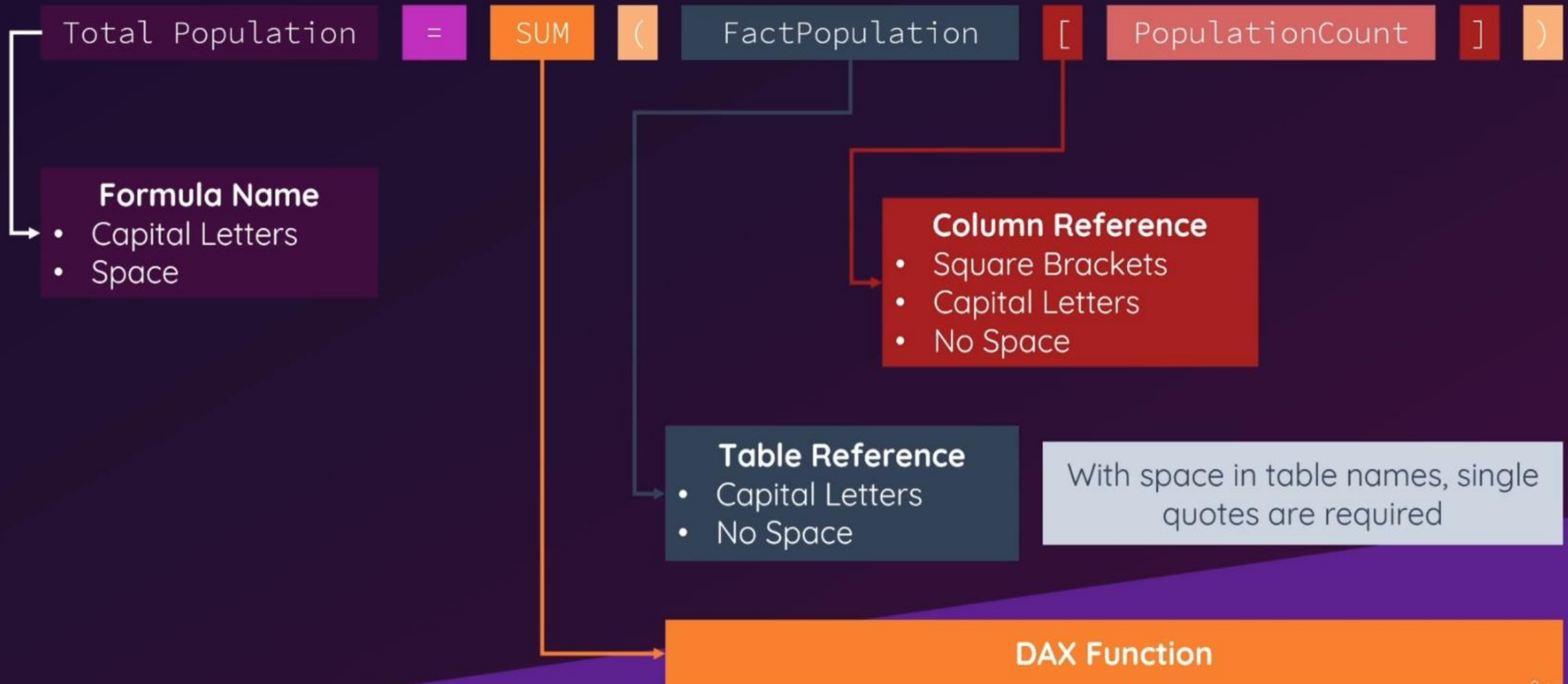
EVALUATE

ORDER BY

VAR

DAX Queries

# The Core DAX Syntax



# DAX Data Types

String (Text)

“The DAX Basics”

Whole & Decimal Numbers

564

949.59

Boolean

TRUE

FALSE

Date/Time

January 1st 2020

Currency

Blank (NA)

# DAX Operators

Arithmetic	Comparison	Logical	Text concat.
+	=	&&	&
-	==		
*	>	IN	
/	>=		
^	<>		

# DAX Core Functions

Type	Function	Output
Text	CONCATENATE("I Love Power","BI")	I Love PowerBI
Information	ISNUMBER(2020)	TRUE
Logical	IF([Population]>100000,"Big","Small")	BigSmall
Math	ROUND(352.867, 2)	352.87
Statistical	AVERAGE(Fact-Pop[Population])	
Filter	FILTER(Fact-Pop[Year]=2020)	
Date & Time	CALENDAR(DATE(2000,01,01),DATE(2020,12,31))	

# Calculated Column or Measure?

Calculated  
Column

“Perform an operation that generates  
results for each row of your table”



Measure

“Return a single result of a calculation or  
an aggregated value (e.g. Averages)”

