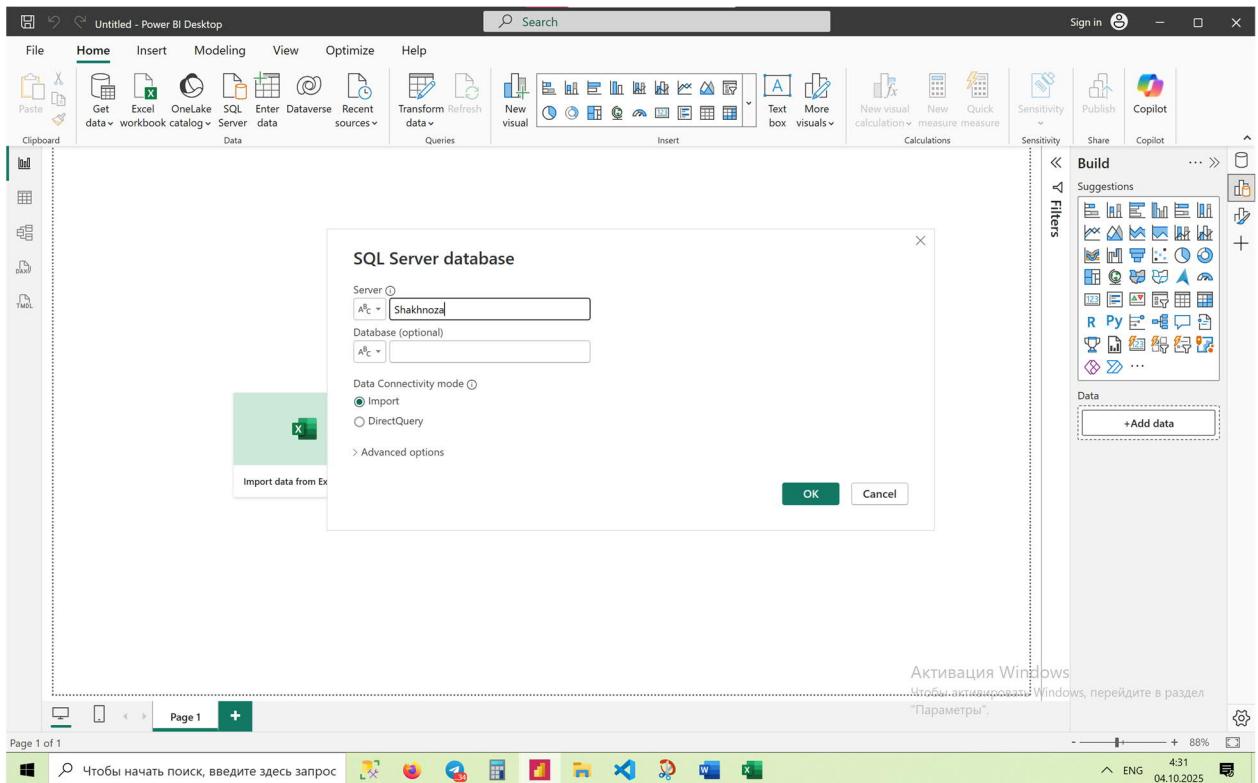
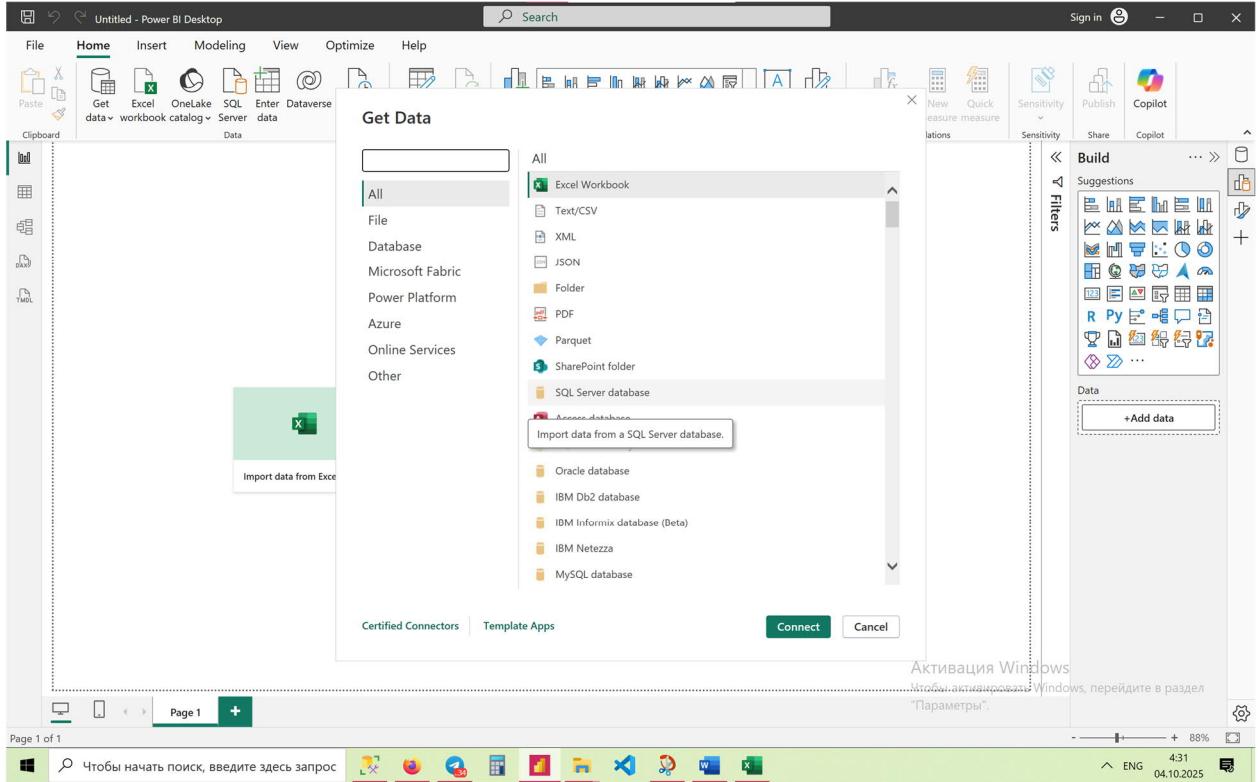


Lesson-12

In order to make this lesson, we should load our data. For this lesson we work with SQL Server Database.



The screenshot shows the Power BI Desktop interface. In the left sidebar, the 'Navigator' pane is open, displaying a tree view of available tables: Shakhnoza [62], AdventureWorks2012 [102], and AdventureWorksDW2012 [41]. Under 'AdventureWorksDW2012', several tables are listed, including vAssocSeqLineItems, vAssocSeqOrders, vDMPrep, vTargetMail, vTimeSeries, AdventureWorksDWBuildVersion, DatabaseLog, DimAccount, DimCurrency, and DimCustomer. The 'DimCustomer' table is selected and highlighted with a green border. To the right of the Navigator, a preview of the 'DimCustomer' table is shown with 14 rows of data. The columns are CustomerKey, GeographyKey, CustomerAlternateKey, Title, and FirstName. The preview message indicates that the data has been truncated due to size limits. Below the preview are buttons for 'Load', 'Transform Data', and 'Cancel'. The status bar at the bottom shows 'Page 1 of 1' and various system icons.

◆ ♦asic Level (1–10)

1. Concatenate First and Last Name

Full Name = DimCustomer[FirstName] & " " & DimCustomer[LastName]

The screenshot shows the Power BI Desktop interface with the 'Table tools' ribbon selected. The 'Column tools' tab is active. In the main area, a preview of the DimCustomer table is displayed with 1848 rows. A new column named 'FullName' is visible, containing the concatenated string of 'FirstName' and 'LastName' separated by a space. The preview includes columns such as 'Occupation', 'HouseOwnerFlag', 'NumberCarsOwned', 'AddressLine1', 'AddressLine2', 'Phone', 'DateFirstPurchase', 'CommuteDistance', and the newly created 'FullName'. To the right of the preview, the 'Data' pane is open, showing the schema of the DimCustomer table with columns like CustomerKey, GeographyKey, CustomerAlternateKey, Title, FirstName, LastName, etc. The status bar at the bottom shows 'Page 1 of 1' and various system icons.

2. Convert Email Address to Uppercase

Email_Upper = UPPER(DimCustomer[Email Address])

Untitled - Power BI Desktop

File Home Help Table tools Column tools

Name E-mail Upper

Format Text

Summarization Don't summarize

Data category Uncategorized

Sort by column Sort

Data groups Groups

Manage relationships Relationships

New column Calculations

Structure

Formatting Properties

1 E-mail Upper = UPPER(DimCustomer[EmailAddress])

numberCarsOwned	AddressLine1	AddressLine2	Phone	DateFirstPurchase	CommuteDistance	FullName	E-mail Upper
7	Am Gallberg 645		1 (11) 500 555-0125	10 <i>июня</i> 2013 г.	2-5 Miles	Larry Gill	LARRY16@ADVENTURE-WORKS.COM
1	1538 Golden Meadow		1 (11) 500 555-0131	18 <i>января</i> 2012 г.	0-1 Miles	Geoffrey Gonzalez	GEOFFREY16@ADVENTURE-WORKS.COM
7	4519 Lydia Lane		1 (11) 500 555-0140	10 <i>января</i> 2012 г.	0-1 Miles	Blake Collins	BLAKE47@ADVENTURE-WORKS.COM
7	Residenz Straße 98		1 (11) 500 555-0191	19 <i>октября</i> 2013 г.	2-5 Miles	Alexa Watson	ALEXA0@ADVENTURE-WORKS.COM
7	Werftstr 544		1 (11) 500 555-0134	1 <i>августа</i> 2013 г.	2-5 Miles	Jacquelyn Dominguez	JACQUELYN13@ADVENTURE-WORKS.COM
1	2035 Emmons Canyon Lane		1 (11) 500 555-0115	11 <i>мая</i> 2013 г.	0-1 Miles	Casey Gutierrez	CASEY34@ADVENTURE-WORKS.COM
7	Hüttenstr 20995		1 (11) 500 555-0174	19 <i>июня</i> 2013 г.	2-5 Miles	Colleen Lu	COLLEN11@ADVENTURE-WORKS.COM
7	Alte Landstr 9902		1 (11) 500 555-0129	7 <i>апреля</i> 2013 г.	2-1 Miles	Jeremiah Stewart	JEREMIAH44@ADVENTURE-WORKS.COM
1	9405 Curletto Dr.		1 (11) 500 555-0122	9 <i>ноября</i> 2013 г.	2-5 Miles	Leah Li	LEAH2@ADVENTURE-WORKS.COM
7	Carispielplatz 43		1 (11) 500 555-0146	28 <i>января</i> 2014 г.	1-2 Miles	Frank Ramos	FRANK25@ADVENTURE-WORKS.COM
7	Rothäuser Weg 100		1 (11) 500 555-0114	6 <i>ноября</i> 2013 г.	0-1 Miles	Candice He	CANDICE2@ADVENTURE-WORKS.COM
1	1318 Pinehurst Court		1 (11) 500 555-0136	11 <i>декабря</i> 2013 г.	2-5 Miles	Andrea Cox	ANDREA11@ADVENTURE-WORKS.COM
7	1153 Loma Linda		1 (11) 500 555-0160	17 <i>сентября</i> 2013 г.	2-5 Miles	Jill Rubio	JILL29@ADVENTURE-WORKS.COM
7	Kappelweg 242		1 (11) 500 555-0133	15 <i>ноября</i> 2011 г.	0-1 Miles	Darren Alvarez	DARREN26@ADVENTURE-WORKS.COM
1	8489 Seaview Ave.		1 (11) 500 555-0115	1 <i>июня</i> 2013 г.	2-5 Miles	Natasha Sanz	NATASHA20@ADVENTURE-WORKS.COM
7	5115 Meadowbrook Court		1 (11) 500 555-0193	21 <i>февраля</i> 2013 г.	2-5 Miles	Autumn Zhu	AUTUMN13@ADVENTURE-WORKS.COM
7	Attaché de Presse		1 (11) 500 555-0171	11 <i>мая</i> 2012 г.	2-5 Miles	George Louwerdis	GEORGES@ADVENTURE-WORKS.COM
7	Zollhof 6678		1 (11) 500 555-0191	1 <i>апреля</i> 2013 г.	0-1 Miles	Dwayne Martin	DWAYNE0@ADVENTURE-WORKS.COM
7	973 Broadway Street		1 (11) 500 555-0135	19 <i>июня</i> 2011 г.	0-1 Miles	Edwin Zhao	EDWIN11@ADVENTURE-WORKS.COM
7	9546 Cardinal Ct.		1 (11) 500 555-0178	17 <i>февраля</i> 2012 г.	0-1 Miles	Joel Raman	JOEL11@ADVENTURE-WORKS.COM
7	9428 Meaffey Way		1 (11) 500 555-0196	4 <i>марта</i> 2012 г.	0-1 Miles	Cassie Luo	CASSIE4@ADVENTURE-WORKS.COM
1	8614 Lagoon Court		1 (11) 500 555-0133	10 <i>апреля</i> 2013 г.	2-5 Miles	Mayra Chandra	MAYRA1@ADVENTURE-WORKS.COM
7	Pascalstr 24		1 (11) 500 555-0158	27 <i>марта</i> 2013 г.	2-5 Miles	Michele Ruiz	MICHELE37@ADVENTURE-WORKS.COM
7	6594 Bent Tree Lane		1 (11) 500 555-0139	15 <i>июня</i> 2013 г.	2-5 Miles	Jodi Xu	JODIS@ADVENTURE-WORKS.COM
7	939 Vista Del Diablo		1 (11) 500 555-0155	1 <i>марта</i> 2012 г.	0-1 Miles	Rosa Wu	ROSA7@ADVENTURE-WORKS.COM
7	76, rue Pierre-Demoulin		1 (11) 500 555-0175	17 <i>августа</i> 2011 г.	2-5 Miles	Kelli Kumar	KELL130@ADVENTURE-WORKS.COM
7	4096 San Remo		1 (11) 500 555-0137	18 <i>ноября</i> 2013 г.	1-2 Miles	Alisha Sun	ALISHA13@ADVENTURE-WORKS.COM
7	Winter der Böck 8559		1 (11) 500 555-0112	31 <i>октября</i> 2013 г.	2-5 Miles	Roy Mehta	ROY14@ADVENTURE-WORKS.COM
7	Krönrena 92		1 (11) 500 555-0119	20 <i>января</i> 2014 г.	2-5 Miles	Dominic Chandra	DOMINIC3@ADVENTURE-WORKS.COM

DimCustomer (18 484 rows) Column: E-mail Upper (18 484 distinct values)

Search

Sign in

Data

Search

DimCustomer

AddressLine1

AddressLine2

BirthDate

CommuteDistance

CustomerAlternateKey

CustomerKey

DateFirstPurchase

E-mail Upper

EmailAddress

EnglishEducation

EnglishOccupation

FirstName

FrenchEducation

FrenchOccupation

FullName

Gender

GeographyKey

HouseOwnerFlag

LastName

MaritalStatus

MiddleName

NameStyle

NumberCarsOwned

NumberChildrenAtHome

Windows

переидите в раздел

ENG 04.10.2025

3. Extract First 3 Characters from First Name

```
First3Chars = LEFT(DimCustomer[FirstName], 3)
```

File Home Help Table tools Column tools

Structure

Formatting

Properties

Sort by column

Data groups

Manage relationships

New column

Calculated columns

1 First_3_chars = LEFT(DimCustomer[FirstName], 3)

	AddressLine1	AddressLine2	Phone	DateFirstPurchase	CommuteDistance	FullName	E-mail Upper	First 3 chars
1	Arn Gallberg 645		1 (11) 500 555-0125	10 июля 2013 г.	2-5 Miles	Larry Gill	LARRY16@ADVENTURE-WORKS.COM	Lar
7	1538 Golden Meadow		1 (11) 500 555-0131	18 января 2012 г.	0-1 Miles	Geoffrey Gonzalez	GEOFFREY16@ADVENTURE-WORKS.COM	Geo
7	4519 Lydia Lane		1 (11) 500 555-0140	10 января 2012 г.	0-1 Miles	Blake Collins	BLAKE47@ADVENTURE-WORKS.COM	Bla
1	Residenz Straße 98		1 (11) 500 555-0191	19 октября 2013 г.	2-5 Miles	Alexa Watson	ALEXA0@ADVENTURE-WORKS.COM	Ale
7	Werftstr 544		1 (11) 500 555-0134	1 августа 2013 г.	2-5 Miles	Jacqueline Dominguez	JACQUELYN13@ADVENTURE-WORKS.COM	Jac
1	2035 Emmons Canyon Lane		1 (11) 500 555-0115	11 марта 2013 г.	0-1 Miles	Casey Gutierrez	CASEY4@ADVENTURE-WORKS.COM	Cas
7	Hüttenstr 20995		1 (11) 500 555-0174	19 июня 2013 г.	2-5 Miles	Colleen Lu	COLLEEN1@ADVENTURE-WORKS.COM	Col
7	Alte Landstr 9902		1 (11) 500 555-0129	7 апреля 2013 г.	1-2 Miles	Jeremiah Stewart	JEREMIAH44@ADVENTURE-WORKS.COM	Jer
7	9405 Curletto Dr.		1 (11) 500 555-0122	9 ноября 2013 г.	2-5 Miles	Leah Li	LEAH2@ADVENTURE-WORKS.COM	Lea
7	Carlsplatz 43		1 (11) 500 555-0146	28 января 2014 г.	1-2 Miles	Frank Ramos	FRANK25@ADVENTURE-WORKS.COM	Fra
1	Rotthäuser Weg 100		1 (11) 500 555-0114	6 ноября 2013 г.	0-1 Miles	Candice He	CANDICE2@ADVENTURE-WORKS.COM	Can
7	1318 Pinehurst Court		1 (11) 500 555-0136	11 декабря 2013 г.	2-5 Miles	Andrea Cox	ANDREA1@ADVENTURE-WORKS.COM	And
7	1153 Loma Linda		1 (11) 500 555-0116	11 сентября 2013 г.	2-5 Miles	Jill Rubio	JILL29@ADVENTURE-WORKS.COM	Jil
7	Kappelweg 242		1 (11) 500 555-0133	15 ноября 2011 г.	0-1 Miles	Darren Alvarez	DARREN2@ADVENTURE-WORKS.COM	Dar
7	8489 Seaview Ave.		1 (11) 500 555-0115	1 июня 2013 г.	2-5 Miles	Natascha Sano	NATASHA20@ADVENTURE-WORKS.COM	Nat
7	5115 Meadowbrook Court		1 (11) 500 555-0193	21 февраля 2013 г.	2-5 Miles	Autumn Zhu	AUTUMN13@ADVENTURE-WORKS.COM	Aut
1	Attaché de Presse		1 (11) 500 555-0171	11 мая 2012 г.	2-5 Miles	George Louverdis	GEORGES@ADVENTURE-WORKS.COM	Geo
7	Zollhof 6678		1 (11) 500 555-0191	1 апреля 2013 г.	0-1 Miles	Dwayne Martin	DWAYNE0@ADVENTURE-WORKS.COM	Dwa
7	973 Broadway Street		1 (11) 500 555-0135	19 июня 2011 г.	0-1 Miles	Edwin Zhao	EDWIN11@ADVENTURE-WORKS.COM	Edw
7	9546 Cardinal Ct.		1 (11) 500 555-0178	17 февраля 2012 г.	0-1 Miles	Joel Raman	JOEL11@ADVENTURE-WORKS.COM	Joe
7	9428 Mehaffey Way		1 (11) 500 555-0196	4 марта 2012 г.	0-1 Miles	Cassie Luo	CASSIE@ADVENTURE-WORKS.COM	Cas
7	8514 Lagoon Court		1 (11) 500 555-0133	10 апреля 2013 г.	2-5 Miles	Mayra Chandra	MAYRA1@ADVENTURE-WORKS.COM	May
7	Pascalstr 24		1 (11) 500 555-0158	27 марта 2013 г.	2-5 Miles	Michele Ruiz	MICHELE37@ADVENTURE-WORKS.COM	Mic
1	6594 Bent Tree Lane		1 (11) 500 555-0139	15 июня 2013 г.	2-5 Miles	Jodi Xu	JODI5@ADVENTURE-WORKS.COM	Jod
7	939 Vista Del Diablo		1 (11) 500 555-0155	1 марта 2012 г.	0-1 Miles	Rosa Wu	ROSA7@ADVENTURE-WORKS.COM	Ros
7	76, rue Pierre-Demoulin		1 (11) 500 555-0175	11 августа 2011 г.	2-5 Miles	Kelli Kumu	KELLI30@ADVENTURE-WORKS.COM	Kel
7	4096 San Remo		1 (11) 500 555-0137	18 ноября 2013 г.	1-2 Miles	Alisha Sun	ALISHA13@ADVENTURE-WORKS.COM	Ali
7	Winter der Böck 8559		1 (11) 500 555-0112	31 октября 2013 г.	2-5 Miles	Roy Mehta	ROY14@ADVENTURE-WORKS.COM	Roy
7	Krönemeier 92		1 (11) 500 555-0119	20 января 2014 г.	2-5 Miles	Dominic Chandra	DOMINIC3@ADVENTURE-WORKS.COM	Domi

Table: DimCustomer (18 484 rows) Column: First_3_chars (381 distinct values)

Search

Sign in

ENG 04.10.2025 4:49

4. Count Characters in Last Name

LastNameLength = LEN(DimCustomer[LastName])

Table: DimCustomer (18 404 rows) Column: LastNameLength (13 distinct values)

Чтобы начать поиск, введите здесь запрос

Активация Windows
Чтобы активировать Windows, перейдите в раздел MiddleName

4:52 04.10.2025

5. Convert First Name to Lowercase

FirstNameLower = LOWER(DimCustomer[FirstName])

Table: DimCustomer (18 404 rows) Column: FirstNameLower (670 distinct values)

Чтобы начать поиск, введите здесь запрос

Активация Windows
Чтобы активировать Windows, перейдите в раздел MiddleName

4:53 04.10.2025

6. Trim Spaces in EnglishEducation

`EducationTrimmed = TRIM(DimCustomer[EnglishEducation])`

The screenshot shows the Power BI Desktop interface with the 'Table tools' ribbon selected. A tooltip displays the DAX formula `1 EducationTrimmed = TRIM(DimCustomer[EnglishEducation])`. The Data pane on the right shows the structure of the DimCustomer table, including columns like DateFirstPurchase, CommuteDistance, FullName, and EducationTrimmed.

DateFirstPurchase	CommuteDistance	FullName	E-mail Upper	First_3_chars	LastLength	FirstNameLower	EducationTrimmed	
125	10 июля 2013 г.	2-5 Miles	Larry Gill	LARRY16@ADVENTURE-WORKS.COM	Lar	4	larry	Partial College
131	18 января 2012 г.	0-1 Miles	Geoffrey Gonzalez	GEOFFREY16@ADVENTURE-WORKS.COM	Geo	8	geoffrey	Partial College
140	10 января 2012 г.	0-1 Miles	Blake Collins	BLAKE47@ADVENTURE-WORKS.COM	Bla	7	blake	Partial College
191	19 октября 2013 г.	2-5 Miles	Alexa Watson	ALEXA0@ADVENTURE-WORKS.COM	Ale	6	alexa	Partial College
134	1 августа 2013 г.	2-5 Miles	Jacquelyn Dominguez	JACQUELYN13@ADVENTURE-WORKS.COM	Jac	9	jacquelyn	Partial College
115	11 мая 2013 г.	0-1 Miles	Casey Gutierrez	CASEY34@ADVENTURE-WORKS.COM	Cas	9	casey	Partial College
174	19 июля 2013 г.	2-5 Miles	Colleen Lu	COLLEEN1@ADVENTURE-WORKS.COM	Col	2	colleen	Partial College
129	7 апреля 2013 г.	1-2 Miles	Jeremiah Stewart	JEREMIAH44@ADVENTURE-WORKS.COM	Jer	7	jeremiah	Partial College
122	9 ноября 2013 г.	2-5 Miles	Leah Li	LEAH2@ADVENTURE-WORKS.COM	Lea	2	leah	Partial College
146	28 января 2014 г.	1-2 Miles	Frank Ramos	FRANK25@ADVENTURE-WORKS.COM	Fra	5	frank	Partial College
114	6 ноября 2013 г.	0-1 Miles	Candice He	CANDICE2@ADVENTURE-WORKS.COM	Can	2	candice	Partial College
136	11 октября 2013 г.	2-5 Miles	Andrea Cox	ANDREA11@ADVENTURE-WORKS.COM	And	3	andrea	Partial College
160	11 сентября 2013 г.	2-5 Miles	Jill Rubio	JILL29@ADVENTURE-WORKS.COM	Jil	5	jill	Partial College
133	15 ноября 2011 г.	0-1 Miles	Darren Alvarez	DARREN26@ADVENTURE-WORKS.COM	Dar	7	darren	Partial College
115	1 июня 2013 г.	2-5 Miles	Natasha Sanz	NATASHA20@ADVENTURE-WORKS.COM	Nat	4	natasha	Partial College
193	21 февраля 2013 г.	2-5 Miles	Autumn Zhu	AUTUMN13@ADVENTURE-WORKS.COM	Aut	3	autumn	Partial College
171	11 мая 2012 г.	2-5 Miles	George Louverdis	GEORGES@ADVENTURE-WORKS.COM	Geo	9	george	Partial College
191	1 апреля 2013 г.	0-1 Miles	Dwayne Martin	DWAYNE0@ADVENTURE-WORKS.COM	Dwa	6	dwayne	Partial College
135	19 июля 2011 г.	0-1 Miles	Edwin Zhao	EDWIN11@ADVENTURE-WORKS.COM	Edw	4	edwin	Partial College
178	17 февраля 2012 г.	0-1 Miles	Joel Rama	JOEL11@ADVENTURE-WORKS.COM	Joe	5	joel	Partial College
196	4 марта 2012 г.	0-1 Miles	Cassie Luo	CASSIE4@ADVENTURE-WORKS.COM	Cas	3	cassie	Partial College
133	10 апреля 2013 г.	2-5 Miles	Mayra Chandra	MAYRA1@ADVENTURE-WORKS.COM	May	7	mayra	Partial College
158	27 марта 2013 г.	2-5 Miles	Michele Ruiz	MICHELE3@ADVENTURE-WORKS.COM	Mic	4	michele	Partial College
139	15 июня 2013 г.	2-5 Miles	Jodi Xu	JODI5@ADVENTURE-WORKS.COM	Jod	2	jodi	Partial College
155	1 марта 2012 г.	0-1 Miles	Rosa Wu	ROSA7@ADVENTURE-WORKS.COM	Ros	2	rosa	Partial College
175	11 августа 2011 г.	2-5 Miles	Kelli Kumar	KELLI30@ADVENTURE-WORKS.COM	Kel	5	kelli	Partial College
137	18 ноября 2013 г.	1-2 Miles	Alisha Sun	ALISHA13@ADVENTURE-WORKS.COM	Ali	3	alisha	Partial College
112	31 октября 2013 г.	2-5 Miles	Roy Mehta	ROY14@ADVENTURE-WORKS.COM	Roy	5	roy	Partial College
119	20 января 2014 г.	2-5 Miles	Dominic Chandra	DOMINIC3@ADVENTURE-WORKS.COM	Dom	7	dominic	Partial College

7. Repeat '*' Character Equal to Length of First Name

`NameStars = REPT("*", LEN(DimCustomer[FirstName]))`

Untitled - Power BI Desktop

File Home Help Table tools Column tools

Name: NameStars Data type: Text

Format: Text Summarization: Don't summarize Data category: Uncategorized

Sort by column: Sort Data groups: Groups Manage relationships New column

Structure: 1 NameStars = REPT("*", LEN(DimCustomer[FirstName]))

	urchase	CommuteDistance	FullName	E-mail Upper	First 3 chars	LastLength	FirstNameLower	EducationTrimmed	NameStars
юля 2013 г.	2-5 Miles	Larry Gill	LARRY16@ADVENTURE-WORKS.COM	Lar	4	larry	Partial College	*****	
авг 2012 г.	0-1 Miles	Geoffrey Gonzalez	GEOFFREY16@ADVENTURE-WORKS.COM	Geo	8	geoffrey	Partial College	*****	
авг 2012 г.	0-1 Miles	Blake Collins	BLAKE47@ADVENTURE-WORKS.COM	Bla	7	blake	Partial College	*****	
июня 2013 г.	2-5 Miles	Alexa Watson	ALEXA0@ADVENTURE-WORKS.COM	Ale	6	alex	Partial College	*****	
сент 2013 г.	2-5 Miles	Jacquelyn Dominguez	JACQUELYN13@ADVENTURE-WORKS.COM	Jac	9	jacquelyn	Partial College	*****	
мая 2013 г.	0-1 Miles	Casey Gutierrez	CASEY34@ADVENTURE-WORKS.COM	Cas	9	casey	Partial College	*****	
июля 2013 г.	2-5 Miles	Colleen Lu	COLLEN11@ADVENTURE-WORKS.COM	Col	2	colleen	Partial College	*****	
июля 2013 г.	1-2 Miles	Jeremiah Stewart	JEREMIAH44@ADVENTURE-WORKS.COM	Jer	7	jeremiah	Partial College	*****	
июня 2013 г.	2-5 Miles	Leah Li	LEAH2@ADVENTURE-WORKS.COM	Lea	2	leah	Partial College	***	
авг 2014 г.	1-2 Miles	Frank Ramos	FRANK25@ADVENTURE-WORKS.COM	Fra	5	frank	Partial College	*****	
июня 2013 г.	0-1 Miles	Candice He	CANDICE2@ADVENTURE-WORKS.COM	Can	2	candice	Partial College	*****	
июня 2013 г.	2-5 Miles	Andrea Cox	ANDREA11@ADVENTURE-WORKS.COM	And	3	andrea	Partial College	*****	
авг 2013 г.	2-5 Miles	Jill Rubio	JILL29@ADVENTURE-WORKS.COM	Jil	5	jill	Partial College	***	
июня 2011 г.	0-1 Miles	Darren Alvarez	DARREN26@ADVENTURE-WORKS.COM	Dar	7	darren	Partial College	*****	
июня 2013 г.	2-5 Miles	Natasha Sanz	NATASHA20@ADVENTURE-WORKS.COM	Nat	4	natasha	Partial College	*****	
июля 2013 г.	2-5 Miles	Autumn Zhu	AUTUMN13@ADVENTURE-WORKS.COM	Aut	3	autumn	Partial College	*****	
мая 2012 г.	2-5 Miles	George Louverdis	GEORGES@ADVENTURE-WORKS.COM	Geo	9	george	Partial College	*****	
июня 2013 г.	0-1 Miles	Dwayne Martin	DWAYNE0@ADVENTURE-WORKS.COM	Dwa	6	dwayne	Partial College	*****	
июль 2011 г.	0-1 Miles	Edwin Zhao	EDWIN11@ADVENTURE-WORKS.COM	Edw	4	edwin	Partial College	***	
июля 2012 г.	0-1 Miles	Joel Raman	JOEL11@ADVENTURE-WORKS.COM	Joe	5	joel	Partial College	***	
авг 2012 г.	0-1 Miles	Cassie Luo	CASSIE40@ADVENTURE-WORKS.COM	Cas	3	cassie	Partial College	*****	
июня 2013 г.	2-5 Miles	Mayra Chandra	MAYRA1@ADVENTURE-WORKS.COM	May	7	mayra	Partial College	*****	
июня 2013 г.	2-5 Miles	Michele Ruiz	MICHELE37@ADVENTURE-WORKS.COM	Mic	4	michele	Partial College	*****	
июня 2013 г.	2-5 Miles	Jodi Xu	JODIS@ADVENTURE-WORKS.COM	Jod	2	jodi	Partial College	***	
июль 2012 г.	0-1 Miles	Rosa Wu	ROSA7@ADVENTURE-WORKS.COM	Ros	2	rosa	Partial College	*****	
авг 2011 г.	2-5 Miles	Kelli Kumar	KELL130@ADVENTURE-WORKS.COM	Kel	5	kelli	Partial College	*****	
июня 2013 г.	1-2 Miles	Alisha Sun	ALISHA13@ADVENTURE-WORKS.COM	Ali	3	alisha	Partial College	*****	
июня 2013 г.	2-5 Miles	Roy Mehta	ROY14@ADVENTURE-WORKS.COM	Roy	5	roy	Partial College	*****	
авг 2014 г.	2-5 Miles	Dominic Chandra	DOMINIC3@ADVENTURE-WORKS.COM	Dom	7	dominic	Partial College	*****	

Table: DimCustomer (18 484 rows) Column: NameStars (10 distinct values)

Search: Чтобы начать поиск, введите здесь запрос

Actions: Windows, Internet Explorer, Edge, File Explorer, Mail, OneDrive, Task View, Start, Power BI

Sign in ENG 4:59 04.10.2025

8. Get Last 4 Characters of Phone Number

Last4Phone = RIGHT(DimCustomer[Phone], 4)

Untitled - Power BI Desktop

File Home Help Table tools Column tools

Name: Last4Phone Data type: Text

Format: Text Summarization: Don't summarize Data category: Uncategorized

Sort by column: Sort Data groups: Groups Manage relationships New column

Structure: 1 Last4Phone = RIGHT(DimCustomer[Phone], 4)

	muteDistance	FullName	E-mail Upper	First 3 chars	LastLength	FirstNameLower	EducationTrimmed	NameStars	Last4Phone
Алис		Larry Gill	LARRY16@ADVENTURE-WORKS.COM	Lar	4	larry	Partial College	*****	0125
Алис		Geoffrey Gonzalez	GEOFFREY16@ADVENTURE-WORKS.COM	Geo	8	geoffrey	Partial College	*****	0131
Алис		Blake Collins	BLAKE47@ADVENTURE-WORKS.COM	Bla	7	blake	Partial College	*****	0140
Алис		Alexa Watson	ALEXA0@ADVENTURE-WORKS.COM	Ale	6	alex	Partial College	*****	0191
Алис		Jacquelyn Dominguez	JACQUELYN13@ADVENTURE-WORKS.COM	Jac	9	jacquelyn	Partial College	*****	0134
Алис		Casey Gutierrez	CASEY34@ADVENTURE-WORKS.COM	Cas	9	casey	Partial College	*****	0115
Алис		Colleen Lu	COLLEN11@ADVENTURE-WORKS.COM	Col	2	colleen	Partial College	*****	0174
Алис		Jeremiah Stewart	JEREMIAH44@ADVENTURE-WORKS.COM	Jer	7	jeremiah	Partial College	*****	0129
Алис		Leah Li	LEAH2@ADVENTURE-WORKS.COM	Lea	2	leah	Partial College	***	0122
Алис		Frank Ramos	FRANK25@ADVENTURE-WORKS.COM	Fra	5	frank	Partial College	*****	0146
Алис		Candice He	CANDICE2@ADVENTURE-WORKS.COM	Can	2	candice	Partial College	*****	0114
Алис		Andrea Cox	ANDREA11@ADVENTURE-WORKS.COM	And	3	andrea	Partial College	*****	0136
Алис		Jill Rubio	JILL29@ADVENTURE-WORKS.COM	Jil	5	jill	Partial College	***	0160
Алис		Darren Alvarez	DARREN26@ADVENTURE-WORKS.COM	Dar	7	darren	Partial College	*****	0133
Алис		Natasha Sanz	NATASHA20@ADVENTURE-WORKS.COM	Nat	4	natasha	Partial College	*****	0115
Алис		Autumn Zhu	AUTUMN13@ADVENTURE-WORKS.COM	Aut	3	autumn	Partial College	*****	0193
Алис		George Louverdis	GEORGES@ADVENTURE-WORKS.COM	Geo	9	george	Partial College	*****	0171
Алис		Dwayne Martin	DWAYNE0@ADVENTURE-WORKS.COM	Dwa	6	dwayne	Partial College	*****	0191
Алис		Edwin Zhao	EDWIN11@ADVENTURE-WORKS.COM	Edw	4	edwin	Partial College	***	0135
Алис		Joel Raman	JOEL11@ADVENTURE-WORKS.COM	Joe	5	joel	Partial College	***	0178
Алис		Cassie Luo	CASSIE40@ADVENTURE-WORKS.COM	Cas	3	cassie	Partial College	*****	0196
Алис		Mayra Chandra	MAYRA1@ADVENTURE-WORKS.COM	May	7	mayra	Partial College	***	0133
Алис		Michele Ruiz	MICHELE37@ADVENTURE-WORKS.COM	Mic	4	michele	Partial College	*****	0158
Алис		Jodi Xu	JODIS@ADVENTURE-WORKS.COM	Jod	2	jodi	Partial College	***	0139
Алис		Rosa Wu	ROSA7@ADVENTURE-WORKS.COM	Ros	2	rosa	Partial College	***	0155
Алис		Kelli Kumar	KELL130@ADVENTURE-WORKS.COM	Kel	5	kelli	Partial College	***	0175
Алис		Alisha Sun	ALISHA13@ADVENTURE-WORKS.COM	Ali	3	alisha	Partial College	***	0137
Алис		Roy Mehta	ROY14@ADVENTURE-WORKS.COM	Roy	5	roy	Partial College	***	0119
Алис		Dominic Chandra	DOMINIC3@ADVENTURE-WORKS.COM	Dom	7	dominic	Partial College	*****	0119

Table: DimCustomer (18 484 rows) Column: Last4Phone (91 distinct values)

Search: Чтобы начать поиск, введите здесь запрос

Actions: Windows, Internet Explorer, Edge, File Explorer, Mail, OneDrive, Task View, Start, Power BI

Sign in ENG 4:59 04.10.2025

9. Format YearlyIncome to Currency with 2 Decimals

IncomeFormatted = FORMAT(DimCustomer[YearlyIncome], "\$#,##0.00")

10. Check If FirstName and LastName Are Exactly the Same

SameName = IF(DimCustomer[FirstName] = DimCustomer[LastName], "Yes", "No")

◆ Intermediate Level (11–20)

11. Find If 'Manager' Appears in Occupation (Case Sensitive)

`IsManager = IF(CONTAINSSTRING(DimCustomer[EnglishOccupation], "Manager"), "Yes", "No")`

The screenshot shows the Power BI Desktop interface with a table named 'DimCustomer'. A new column 'IsManager' has been added using the formula:

```
IsManager = IF(CONTAINSSTRING(DimCustomer[EnglishOccupation], "Manager"), "Yes", "No")
```

The table contains 18,484 rows and 17 columns. The 'IsManager' column is of type Text and is highlighted. The data includes various names and their corresponding English occupations.

DimCustomer	First_3_chars	LastnameLength	FirstNameLower	EducationTrimmed	NameStarts	Last4Phone	IncomeFormatted	SameName	IsManager
ENTURE-WORKS.COM	Lar	4	larry	Partial College	*****	0125	\$30,000.00	No	No
ENTURE-WORKS.COM	Geo	8	geoffrey	Partial College	*****	0131	\$30,000.00	No	No
ENTURE-WORKS.COM	Bla	7	blake	Partial College	*****	0140	\$30,000.00	No	No
VENTURE-WORKS.COM	Ale	6	alexa	Partial College	*****	0191	\$30,000.00	No	No
ADVENTURE-WORKS.COM	Jac	9	jacquelyn	Partial College	*****	0134	\$30,000.00	No	No
ENTURE-WORKS.COM	Cas	9	casey	Partial College	*****	0115	\$30,000.00	No	No
DVENTURE-WORKS.COM	Col	2	colleen	Partial College	*****	0174	\$30,000.00	No	No
DVENTURE-WORKS.COM	Jer	7	jeremiah	Partial College	*****	0129	\$30,000.00	No	No
TURE-WORKS.COM	Lea	2	leah	Partial College	****	0122	\$30,000.00	No	No
ENTURE-WORKS.COM	Fra	5	frank	Partial College	*****	0146	\$30,000.00	No	No
VENTURE-WORKS.COM	Can	2	candice	Partial College	*****	0114	\$30,000.00	No	No
DVENTURE-WORKS.COM	And	3	andrea	Partial College	*****	0136	\$30,000.00	No	No
TURE-WORKS.COM	Jil	5	jill	Partial College	****	0160	\$30,000.00	No	No
VENTURE-WORKS.COM	Dar	7	darree	Partial College	*****	0133	\$30,000.00	No	No
DVENTURE-WORKS.COM	Nat	4	natasha	Partial College	*****	0115	\$30,000.00	No	No
DVENTURE-WORKS.COM	Aut	3	autumn	Partial College	*****	0193	\$30,000.00	No	No
EVENTURE-WORKS.COM	Geo	9	george	Partial College	*****	0171	\$30,000.00	No	No
JVENTURE-WORKS.COM	Dwa	6	dwayne	Partial College	*****	0191	\$30,000.00	No	No
EVENTURE-WORKS.COM	Edw	4	edwin	Partial College	*****	0135	\$30,000.00	No	No
JTURE-WORKS.COM	Joe	5	joel	Partial College	****	0178	\$30,000.00	No	No
NTURE-WORKS.COM	Cas	3	cassie	Partial College	*****	0196	\$30,000.00	No	No
NTURE-WORKS.COM	May	7	mayra	Partial College	*****	0133	\$30,000.00	No	No
JVENTURE-WORKS.COM	Mic	4	michele	Partial College	*****	0158	\$30,000.00	No	No
TURE-WORKS.COM	Jod	2	jodi	Partial College	***	0139	\$30,000.00	No	No
ITURE-WORKS.COM	Ros	2	rosa	Partial College	****	0155	\$30,000.00	No	No
NTURE-WORKS.COM	Kel	5	kelli	Partial College	*****	0175	\$30,000.00	No	No
EVENTURE-WORKS.COM	Ali	3	aisha	Partial College	*****	0137	\$30,000.00	No	No
TURE-WORKS.COM	Roy	5	roy	Partial College	***	0112	\$30,000.00	No	No
VENTURE-WORKS.COM	Dom	7	dominic	Partial College	*****	0119	\$30,000.00	No	No

12. Search for 'graduate' in EnglishEducation (Case Insensitive)

`ContainsGraduate`

`IF(CONTAINSSTRING(LOWER(DimCustomer[EnglishEducation]), "graduate"), "Yes", "No")`

Untitled - Power BI Desktop

File Home Help Table tools Column tools

Name ContainsGraduate

Data type Text

Format Text

Summarization Don't summarize

Data category Uncategorized

Sort by column Sort

Data groups Groups

Manage relationships Relationships

New column Calculations

Structure

Formatting Properties

1 ContainsGraduate = IF(CONTAINSSTRING(LOWER(DimCustomer[EnglishEducation]), "graduate"), "Yes", "No")

	First_3_chars	LastNameLength	FirstNameLower	EducationTrimmed	NameStars	Last4Phone	IncomeFormatted	SameName	IsManager	ContainsGraduate
1	Lar	4	larry	Partial College	*****	0125	\$30,000.00	No	No	No
1	Geo	8	geoffrey	Partial College	*****	0131	\$30,000.00	No	No	No
1	Bla	7	blake	Partial College	*****	0140	\$30,000.00	No	No	No
1	Ale	6	alexa	Partial College	*****	0191	\$30,000.00	No	No	No
1	Jac	9	jacquelyn	Partial College	*****	0134	\$30,000.00	No	No	No
1	Cas	9	casey	Partial College	*****	0115	\$30,000.00	No	No	No
1	Col	2	colleen	Partial College	*****	0174	\$30,000.00	No	No	No
1	Jer	7	jeremiah	Partial College	*****	0129	\$30,000.00	No	No	No
1	Lea	2	leah	Partial College	****	0122	\$30,000.00	No	No	No
1	Fra	5	frank	Partial College	****	0146	\$30,000.00	No	No	No
1	Can	2	candice	Partial College	*****	0114	\$30,000.00	No	No	No
1	And	3	andrea	Partial College	*****	0136	\$30,000.00	No	No	No
1	Jil	5	jill	Partial College	****	0160	\$30,000.00	No	No	No
1	Dar	7	darren	Partial College	*****	0133	\$30,000.00	No	No	No
1	Nat	4	natasha	Partial College	*****	0115	\$30,000.00	No	No	No
1	Aut	3	autumn	Partial College	*****	0193	\$30,000.00	No	No	No
1	Geo	9	george	Partial College	*****	0171	\$30,000.00	No	No	No
1	Dwa	6	dwayne	Partial College	*****	0191	\$30,000.00	No	No	No
1	Edw	4	edwin	Partial College	*****	0135	\$30,000.00	No	No	No
1	Joe	5	joel	Partial College	****	0178	\$30,000.00	No	No	No
1	Cas	3	cassie	Partial College	*****	0196	\$30,000.00	No	No	No
1	May	7	mayra	Partial College	*****	0133	\$30,000.00	No	No	No
1	Mic	4	michele	Partial College	*****	0158	\$30,000.00	No	No	No
1	Jod	2	jodi	Partial College	***	0139	\$30,000.00	No	No	No
1	Ros	2	rosa	Partial College	***	0155	\$30,000.00	No	No	No
1	Kel	5	kelli	Partial College	*****	0175	\$30,000.00	No	No	No
1	Ali	3	alisha	Partial College	*****	0137	\$30,000.00	No	No	No
1	Roy	5	roy	Partial College	***	0112	\$30,000.00	No	No	No
1	Dom	7	dominic	Partial College	*****	0119	\$30,000.00	No	No	"Параметры"

Table: DimCustomer (18 484 rows) Column: ContainsGraduate (2 distinct values)

Search

Sign in

Data

Search

DimCustomer

AddressLine1

AddressLine2

BirthDate

CommuteDistance

ContainsGraduate

CustomerAlternateKey

CustomerKey

DateFirstPurchase

E-mail Upper

EducationTrimmed

EmailAddress

EnglishEducation

EnglishOccupation

First_3_chars

FirstName

FirstNameLower

FrenchEducation

FrenchOccupation

FullName

Gender

GeographyKey

HouseOwnerFlag

IncomeFormatted

IsActive

13. Extract Characters 3–7 from First Name

```
MidName = MID(DimCustomer[FirstName], 3, 5)
```

Untitled - Power BI Desktop

File Home Help Table tools Column tools

Name: MidMidName
Data type: Text

Format: Text
Summarization: Don't summarize
Data category: Uncategorized

Sort by column
Data groups
Manage relationships
New column
Calculated fields

Structure
Formatting Properties Sort Groups Relationships Calculations

1 MidMidName = MID(DimCustomer[FirstName], 3, 5)

LastNamesLength	FirstNameLower	EducationTrimmed	NameStars	Last4Phone	IncomeFormatted	SameName	IsManager	ContainsGraduate	MidMidName
4	larry	Partial College	*****	0125	\$30,000.00	No	No	No	rry
8	geoffrey	Partial College	*****	0131	\$30,000.00	No	No	No	offre
7	blake	Partial College	*****	0140	\$30,000.00	No	No	No	ake
6	alexa	Partial College	*****	0191	\$30,000.00	No	No	No	exa
9	jacquelyn	Partial College	*****	0134	\$30,000.00	No	No	No	cquel
9	casey	Partial College	*****	0115	\$30,000.00	No	No	No	sey
2	colleen	Partial College	*****	0174	\$30,000.00	No	No	No	ileen
7	jeremiah	Partial College	*****	0129	\$30,000.00	No	No	No	remia
2	leah	Partial College	***	0122	\$30,000.00	No	No	No	ah
5	frank	Partial College	***	0146	\$30,000.00	No	No	No	ank
2	candice	Partial College	***	0114	\$30,000.00	No	No	No	ndice
3	andrea	Partial College	***	0136	\$30,000.00	No	No	No	drea
5	jill	Partial College	***	0160	\$30,000.00	No	No	No	ll
7	darren	Partial College	***	0133	\$30,000.00	No	No	No	rren
4	natasha	Partial College	***	0115	\$30,000.00	No	No	No	tasha
3	autumn	Partial College	***	0193	\$30,000.00	No	No	No	tumn
9	george	Partial College	***	0171	\$30,000.00	No	No	No	orge
6	dwayne	Partial College	***	0191	\$30,000.00	No	No	No	ayne
4	edwin	Partial College	***	0135	\$30,000.00	No	No	No	win
5	joel	Partial College	***	0178	\$30,000.00	No	No	No	el
3	cassie	Partial College	***	0196	\$30,000.00	No	No	No	ssie
7	mayra	Partial College	***	0133	\$30,000.00	No	No	No	yra
4	michele	Partial College	***	0158	\$30,000.00	No	No	No	chele
2	jodi	Partial College	***	0139	\$30,000.00	No	No	No	di
2	rosa	Partial College	***	0155	\$30,000.00	No	No	No	sa
5	kelli	Partial College	***	0175	\$30,000.00	No	No	No	lli
3	alisha	Partial College	***	0137	\$30,000.00	No	No	No	rina
5	roy	Partial College	**	0112	\$30,000.00	No	No	No	Чтобы активировать Windows, перейдите в раздел "Параметры".
7	domini	Partial Collegee	**	0119	\$30,000.00	No	No	No	"Parametres".

Data Search

DimCustomer AddressLine1 AddressLine2 BirthDate CommuteDistance ContainsGraduate CustomerAlternateKey CustomerKey DateFirstPurchase E-mail Upper EducationTrimmed FirstName EmailAddress EnglishEducation EnglishOccupation First_3_chars FirstName LastName Lower FirstName Lower FrenchEducation FrenchOccupation FullName Gender GeographyKey HouseOwnerFlag IncomeFormatted

Активация Windows Чтобы активировать Windows, перейдите в раздел "Параметры".

14. Replace Area Code in Phone Number with 'XXX'

PhoneMasked = "XXX" & RIGHT(DimCustomer[Phone], LEN(DimCustomer[Phone]) - 3)

The screenshot shows a Power BI Desktop interface with a table named 'DimCustomer' containing 18,484 rows. A new column 'PhoneMasked' has been added using the formula: `PhoneMasked = "XXX" & RIGHT(DimCustomer[Phone], LEN(DimCustomer[Phone]) - 3)`. The 'PhoneMasked' column displays the first three digits of the phone number followed by three asterisks. The table includes columns such as FirstNameLower, EducationTrimmed, NameStars, Last4Phone, IncomeFormatted, SameName, IsManager, ContainsGraduate, MidName, and PhoneMasked.

15. Format BirthDate as 'DD-MM-YYYY'

BirthDateFormatted = FORMAT(DimCustomer[BirthDate], "DD-MM-YYYY")

The screenshot shows a Power BI Desktop interface with a table named 'DimCustomer' containing 18,484 rows. A new column 'BirthDateFormatted' has been added using the formula: `BirthDateFormatted = FORMAT(DimCustomer[BirthDate], "DD-MM-YYYY")`. The 'BirthDateFormatted' column displays the birth date in the DD-MM-YYYY format. The table includes columns such as EducationTrimmed, NameStars, Last4Phone, IncomeFormatted, SameName, IsManager, ContainsGraduate, MidName, PhoneMasked, and BirthDateFormatted.

16. Create Initial + Last Name Format (e.g. J.Smith)

Initial Last = LEFT(DimCustomer[FirstName], 1) & ". " & DimCustomer[LastName]

The screenshot shows the Power BI Desktop interface with the 'Table tools' ribbon selected. A new column 'Initial_LastName' is being created, with the formula `LEFT(DimCustomer[FirstName], 1) & ". " & DimCustomer[LastName]` entered in the 'Structure' pane. The Data pane on the right lists various columns and their properties.

Name	Type	Format	Summarization	Data category	Sort by column	Data groups	Relationships	Calculations
Initial_LastName	Text	Text	Don't summarize	Uncategorized	Sort	Groups	Manage relationships	New column

Table: DimCustomer (18 484 rows) Column: Initial_LastName (4 207 distinct values)

17. Capitalize First Letter of FirstName, Lowercase the Rest

FirstNameProper = UPPER(LEFT(DimCustomer[FirstName], 1)) & LOWER(MID(DimCustomer[FirstName], 2, LEN(DimCustomer[FirstName])-1))

Untitled - Power BI Desktop

Table tools **Column tools**

Name: FirstName_Proper Data type: Text

Format: Text Summarization: Don't summarize

Structure Formatting Properties Sort by column Data groups Manage relationships New column Calculations

1 FirstName_Proper = UPPER(LEFT(DimCustomer[FirstName],1)) & LOWER(MID(DimCustomer[FirstName],LEN(DimCustomer[FirstName])-1))

ast4Phone	IncomeFormatted	SameName	IsManager	ContainsGraduate	MidName	PhoneMasked	BirthDateFormatted	Initial_LastName	FirstName_Proper
142	\$30,000.00	No	No	No	loe	XXX-555-0142	26-08-1984	C.Young	Chloe
158	\$40,000.00	No	No	No	stiny	XXX-555-0158	02-03-1984	D.Wilson	Destiny
199	\$40,000.00	No	No	No	ria	XXX-555-0199	06-08-1981	M.Roberts	Maria
114	\$40,000.00	No	No	No	ily	XXX-555-0114	20-10-1979	E.Wood	Emily
138	\$40,000.00	No	No	No	vin	XXX-555-0138	02-11-1979	D.Brooks	Devin
131	\$90,000.00	No	No	No	ylor	XXX-555-0131	02-11-1969	T.Howard	Taylor
176	\$90,000.00	No	No	No	natha	XXX-555-0176	16-02-1969	J.Phillips	Jonathan
189	\$10,000.00	No	No	No	rrenc	XXX11 500 555-0189	24-11-1985	T.Carson	Terrence
143	\$10,000.00	No	No	No	mon	XXX11 500 555-0143	19-09-1984	R.Ye	Ramon
187	\$10,000.00	No	No	No	nthia	XXX11 500 555-0187	10-05-1984	C.Malhotra	Cynthia
154	\$10,000.00	No	No	No	rrod	XXX11 500 555-0154	03-03-1984	J.Prasad	Jarrod
125	\$30,000.00	No	No	No	rry	XXX11 500 555-0125	11-10-1982	L.Gill	Larry
131	\$30,000.00	No	No	No	offre	XXX11 500 555-0131	06-08-1982	G.Gonzalez	Geoffrey
140	\$30,000.00	No	No	No	ake	XXX11 500 555-0140	20-10-1980	B.Collins	Blake
170	\$70,000.00	No	No	No	son	XXX-555-0170	12-10-1972	J.Carter	Jason
159	\$70,000.00	No	No	No	llian	XXX-555-0159	10-07-1978	J.Garcia	Jillian
169	\$40,000.00	No	No	No	uardo	XXX-555-0169	15-09-1983	E.Foster	Eduardo
153	\$40,000.00	No	No	No	exa	XXX-555-0153	15-01-1980	A.Cook	Alexa
185	\$40,000.00	No	No	No	exand	XXX-555-0185	22-09-1979	A.Davis	Alexandra
182	\$10,000.00	No	No	No	istin	XXX11 500 555-0182	05-05-1985	K.Sandberg	Kristine
195	\$10,000.00	No	No	No	lbert	XXX11 500 555-0195	03-08-1984	G.Liang	Gilbert
180	\$10,000.00	No	No	No	isty	XXX11 500 555-0180	15-11-1985	K.Rubio	Kristy
191	\$30,000.00	No	No	No	exa	XXX11 500 555-0191	22-02-1983	A.Watson	Alexa
134	\$30,000.00	No	No	No	cquel	XXX11 500 555-0134	27-03-1983	J.Dominguez	Jacquelyn
115	\$30,000.00	No	No	No	sey	XXX11 500 555-0115	16-06-1983	C.Gutierrez	Casey
176	\$10,000.00	No	No	No	isha	XXX11 500 555-0176	24-11-1985	A.Chander	Alisha
112	\$10,000.00	No	No	No	rek	XXX11 500 555-0112	10-08-1985	D.Raje	Derek
148	\$10,000.00	No	No	No	lter	XXX11 500 555-0148	10-09-1984	W.Dominguez	Walter
160	\$20,000.00	No	No	No	lsev	XXX11 500 555-0160	08-10-1980	K.Tano	Kelsev

Table: DimCustomer (18 484 rows) Column: FirstName_Proper (670 distinct values)

РУС 04.10.2025 9:47

18. Substitute Dashes with Spaces in Phone

PhoneNoDash = SUBSTITUTE(DimCustomer[Phone], "-", " ")

Untitled - Power BI Desktop

Table tools **Column tools**

Name: Phone_Spaces Data type: Text

Format: Text Summarization: Don't summarize

Structure Formatting Properties Sort by column Data groups Manage relationships New column Calculations

1 Phone_Spaces = SUBSTITUTE(DimCustomer[Phone], "-", " ")

ast4Phone	SameName	IsManager	ContainsGraduate	MidName	PhoneMasked	BirthDateFormatted	Initial_LastName	FirstName_Proper	Phone_Spaces
000.00	No	No	No	loe	XXX-555-0142	26-08-1984	C.Young	Chloe	208 555 0142
000.00	No	No	No	stiny	XXX-555-0158	02-03-1984	D.Wilson	Destiny	622 555 0158
000.00	No	No	No	ria	XXX-555-0199	06-08-1981	M.Roberts	Maria	158 555 0199
000.00	No	No	No	ily	XXX-555-0114	20-10-1979	E.Wood	Emily	184 555 0114
000.00	No	No	No	vin	XXX-555-0138	02-11-1979	D.Brooks	Devin	502 555 0138
000.00	No	No	No	ylor	XXX-555-0131	02-11-1969	T.Howard	Taylor	162 555 0131
000.00	No	No	No	natha	XXX-555-0176	16-02-1969	J.Phillips	Jonathan	967 555 0176
000.00	No	No	No	rrenc	XXX11 500 555-0189	24-11-1985	T.Carson	Terrence	1 (11) 500 555 0189
000.00	No	No	No	mon	XXX11 500 555-0143	19-09-1984	R.Ye	Ramon	1 (11) 500 555 0143
000.00	No	No	No	nthia	XXX11 500 555-0187	10-05-1984	C.Malhotra	Cynthia	1 (11) 500 555 0187
000.00	No	No	No	rrod	XXX11 500 555-0154	03-03-1984	J.Prasad	Jarrod	1 (11) 500 555 0154
000.00	No	No	No	rry	XXX11 500 555-0125	11-10-1982	L.Gill	Larry	1 (11) 500 555 0125
000.00	No	No	No	offre	XXX11 500 555-0131	06-08-1982	G.Gonzalez	Geoffrey	1 (11) 500 555 0131
000.00	No	No	No	ake	XXX11 500 555-0140	20-10-1980	B.Collins	Blake	1 (11) 500 555 0140
000.00	No	No	No	son	XXX-555-0170	12-10-1972	J.Carter	Jason	234 555 0170
000.00	No	No	No	llian	XXX-555-0159	10-07-1978	J.Garcia	Jillian	386 555 0159
000.00	No	No	No	uardo	XXX-555-0169	15-09-1983	E.Foster	Eduardo	522 555 0169
000.00	No	No	No	exa	XXX-555-0153	15-01-1980	A.Cook	Alexa	666 555 0153
000.00	No	No	No	exand	XXX-555-0185	22-09-1979	A.Davis	Alexandra	719 555 0185
000.00	No	No	No	istin	XXX11 500 555-0182	05-05-1985	K.Sandberg	Kristine	1 (11) 500 555 0182
000.00	No	No	No	lbert	XXX11 500 555-0195	03-08-1984	G.Liang	Gilbert	1 (11) 500 555 0195
000.00	No	No	No	isty	XXX11 500 555-0180	15-11-1985	K.Rubio	Kristy	1 (11) 500 555 0180
000.00	No	No	No	exa	XXX11 500 555-0191	22-02-1983	A.Watson	Alexa	1 (11) 500 555 0191
000.00	No	No	No	cquel	XXX11 500 555-0134	27-03-1983	J.Dominguez	Jacquelyn	1 (11) 500 555 0134
000.00	No	No	No	sey	XXX11 500 555-0115	16-06-1983	C.Gutierrez	Casey	1 (11) 500 555 0115
000.00	No	No	No	isha	XXX11 500 555-0176	24-11-1985	A.Chander	Alisha	1 (11) 500 555 0176
000.00	No	No	No	rek	XXX11 500 555-0112	10-08-1985	D.Raje	Derek	1 (11) 500 555 0112
000.00	No	No	No	lter	XXX11 500 555-0148	10-09-1984	W.Dominguez	Walter	1 (11) 500 555 0148

Table: DimCustomer (18 484 rows) Column: Phone_Spaces (890 distinct values)

РУС 04.10.2025 9:48

19. Convert BirthDate Year to Numeric Using VALUE

BirthYear = VALUE(FORMAT(DimCustomer[BirthDate], "YYYY"))

Table: DimCustomer (18 484 rows) Column: BirthYear (70 distinct values)

File Home Help Table tools Column tools

Name BirthYear Data type Decimal number Format General Summation Sum Data category Uncategorized Sort by column Data groups Groups Manage relationships Relationships New column

Structure Formatting Properties Sort Sort by column Data groups Groups Manage relationships Relationships New column

1 BirthYear = VALUE(FORMAT(DimCustomer[BirthDate], "YYYY"))

SameName	IsManager	ContainsGraduate	MidName	PhoneMasked	BirthDateFormatted	Initial_LastName	FirstName_Proper	Phone_Spaces	BirthYear
No	No	No	loe	XXX-555-0142	26-08-1984	C.Young	Chloe	208 555 0142	1984
No	No	No	stiny	XXX-555-0158	02-03-1984	D.Wilson	Destiny	622 555 0158	1984
No	No	No	ria	XXX-555-0199	06-08-1981	M.Roberts	Maria	158 555 0199	1981
No	No	No	ily	XXX-555-0114	20-10-1979	E.Wood	Emily	184 555 0114	1979
No	No	No	vin	XXX-555-0138	02-11-1979	D.Brooks	Devin	502 555 0138	1979
No	No	No	ylor	XXX-555-0131	02-11-1969	T.Howard	Taylor	162 555 0131	1969
No	No	No	natha	XXX-555-0176	16-02-1969	J.Phillips	Jonathan	967 555 0176	1969
No	No	No	rrenc	XXX11) 500 555-0189	24-11-1985	T.Carson	Terrence	1 (11) 500 555 0189	1985
No	No	No	mon	XXX11) 500 555-0143	19-09-1984	R.Ye	Ramon	1 (11) 500 555 0143	1984
No	No	No	nthia	XXX11) 500 555-0187	10-05-1984	C.Malhotra	Cynthia	1 (11) 500 555 0187	1984
No	No	No	rrod	XXX11) 500 555-0154	03-03-1984	J.Prasad	Jarrod	1 (11) 500 555 0154	1984
No	No	No	rry	XXX11) 500 555-0125	11-10-1982	L.Gill	Larry	1 (11) 500 555 0125	1982
No	No	No	offre	XXX11) 500 555-0131	06-08-1982	G.Gonzalez	Geoffrey	1 (11) 500 555 0131	1982
No	No	No	ake	XXX11) 500 555-0140	20-10-1980	B.Collins	Blake	1 (11) 500 555 0140	1980
No	No	No	son	XXX-555-0170	12-10-1972	J.Carter	Jason	234 555 0170	1972
No	No	No	llian	XXX-555-0159	10-07-1978	J.Garcia	Jillian	386 555 0159	1978
No	No	No	uardo	XXX-555-0169	15-09-1983	E.Foster	Eduardo	522 555 0169	1983
No	No	No	exa	XXX-555-0153	15-01-1980	A.Cook	Alexa	666 555 0153	1980
No	No	No	exand	XXX-555-0185	22-09-1979	A.Davis	Alexandra	719 555 0185	1979
No	No	No	istin	XXX11) 500 555-0182	05-05-1985	K.Sandberg	Kristine	1 (11) 500 555 0182	1985
No	No	No	ibert	XXX11) 500 555-0195	03-08-1984	G.Liang	Gilbert	1 (11) 500 555 0195	1984
No	No	No	isty	XXX11) 500 555-0180	15-11-1985	K.Rubio	Kristy	1 (11) 500 555 0180	1985
No	No	No	exa	XXX11) 500 555-0191	22-02-1983	A.Watson	Alexa	1 (11) 500 555 0191	1983
No	No	No	cquel	XXX11) 500 555-0134	27-03-1983	J.Dominguez	Jacquelyn	1 (11) 500 555 0134	1983
No	No	No	sey	XXX11) 500 555-0115	16-06-1983	C.Gutierrez	Casey	1 (11) 500 555 0115	1983
No	No	No	isha	XXX11) 500 555-0176	24-11-1985	A.Chander	Alisha	1 (11) 500 555 0176	1985
No	No	No	rek	XXX11) 500 555-0112	10-08-1985	D.Raje	Derek	1 (11) 500 555 0112	1985
No	No	No	Iter	XXX11) 500 555-0148	10-09-1984	W.Dominguez	Walter	1 (11) 500 555 0148	1984
No	No	No	Isev	XXX11) 500 555-0160	08-10-1980	K.Tana	Kelsev	1 (11) 500 555 0160	1980

20. Show YearlyIncome Rounded to 1 Decimal Without Commas

IncomeRounded = FORMAT(ROUND(DimCustomer[YearlyIncome], 1), "0.0")

Screenshot of Power BI Desktop showing the Column tools ribbon tab selected. A formula bar at the top contains the code: `1 IncomeRounded = FORMAT(ROUND(dimCustomer[YearlyIncome], 1), "0.0")`. The main area displays a table of data with columns including sManager, ContainsGraduate, MidName, PhoneMasked, BirthDateFormatted, Initial_LastName, FirstName_Proper, Phone_Spaces, BirthYear, and IncomeRounded. The Data pane on the right lists various columns and measures such as FirstName, LastName, and IncomeRounded.

◆ ♦vanced Level (21–30)

21. Customer Code: First 2 Letters of LastName + Last 2 of CustomerKey

`CustomerCode = LEFT(DimCustomer[LastName], 2) & RIGHT(DimCustomer[CustomerKey], 2)`

Screenshot of Power BI Desktop showing the Column tools ribbon tab selected. A formula bar at the top contains the code: `1 CustomerCode = LEFT(DimCustomer[LastName], 2) & RIGHT(DimCustomer[CustomerKey], 2)`. The main area displays a table of data with columns including sManager, ContainsGraduate, MidName, PhoneMasked, BirthDateFormatted, Initial_LastName, FirstName_Proper, Phone_Spaces, BirthYear, IncomeRounded, and CustomerCode. The Data pane on the right lists various columns and measures such as FirstName, LastName, and CustomerCode.

22. Validate Email Ends with '.com' and Contains '@'

```
ValidEmail = IF(
    CONTAINSSTRING(DimCustomer[EmailAddress], "@") &&
    RIGHT(DimCustomer[EmailAddress], 4) = ".com",
    "Valid", "Invalid"
)
```

The screenshot shows the Power BI Desktop interface with the 'Column tools' ribbon selected. In the 'Structure' pane, a DAX formula is defined:

```
1 Email_Valid =
2 IF(
3     AND(
4         CONTAINSSTRING(DimCustomer[EmailAddress], "@"), 
5         RIGHT(DimCustomer[EmailAddress], 4) = ".com"
6     ), 
7     "Valid", 
8     "Invalid"
9 )
10
```

The preview pane displays the DimCustomer table with 18,484 rows. The 'Email_Valid' column is shown as a dropdown menu with the value 'Valid' selected.

23. Extract Domain Name from EmailAddress

$$\text{EmailDomain} = \text{RIGHT}(\text{DimCustomer}[EmailAddress], \text{LEN}(\text{DimCustomer}[EmailAddress]) - \text{FIND}("@", \text{DimCustomer}[EmailAddress]))$$

Untitled - Power BI Desktop

File Home Help Table tools Column tools

Name Email_Domain Data type Text

Format Text \$ % Auto

Summarization Don't summarize Data category Uncategorized

Sort by column Sort Data groups Groups Manage relationships Relationships New column Calculations

Structure Formatting Properties

1 Email_Domain =
2 MID(
3 DimCustomer[EmailAddress],
4 FIND("@", DimCustomer[EmailAddress]) + 1,
5 LEN(DimCustomer[EmailAddress]) - FIND("@", DimCustomer[EmailAddress])
6)
7

	BirthDateFormatted	Initial_LastName	FirstName_Proper	Phone_Spaces	BirthYear	IncomeRounded	CustomerCode	Email_Validate	Email_Domain
555-0142	26-08-1984	C.Young	Chloe	208 555 0142	1984	30000.0	Yo15	Valid	adventure-works.com
555-0158	02-03-1984	D.Wilson	Destiny	622 555 0158	1984	40000.0	Wi21	Valid	adventure-works.com
555-0199	06-08-1981	M.Roberts	Maria	158 555 0199	1981	40000.0	Ro56	Valid	adventure-works.com
555-0114	20-10-1979	E.Wood	Emily	184 555 0114	1979	40000.0	Wo61	Valid	adventure-works.com
555-0138	02-11-1979	D.Brooks	Devin	502 555 0138	1979	40000.0	Br64	Valid	adventure-works.com
555-0131	02-11-1969	T.Howard	Taylor	162 555 0131	1969	90000.0	Ho66	Valid	adventure-works.com
555-0176	16-02-1969	J.Phillips	Jonathan	967 555 0176	1969	90000.0	Ph78	Valid	adventure-works.com
1) 500 555-0189	24-11-1985	T.Carson	Terrence	1 (11) 500 555 0189	1985	10000.0	Ca56	Valid	adventure-works.com
1) 500 555-0143	19-09-1984	R.Ye	Ramon	1 (11) 500 555 0143	1984	10000.0	Ye57	Valid	adventure-works.com
1) 500 555-0187	10-05-1984	C.Malhotra	Cynthia	1 (11) 500 555 0187	1984	10000.0	Ma58	Valid	adventure-works.com
1) 500 555-0154	03-12-1984	J.Prasad	Jarrod	1 (11) 500 555 0154	1984	10000.0	Pj59	Valid	adventure-works.com
1) 500 555-0125	11-10-1982	L.Gill	Larry	1 (11) 500 555 0125	1982	30000.0	Gi02	Valid	adventure-works.com
1) 500 555-0131	06-08-1982	G.Gonzalez	Geoffrey	1 (11) 500 555 0131	1982	30000.0	Go03	Valid	adventure-works.com
1) 500 555-0140	20-10-1980	B.Collins	Blake	1 (11) 500 555 0140	1980	30000.0	Co10	Valid	adventure-works.com
555-0170	12-10-1972	J.Carter	Jason	234 555 0170	1972	70000.0	Ca24	Valid	adventure-works.com
555-0159	10-07-1978	J.Garcia	Jillian	386 555 0159	1978	70000.0	Ga70	Valid	adventure-works.com
555-0169	15-09-1983	E.Foster	Eduardo	522 555 0169	1983	40000.0	Fo26	Valid	adventure-works.com
555-0153	15-01-1980	A.Cook	Alexa	666 555 0153	1980	40000.0	Co46	Valid	adventure-works.com
555-0185	22-09-1979	A.Davis	Alexandra	719 555 0185	1979	40000.0	Da47	Valid	adventure-works.com
1) 500 555-0182	05-05-1985	K.Sandberg	Kristine	1 (11) 500 555 0182	1985	10000.0	Sa41	Valid	adventure-works.com
1) 500 555-0195	03-08-1984	G.Liang	Gilbert	1 (11) 500 555 0195	1984	10000.0	Li42	Valid	adventure-works.com
1) 500 555-0180	15-11-1985	K.Rubio	Kristy	1 (11) 500 555 0180	1985	10000.0	Ru43	Valid	adventure-works.com
1) 500 555-0191	22-02-1983	A.Watson	Alexa	1 (11) 500 555 0191	1983	30000.0	Wa17	Valid	adventure-works.com
1) 500 555-0134	27-03-1983	J.Dominguez	Jacquelyn	1 (11) 500 555 0134	1983	30000.0	Do18	Valid	adventure-works.com

Table: DimCustomer (18 484 rows) Column: Email_Domain (1 distinct values)

Search

Sign in

File Home Help Table tools Column tools

Name Email_Domain Data type Text

Format Text \$ % Auto

Summarization Don't summarize Data category Uncategorized

Sort by column Sort Data groups Groups Manage relationships Relationships New column Calculations

Structure Formatting Properties

1 Email_Domain =
2 MID(
3 DimCustomer[EmailAddress],
4 FIND("@", DimCustomer[EmailAddress]) + 1,
5 LEN(DimCustomer[EmailAddress]) - FIND("@", DimCustomer[EmailAddress])
6)
7

	BirthDateFormatted	Initial_LastName	FirstName_Proper	Phone_Spaces	BirthYear	IncomeRounded	CustomerCode	Email_Validate	Email_Domain
555-0142	26-08-1984	C.Young	Chloe	208 555 0142	1984	30000.0	Yo15	Valid	adventure-works.com
555-0158	02-03-1984	D.Wilson	Destiny	622 555 0158	1984	40000.0	Wi21	Valid	adventure-works.com
555-0199	06-08-1981	M.Roberts	Maria	158 555 0199	1981	40000.0	Ro56	Valid	adventure-works.com
555-0114	20-10-1979	E.Wood	Emily	184 555 0114	1979	40000.0	Wo61	Valid	adventure-works.com
555-0138	02-11-1979	D.Brooks	Devin	502 555 0138	1979	40000.0	Br64	Valid	adventure-works.com
555-0131	02-11-1969	T.Howard	Taylor	162 555 0131	1969	90000.0	Ho66	Valid	adventure-works.com
555-0176	16-02-1969	J.Phillips	Jonathan	967 555 0176	1969	90000.0	Ph78	Valid	adventure-works.com
1) 500 555-0189	24-11-1985	T.Carson	Terrence	1 (11) 500 555 0189	1985	10000.0	Ca56	Valid	adventure-works.com
1) 500 555-0143	19-09-1984	R.Ye	Ramon	1 (11) 500 555 0143	1984	10000.0	Ye57	Valid	adventure-works.com
1) 500 555-0187	10-05-1984	C.Malhotra	Cynthia	1 (11) 500 555 0187	1984	10000.0	Ma58	Valid	adventure-works.com
1) 500 555-0154	03-12-1984	J.Prasad	Jarrod	1 (11) 500 555 0154	1984	10000.0	Pj59	Valid	adventure-works.com
1) 500 555-0125	11-10-1982	L.Gill	Larry	1 (11) 500 555 0125	1982	30000.0	Gi02	Valid	adventure-works.com
1) 500 555-0131	06-08-1982	G.Gonzalez	Geoffrey	1 (11) 500 555 0131	1982	30000.0	Go03	Valid	adventure-works.com
1) 500 555-0140	20-10-1980	B.Collins	Blake	1 (11) 500 555 0140	1980	30000.0	Co10	Valid	adventure-works.com
555-0170	12-10-1972	J.Carter	Jason	234 555 0170	1972	70000.0	Ca24	Valid	adventure-works.com
555-0159	10-07-1978	J.Garcia	Jillian	386 555 0159	1978	70000.0	Ga70	Valid	adventure-works.com
555-0169	15-09-1983	E.Foster	Eduardo	522 555 0169	1983	40000.0	Fo26	Valid	adventure-works.com
555-0153	15-01-1980	A.Cook	Alexa	666 555 0153	1980	40000.0	Co46	Valid	adventure-works.com
555-0185	22-09-1979	A.Davis	Alexandra	719 555 0185	1979	40000.0	Da47	Valid	adventure-works.com
1) 500 555-0182	05-05-1985	K.Sandberg	Kristine	1 (11) 500 555 0182	1985	10000.0	Sa41	Valid	adventure-works.com
1) 500 555-0195	03-08-1984	G.Liang	Gilbert	1 (11) 500 555 0195	1984	10000.0	Li42	Valid	adventure-works.com
1) 500 555-0180	15-11-1985	K.Rubio	Kristy	1 (11) 500 555 0180	1985	10000.0	Ru43	Valid	adventure-works.com
1) 500 555-0191	22-02-1983	A.Watson	Alexa	1 (11) 500 555 0191	1983	30000.0	Wa17	Valid	adventure-works.com
1) 500 555-0134	27-03-1983	J.Dominguez	Jacquelyn	1 (11) 500 555 0134	1983	30000.0	Do18	Valid	adventure-works.com

Data

Search

EnglishEducation EnglishOccupation

First_3_chars FirstName FirstName_Proper FirstName_Lower FrenchEducation FrenchOccupation

FullName Gender

HouseOwnerFlag IncomeFormatted IncomeRounded

Initial_LastName IsManager LastName LastNameLength MaritalStatus MiddleName

MidName NameStars NameStyle

24. Mask Phone Number Except Last 4 Digits

PhoneMasked = REPT("X", LEN(DimCustomer[Phone])-4) & RIGHT(DimCustomer[Phone], 4)

84

Untitled - Power BI Desktop

File Home Help Table tools Column tools

Name: Phone_Masked Format: Text Summarization: Don't summarize Data category: Uncategorized Sort by column: Sort Sort by row: Sort Groups Manage relationships New column Calculations

Structure: 1 Phone_Masked = REPT("*", LEN(DimCustomer[Phone]) - 4) & RIGHT(DimCustomer[Phone], 4)

Data Search

hDateFormatted	Initial_LastName	FirstName_Proper	Phone_Spaces	BirthYear	IncomeRounded	CustomerCode	Email_Valid	Email_Domain	Phone_Masked
18-1984	C.Young	Chloe	208 555 0142	1984	30000.0	Yo15	Valid	adventure-works.com	*****0142
13-1984	D.Wilson	Destiny	622 555 0158	1984	40000.0	Wi21	Valid	adventure-works.com	*****0158
18-1981	M.Roberts	Maria	158 555 0199	1981	40000.0	Ro56	Valid	adventure-works.com	*****0199
10-1979	E.Wood	Emily	184 555 0114	1979	40000.0	Wo61	Valid	adventure-works.com	*****0114
11-1979	D.Brooks	Devin	502 555 0138	1979	40000.0	Br64	Valid	adventure-works.com	*****0138
11-1969	T.Howard	Taylor	162 555 0131	1969	90000.0	Ho66	Valid	adventure-works.com	*****0131
12-1969	J.Phillips	Jonathan	967 555 0176	1969	90000.0	Ph78	Valid	adventure-works.com	*****0176
11-1985	T.Carson	Terrence	1 (11) 500 555 0189	1985	10000.0	Ca56	Valid	adventure-works.com	*****0189
19-1984	R.Ye	Ramon	1 (11) 500 555 0143	1984	10000.0	Ye57	Valid	adventure-works.com	*****0143
15-1984	C.Malhotra	Cynthia	1 (11) 500 555 0187	1984	10000.0	Ma58	Valid	adventure-works.com	*****0187
13-1984	J.Prasad	Jarrod	1 (11) 500 555 0154	1984	10000.0	Pr59	Valid	adventure-works.com	*****0154
10-1982	L.Gill	Larry	1 (11) 500 555 0125	1982	30000.0	Gi02	Valid	adventure-works.com	*****0125
18-1982	G.Gonzalez	Geoffrey	1 (11) 500 555 0131	1982	30000.0	Go03	Valid	adventure-works.com	*****0131
10-1980	B.Collins	Blake	1 (11) 500 555 0140	1980	30000.0	Co10	Valid	adventure-works.com	*****0140
10-1972	J.Carter	Jason	234 555 0170	1972	70000.0	Ca24	Valid	adventure-works.com	*****0170
17-1978	J.Garcia	Jillian	386 555 0159	1978	70000.0	Ga70	Valid	adventure-works.com	*****0159
19-1983	E.Foster	Eduardo	522 555 0169	1983	40000.0	Fe26	Valid	adventure-works.com	*****0169
11-1980	A.Cook	Alexa	666 555 0153	1980	40000.0	Co46	Valid	adventure-works.com	*****0153
19-1979	A.Davis	Alexandra	719 555 0185	1979	40000.0	Da47	Valid	adventure-works.com	*****0185
15-1985	K.Sandberg	Kristine	1 (11) 500 555 0182	1985	10000.0	Sa41	Valid	adventure-works.com	*****0182
18-1984	G.Liang	Gilbert	1 (11) 500 555 0195	1984	10000.0	Li42	Valid	adventure-works.com	*****0195
11-1985	K.Rubio	Kristy	1 (11) 500 555 0180	1985	10000.0	Ru43	Valid	adventure-works.com	*****0180
12-1983	A.Watson	Alexa	1 (11) 500 555 0191	1983	30000.0	Wa17	Valid	adventure-works.com	*****0191
13-1983	J.Dominguez	Jacquelyn	1 (11) 500 555 0134	1983	30000.0	Do18	Valid	adventure-works.com	*****0134
16-1983	C.Gutierrez	Casey	1 (11) 500 555 0115	1983	30000.0	Gu19	Valid	adventure-works.com	*****0115
11-1985	A.Chander	Alisha	1 (11) 500 555 0176	1985	10000.0	Ch72	Valid	adventure-works.com	*****0176
18-1985	D.Raje	Derek	1 (11) 500 555 0112	1985	10000.0	Ra74	Valid	adventure-works.com	*****0112
19-1984	W.Dominguez	Walter	1 (11) 500 555 0148	1984	10000.0	Do76	Valid	adventure-works.com	*****0148

Table: DimCustomer (18 484 rows) Column: Phone_Masked (181 distinct values)

25. Proper Casing of Last Name (simulate manually)

LastnameProper = UPPER(LEFT(DimCustomer[LastName], 1)) &
LOWER(MID(DimCustomer[LastName], 2, LEN(DimCustomer[LastName])-1))

The screenshot shows the Power BI Desktop interface with a calculated column named 'LastName_Proper' being created. The formula is defined as:

```
1 LastName_Proper = UPPER(LEFT(DimCustomer[LastName],1)) & LOWER(MID(DimCustomer[LastName],2,LEN(DimCustomer[LastName])-1))
```

The Data pane on the right lists several columns from the DimCustomer table, including FirstName, LastName, and DimCustomer.

26. Replace Multiple Spaces in EnglishOccupation with Single Space

OccupationClean = SUBSTITUTE(SUBSTITUTE(DimCustomer[EnglishOccupation], " ", " "), " ", " ")

27. Generate Custom ID: Initials + Birth Year (e.g., JD_1985)

CustomID = LEFT(DimCustomer[FirstName], 1) &
LEFT(DimCustomer[LastName], 1) &
FORMAT(DimCustomer[BirthDate], "YYYY")

28. Remove Hyphens and Convert Phone to Number

```
PhoneNumeric = VALUE(SUBSTITUTE(DimCustomer[Phone], "-", ""))
```

29. Customer Segmentation (Education + Income)

```
CustomerSegment =
SWITCH(
    TRUE(),
    DimCustomer[EnglishEducation] = "Graduate Degree" &&
    DimCustomer[YearlyIncome] > 90000, "Elite",
    DimCustomer[EnglishEducation] = "Bachelors" &&
    DimCustomer[YearlyIncome] >= 60000 && DimCustomer[YearlyIncome] <= 90000,
    "Professional",
    DimCustomer[EnglishEducation] = "High School", "Basic",
    "Other"
)
```

30. Dynamic Customer Count by Gender (with conditions)

```
CustomerCountByGender =
VAR GenderCount = DISTINCTCOUNT(DimCustomer[Gender])
RETURN
IF(
    ISFILTERED(DimCustomer[Gender]),
```

```
IF(GenderCount=1,    COUNTROWS(VALUES(DimCustomer[CustomerKey])),  
"Multiple Values Selected",  
COUNTROWS(DimCustomer)  
)
```