

PRACTICAL 09: 11.DATA ANALYSIS AND VISUALIZATION USING EXCEL

(28/02/2024)

The screenshot displays the Power BI Desktop interface. The top ribbon includes tabs for File, Home, Insert, Modeling, View, and Help. The Home tab is active, showing various data source and visualization options. The main workspace area displays the message "Add data to your report" and "Once loaded, your data will appear in the Fields pane." Below this message are four buttons: "Import data from Excel" (highlighted with a red line), "Import data from SQL Server", "Paste data into a blank table", and "Try a sample dataset". A link "Get data from another source ->" is also present.

On the right side, the "Visualizations" pane shows various chart types, and the "Fields" pane is empty. The bottom status bar indicates "Page 1 of 1" and "87%".

Below the main interface, a "Navigator" window is open, showing a list of data sources under "global_superstore_2016.xlsx [3]". The "Returns" table is selected, and its data is displayed in a table format.

Column1	Column2	Column3
Returned	Order ID	Region
Yes	CA-2012-SA20830140-41210	Central US
Yes	IN-2012-PB19210127-41259	Eastern Asia
Yes	CA-2012-SC20095140-41174	Central US
Yes	IN-2015-JH158207-42140	Oceania
Yes	IN-2014-LC168857-41747	Oceania
Yes	ID-2013-AB1001527-41439	Eastern Asia
Yes	ES-2015-RA1994545-42218	Western Europe
Yes	CA-2014-TB21280140-41724	Central US
Yes	ES-2014-JF15295120-41924	Southern Europe
Yes	IN-2014-NM1844527-41800	Eastern Asia
Yes	IN-2015-GB145307-42260	Oceania
Yes	ES-2012-SC208458-41070	Western Europe
Yes	TU-2013-SF10200134-41417	Western Asia
Yes	ID-2015-RD1993092-42140	Oceania
Yes	CA-2014-TC21295140-41800	Southern US
Yes	SF-2015-MV8190117-42362	Southern Africa
Yes	IN-2014-EM1382566-41850	Eastern Asia
Yes	ES-2015-CC1210045-42182	Western Europe
Yes	ES-2015-MM1792045-42199	Western Europe
Yes	IN-2015-DB1306027-42353	Eastern Asia
Yes	IN-2013-JC157757-41310	Oceania
Yes	CA-2015-RB19705140-42262	Eastern US
Yes	ES-2015-BB1154548-42336	Western Europe

Build visuals with your data

Select or drag fields from the Fields pane onto the report canvas.

Visualizations

Build visual

Fields

Search

Orders

People

Returns

Card

Values

Add data fields here

Drill through

Cross-report

Keep all filters

Add drill-through fields here

Page 1

1.47M

Sum of Profit

Visualizations

Build visual

Fields

Search

Orders

Category

City

Country

Customer ID

Customer Name

Discount

Market

Order Date

Date Hierarc...

Year

Quarter

Month

Day

Order ID

Order Priority

Postal Code

Product ID

Product Name

Profit

Quantity

Region

Row ID

Sales

Fields

Sum of Profit

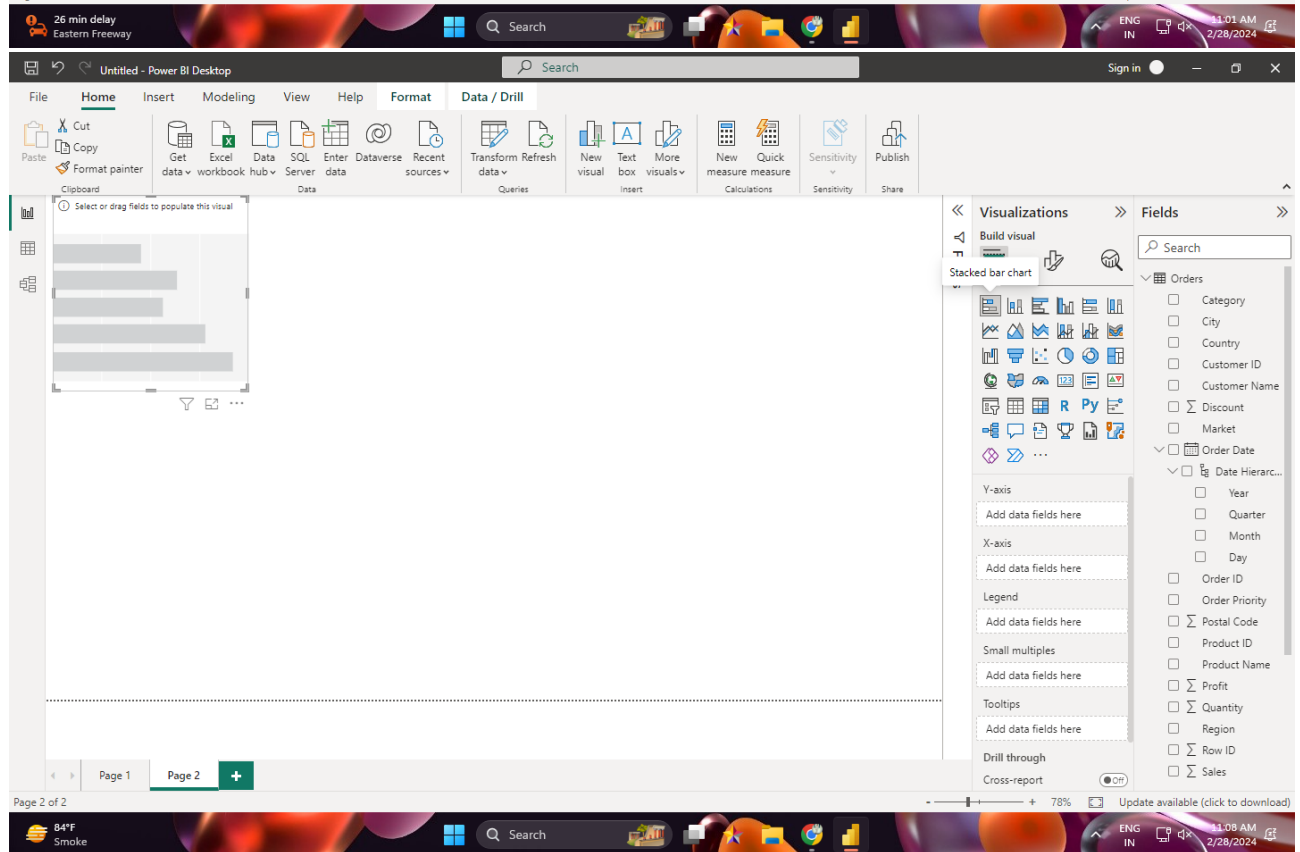
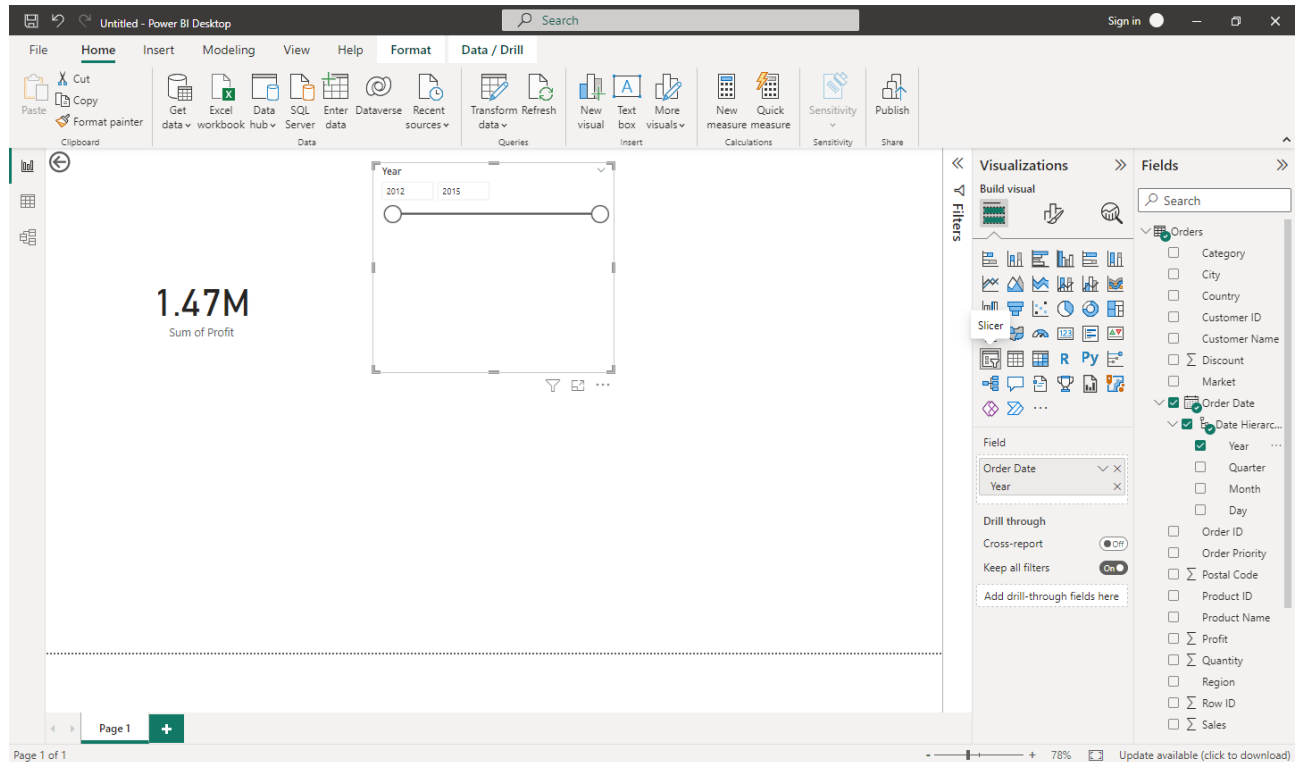
Drill through

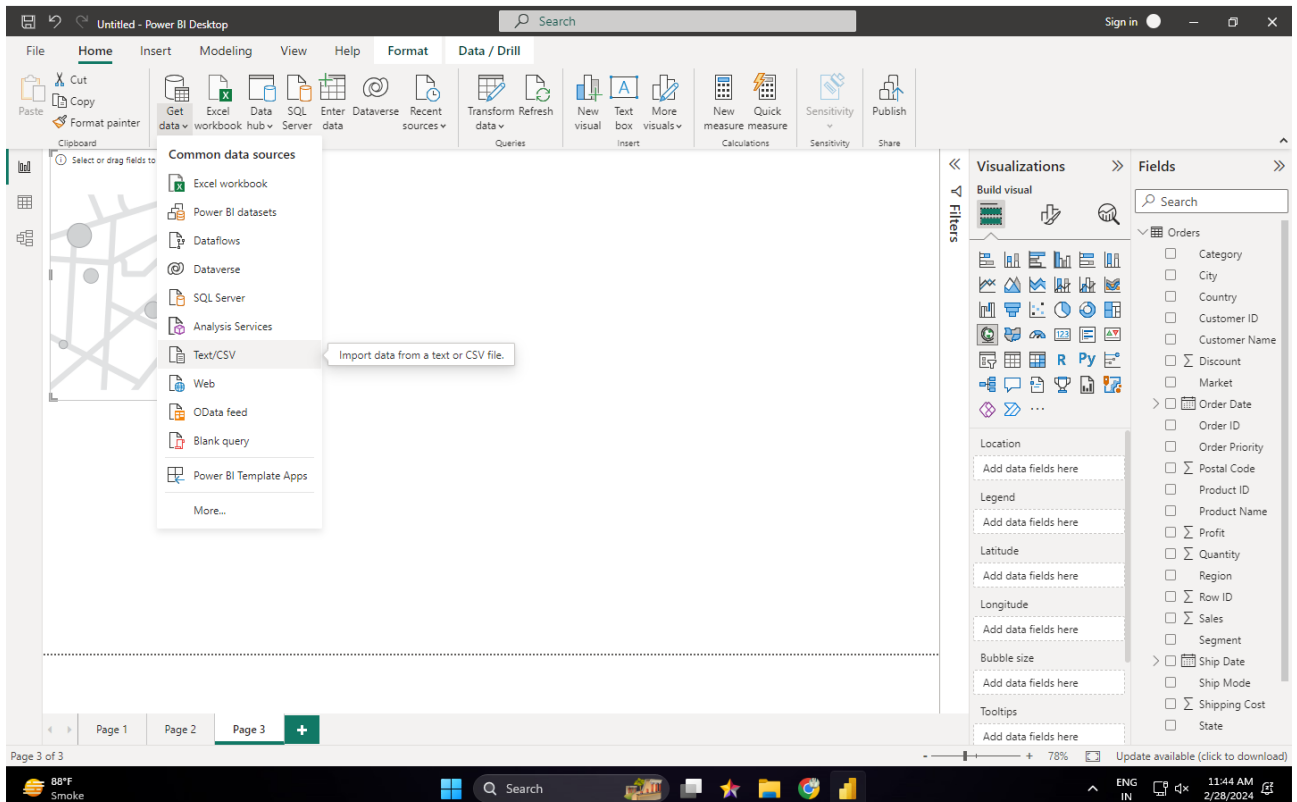
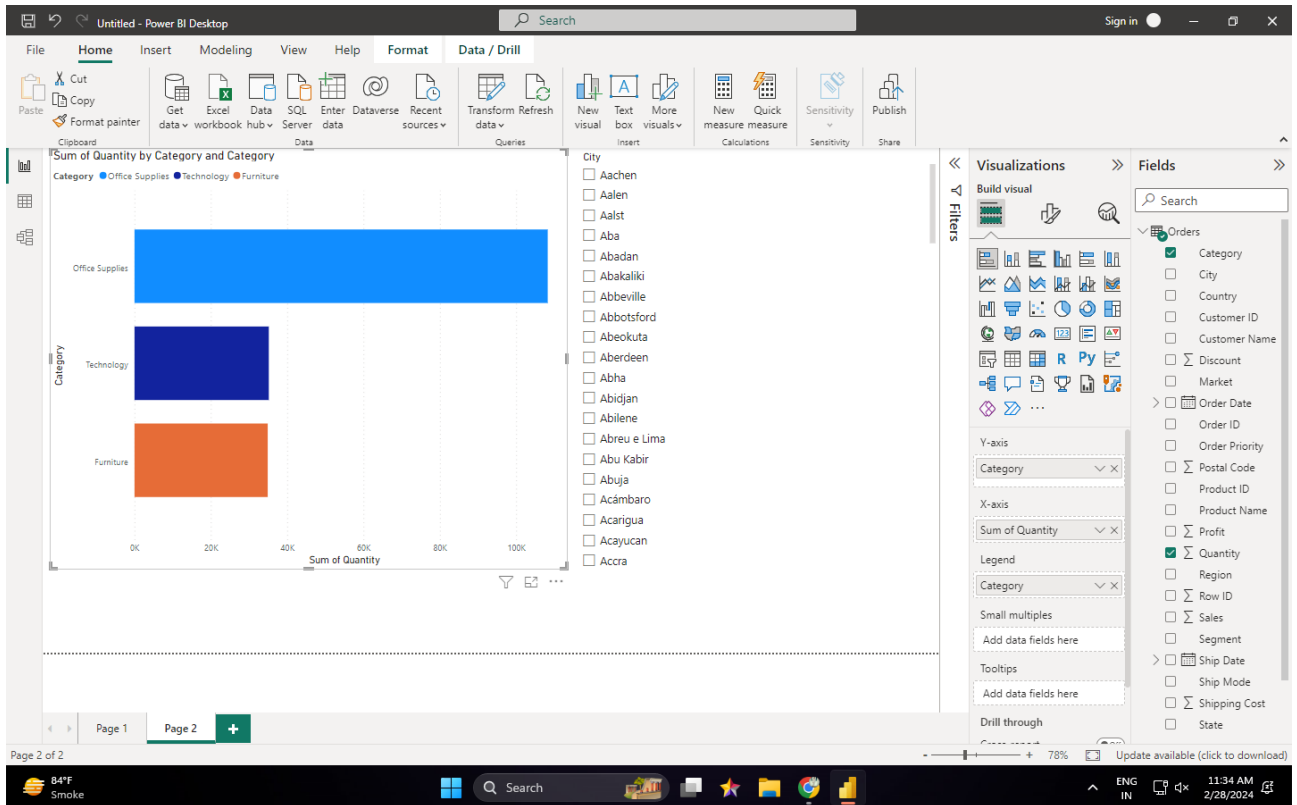
Cross-report

Keep all filters

Add drill-through fields here

Page 1





ZAHID SHAIKH 453

FileHomeTransformAdd ColumnViewToolsHelp

Close & Apply

New Source

Recent Sources

Enter Data

Data source settings

Data Sources

Manage Parameters

Refresh Preview

Advanced Editor

Query

Choose Columns

Remove Columns

Keep Rows

Remove Rows

Reduce Rows

Sort

Split Column

Group By

Replace Values

Transform

Data Type: Whole Number

Use First Row as Headers

Append Queries

Combine Files

Combine

Text Analytics

Vision

Azure Machine Learning

AI Insights

Queries [4]

Orders

People

Returns

titanic

Table.TransformColumnTypes(#"Promoted Headers",{"PassengerId", Int64.Type}, {"Survived", Int64.Type}, {"Pclass",

123 PassengerId

123 Survived

123 Pclass

123 Name

123 Sex

1

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3 Braund, Mr. Owen Harris

1 Cumings, Mrs. John Bradley (Florence Briggs Thayer)

3 Heikkinen, Miss. Laina

1 Futrelle, Mrs. Jacques Heath (Lily May Peel)

3 Allen, Mr. William Henry

3 Moran, Mr. James

1 McCarthy, Mr. Timothy J

3 Palsson, Master. Gosta Leonard

3 Johnson, Mrs. Oscar W (Elisabeth Vilhelmina Berg)

2 Nasser, Mrs. Nicholas (Adele Achem)

3 Sandstrom, Miss. Marguerite Rut

1 Bonnell, Miss. Elizabeth

3 Saunderson, Mr. William Henry

3 Andersson, Mr. Anders Johan

3 Vestrom, Miss. Hulda Amanda Adolfina

2 Hewlett, Mrs. (Mary D Kingcome)

3 Rice, Master. Eugene

2 Williams, Mr. Charles Eugene

3 Vander Planke, Mrs. Julius (Emelia Maria Vandemoortele)

3 Masselmani, Mrs. Fatima

2 Fynney, Mr. Joseph J

3 Beesley, Mr. Lawrence

3 McGowan, Miss. Anna "Annie"

1 Sloper, Mr. William Thompson

3 Palsson, Miss. Torborg Danira

3 Asplund, Mrs. Carl Oscar (Selma Augusta Emilia Johansson)

3 Emir, Mr. Farred Chehab

1 Fortune, Mr. Charles Alexander

3 O'Dwyer, Miss. Ellen "Nellie"

12 COLUMNS, 891 ROWS

Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 11:44 AM

Breaking news

Unfolding now

Search

11:45 AM

2/28/2024

FileHomeTransformAdd ColumnViewToolsHelp

Column From Custom Examples

Invoke Custom Function

Index Column

Duplicate Column

Conditional Column

ABC Extract

Format

Parse

Statistics

Standard

Scientific

Trigonometry

Rounding

Information

Date

Time

Duration

From Date & Time

Text Analytics

Vision

Azure Machine Learning

AI Insights

Queries [4]

Orders

People

Returns

titanic

Table.TransformColumnTypes(#"Promoted Headers",{"PassengerId", Int64.Type}, {"Survived", Int64.Type}, {"Pclass",

123 PassengerId

123 Survived

123 Pclass

123 Name

123 Sex

1

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3 Braund, Mr. Owen Harris

1 Cumings, Mrs. John Bradley (Florence Briggs Thayer)

3 Heikkinen, Miss. Laina

1 Futrelle, Mrs. Jacques Heath (Lily May Peel)

3 Allen, Mr. William Henry

3 Moran, Mr. James

1 McCarthy, Mr. Timothy J

3 Palsson, Master. Gosta Leonard

3 Johnson, Mrs. Oscar W (Elisabeth Vilhelmina Berg)

2 Nasser, Mrs. Nicholas (Adele Achem)

3 Sandstrom, Miss. Marguerite Rut

1 Bonnell, Miss. Elizabeth

3 Saunderson, Mr. William Henry

3 Andersson, Mr. Anders Johan

3 Vestrom, Miss. Hulda Amanda Adolfina

2 Hewlett, Mrs. (Mary D Kingcome)

3 Rice, Master. Eugene

2 Williams, Mr. Charles Eugene

3 Vander Planke, Mrs. Julius (Emelia Maria Vandemoortele)

3 Masselmani, Mrs. Fatima

2 Fynney, Mr. Joseph J

3 Beesley, Mr. Lawrence

3 McGowan, Miss. Anna "Annie"

1 Sloper, Mr. William Thompson

3 Palsson, Miss. Torborg Danira

3 Asplund, Mrs. Carl Oscar (Selma Augusta Emilia Johansson)

3 Emir, Mr. Farred Chehab

1 Fortune, Mr. Charles Alexander

3 O'Dwyer, Miss. Ellen "Nellie"

12 COLUMNS, 891 ROWS

Column profiling based on top 1000 rows

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Breaking news

Unfolding now

Search

11:46 AM

2/28/2024

Queries [4]

Orders

People

Returns

titanic

File

Home

Transform

Add Column

View

Tools

Help

Column From Custom Examples

Column

Invoke Custom Function

Index Column

Duplicate Column

General

Conditional Column

Format

ABC 123 Extract

Parse

From Text

Statistics

Standard

Scientific

From Number

Trigonometry

Rounding

Information

Date

Time

Duration

From Date & Time

Text

Analytics

Vision

Azure Machine Learning

AI Insights

Table.TransformColumnTypes(#"Promoted Headers",{{"PassengerId", Int64.Type}, {"Survived", Int64.Type}, {"Pclass", Int64.Type}, {"Name", Text.Type}, {"Sex", Text.Type}, {"Ports", Text.Type}})

123 PassengerId

123 Survived

123 Pclass

123 Name

123 Sex

123 Ports

1	1	0	3	Braund, Mr. Owen Harris	male	
2						
3						
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24	24	1	1	Sloper, Mr. William Thompson	male	
25	25	0	3	Palsson, Miss. Torborg Danira	female	
26	26	1	3	Asplund, Mrs. Carl Oscar (Selma Augusta Emilia Johansson)	female	
27	27	0	3	Emir, Mr. Farred Chehab	male	
28	28	0	1	Fortune, Mr. Charles Alexander	male	
29	29	1	3	O'Dwyer, Miss. Ellen "Nellie"	female	

Add Conditional Column

Add a conditional column that is computed from the other columns or values.

New column name

Ports

Column Name

Operator

Value

Output

If

Embarked

equals

ABC 123 C

Then

ABC 123 Cherbourg

Else If

Embarked

equals

ABC 123 S

Then

ABC 123 Southampton

Else If

Embarked

equals

ABC 123 Q

Then

ABC 123 Queenstown

...

Add Clause

Else

ABC 123

OK

Cancel

Query Settings

PROPERTIES

Name

titanic

All Properties

APPLIED STEPS

Source

Promoted Headers

Changed Type

12 COLUMNS, 891 ROWS

Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 11:44 AM

88°F

Air: Severe

Search

11:49 AM

2/28/2024

Queries [4]

Orders

People

Returns

titanic

File

Home

Transform

Add Column

View

Tools

Help

Column From Custom Examples

Column

Invoke Custom Function

Index Column

Duplicate Column

General

Conditional Column

Format

ABC 123 Extract

Parse

From Text

Statistics

Standard

Scientific

From Number

Trigonometry

Rounding

Information

Date

Time

Duration

From Date & Time

Text

Analytics

Vision

Azure Machine Learning

AI Insights

Table.AddColumn(#"Changed Type", "Ports", each if [Embarked] = "C" then "Cherbourg" else if [Embarked] = "S" then "Southampton" else if [Embarked] = "Q" then "Queenstown" else null)

123 Ports

1	0	A/5 21171	7.25	S	Southampton
2	0	PC 17599	71.2833	C	Cherbourg
3	0	STON/O2. 3101282	7.925	S	Southampton
4	0	113803	53.1	C123	Southampton
5	0	373450	8.05	S	Southampton
6	0	330877	8.4583	Q	Queenstown
7	0	17463	51.8625	E46	Southampton
8	1	349909	21.075	S	Southampton
9	2	347742	11.1333	S	Southampton
10	0	237736	30.0708	C	Cherbourg
11	1	PP 9549	16.7	G6	Southampton
12	0	113783	26.55	C103	Southampton
13	0	A/5. 2151	8.05	S	Southampton
14	5	347082	31.275	S	Southampton
15	0	350406	7.8542	S	Southampton
16	0	248706	16	S	Southampton
17	1	382652	29.125	Q	Queenstown
18	0	244373	13	S	Southampton
19	0	345763	18	S	Southampton
20	0	2649	7.225	C	Cherbourg
21	0	239865	26	S	Southampton
22	0	248698	13	D56	Southampton
23	0	330923	8.0292	Q	Queenstown
24	0	113788	35.5	A6	Southampton
25	1	349909	21.075	S	Southampton
26	5	347077	31.3875	S	Southampton
27	0	2631	7.225	C	Cherbourg
28	2	19950	263	C23 C25 C27	Southampton
29	0	330959	7.8792	Q	Queenstown

Query Settings

PROPERTIES

Name

titanic

All Properties

APPLIED STEPS

Source

Promoted Headers

Changed Type

Added Conditional Column

13 COLUMNS, 891 ROWS

Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 11:49 AM

Tomorrow's high

Near record

Search

11:49 AM

2/28/2024

