

# Appending Sheets in Power Query

Multiple sheets in Excel can be appended as a single sheet in Power BI.

Go To Append Queries -> Append Query as New -> Select The sheets to be appended -> Click Add -> Ok

The screenshot displays the Power Query 'Append' dialog box. The 'Available tables' list includes APR20, FEB20, JAN20, MAR20, and Sales2020. The 'Tables to append' list contains Sales2020. The 'Three or more tables' radio button is selected. The background shows a data table with columns: Date, Policy Id, premium, and Comm.

| Date      | Policy Id | premium | Comm |
|-----------|-----------|---------|------|
| 1/1/2020  | P0001     | 10000   | 1000 |
| 1/2/2020  | P0002     | 30000   | 3000 |
| 1/3/2020  |           |         |      |
| 1/4/2020  |           |         |      |
| 1/5/2020  |           |         |      |
| 1/6/2020  |           |         |      |
| 1/7/2020  |           |         |      |
| 1/8/2020  |           |         |      |
| 1/9/2020  |           |         |      |
| 1/10/2020 |           |         |      |
| 1/11/2020 |           |         |      |
| 2/1/2020  |           |         |      |
| 2/2/2020  |           |         |      |
| 2/3/2020  |           |         |      |
| 2/4/2020  |           |         |      |
| 2/5/2020  |           |         |      |
| 2/6/2020  |           |         |      |
| 2/7/2020  |           |         |      |
| 2/8/2020  |           |         |      |
| 2/9/2020  |           |         |      |
| 2/10/2020 |           |         |      |
| 3/1/2020  |           |         |      |
| 3/2/2020  |           |         |      |
| 3/3/2020  | P0003     | 40000   | 4000 |
| 3/4/2020  | P0004     | 20000   | 2000 |

**Note: Columns Name should be same.**

**To display only the appended sheet in Power BI clear the ENABLE LOAD option for other sheets.**



# Merging Sheets in Power Query

Merging Sheets in Power Query can be considered as advanced lookup.

Go To Merge Queries -> Select The tables to be merged -> Select the common field -> Specify the join type -> Ok

The screenshot shows the Power Query 'Merge' dialog box. The 'Merge' dialog has a 'Merge' tab selected. It shows two tables: 'SAL' and 'Sheet1'. The 'SAL' table has columns EID, DEPT, DESI, and SALARY. The 'Sheet1' table has columns EID, NAME, FNAME, LNAME, ADDRESS, PHONE, EMAIL, and DO. The 'Join Kind' is set to 'Left Outer (all from first, matching from second)'. The 'Fuzzy matching options' section shows a green checkmark and the text 'The selection matches 41 of 42 rows from the first table.' The 'Query Settings' pane on the right shows the 'PROPERTIES' and 'APPLIED STEPS' sections. The 'APPLIED STEPS' section shows 'Source', 'Navigation', 'Promoted Headers', and 'Changed Type'.

| EID  | DEPT  | DESI       | SALARY |
|------|-------|------------|--------|
| 1001 | OPS   | Director   | 400000 |
| 1002 | OPS   | VP         | 250000 |
| 1003 | ADMIN | SR MANAGER | 134165 |
| 1004 | MIS   | Manager    | 104175 |
| 1005 | HR    | ASSOCIATE  | 321021 |

| EID  | NAME             | FNAME     | LNAME  | ADDRESS                 | PHONE      | EMAIL               | DO   |
|------|------------------|-----------|--------|-------------------------|------------|---------------------|------|
| 1001 | RAMESH GUPTA     | RAMESH    | GUPTA  | SECTOR 7,Rohini,Gurgaon | 9999002727 | RK@YAHOO.CO.IN      | 9/1  |
| 1002 | Sandeep Sharma   | Sandeep   | Sharma | SECTOR 2,PALAM,GURGAON  | 9567890010 | SAM1@YAHOO.COM      | 9/15 |
| 1003 | Rajesh Sharma    | Rajesh    | Sharma | Sector 11,Dwarka,Delhi  | 9999001001 | RSharma56@gmail.com | 3/16 |
| 1004 | Yogeshwar Sharma | Yogeshwar | Sharma | Sector 11,Dwarka,Delhi  | 8899001001 | YSharma@gmail.com   | 9/25 |

Join Kind: Left Outer (all from first, matching from second)

☐ Use fuzzy matching to perform the merge

Fuzzy matching options

✓ The selection matches 41 of 42 rows from the first table.

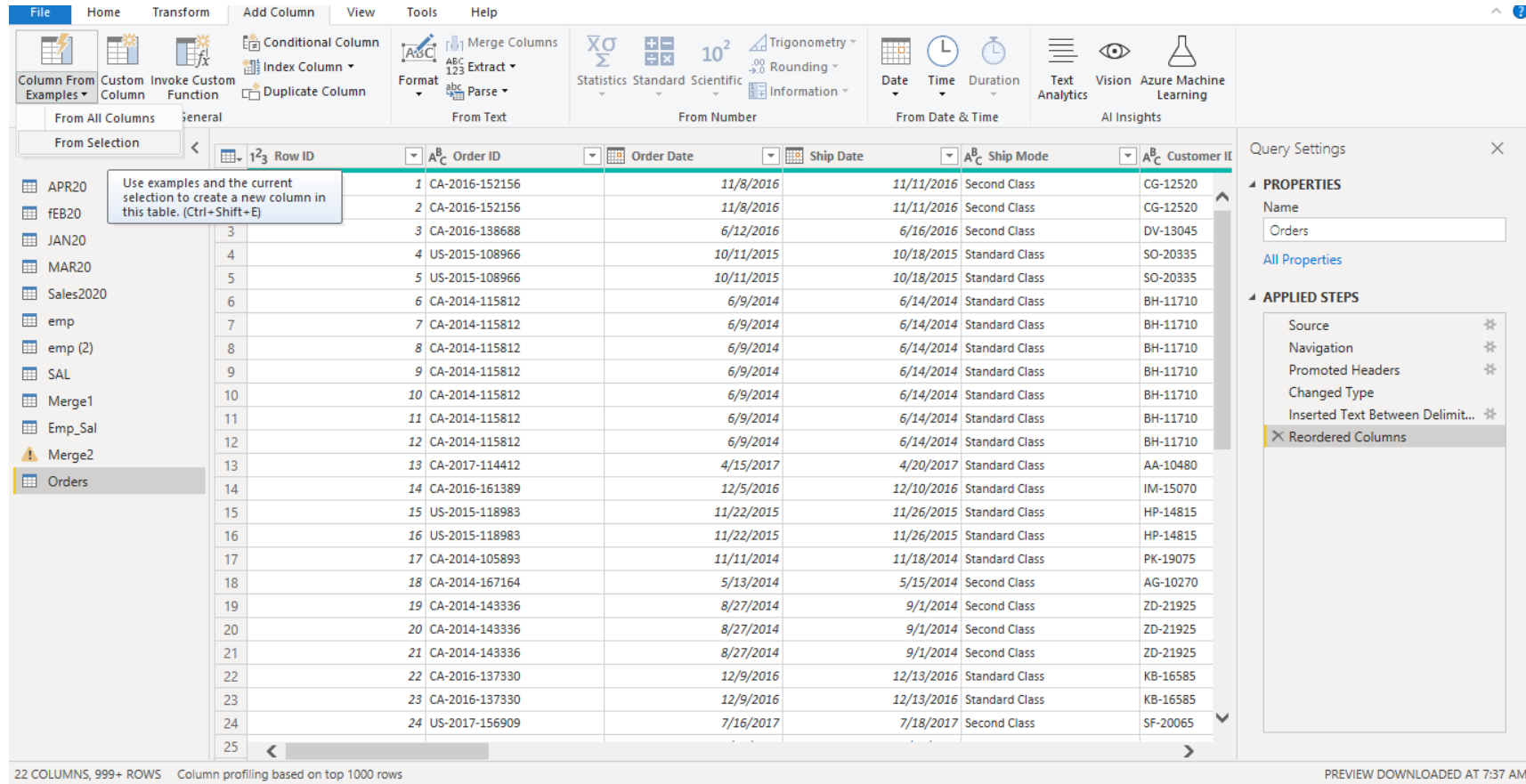
OK Cancel

Merging Sheets can also be done in multiple data source & Multiple Columns



# Columns From Example in Power Query

CFE is Just like Fast Fill In Excel. Many of the Text & date functions can be utilized without writing any function, Just by few clicks. (Split, Merge, Date Parts, Part of AlphaNumeric Data)



The screenshot displays the Microsoft Power Query Editor interface. The ribbon at the top includes tabs for File, Home, Transform, Add Column, View, Tools, and Help. The 'Add Column' tab is active, showing options like 'Column From Examples', 'Custom Column', 'Invoke Custom Function', 'Conditional Column', 'Index Column', and 'Duplicate Column'. A tooltip is visible over the 'Column From Examples' button, stating: 'Use examples and the current selection to create a new column in this table. (Ctrl+Shift+E)'. The main area shows a data table with the following columns: Row ID, Order ID, Order Date, Ship Date, Ship Mode, and Customer ID. The table contains 25 rows of data. The right-hand pane shows the 'Query Settings' for the 'Orders' query, including the 'PROPERTIES' section (Name: Orders) and the 'APPLIED STEPS' section (Source, Navigation, Promoted Headers, Changed Type, Inserted Text Between Delimit..., Reordered Columns). The status bar at the bottom indicates '22 COLUMNS, 999+ ROWS' and 'Column profiling based on top 1000 rows'. The preview was downloaded at 7:37 AM.

| Row ID | Order ID       | Order Date | Ship Date  | Ship Mode      | Customer ID |
|--------|----------------|------------|------------|----------------|-------------|
| 1      | CA-2016-152156 | 11/8/2016  | 11/11/2016 | Second Class   | CG-12520    |
| 2      | CA-2016-152156 | 11/8/2016  | 11/11/2016 | Second Class   | CG-12520    |
| 3      | CA-2016-138688 | 6/12/2016  | 6/16/2016  | Second Class   | DV-13045    |
| 4      | US-2015-108966 | 10/11/2015 | 10/18/2015 | Standard Class | SO-20335    |
| 5      | US-2015-108966 | 10/11/2015 | 10/18/2015 | Standard Class | SO-20335    |
| 6      | CA-2014-115812 | 6/9/2014   | 6/14/2014  | Standard Class | BH-11710    |
| 7      | CA-2014-115812 | 6/9/2014   | 6/14/2014  | Standard Class | BH-11710    |
| 8      | CA-2014-115812 | 6/9/2014   | 6/14/2014  | Standard Class | BH-11710    |
| 9      | CA-2014-115812 | 6/9/2014   | 6/14/2014  | Standard Class | BH-11710    |
| 10     | CA-2014-115812 | 6/9/2014   | 6/14/2014  | Standard Class | BH-11710    |
| 11     | CA-2014-115812 | 6/9/2014   | 6/14/2014  | Standard Class | BH-11710    |
| 12     | CA-2014-115812 | 6/9/2014   | 6/14/2014  | Standard Class | BH-11710    |
| 13     | CA-2017-114412 | 4/15/2017  | 4/20/2017  | Standard Class | AA-10480    |
| 14     | CA-2016-161389 | 12/5/2016  | 12/10/2016 | Standard Class | IM-15070    |
| 15     | US-2015-118983 | 11/22/2015 | 11/26/2015 | Standard Class | HP-14815    |
| 16     | US-2015-118983 | 11/22/2015 | 11/26/2015 | Standard Class | HP-14815    |
| 17     | CA-2014-105893 | 11/11/2014 | 11/18/2014 | Standard Class | PK-19075    |
| 18     | CA-2014-167164 | 5/13/2014  | 5/15/2014  | Second Class   | AG-10270    |
| 19     | CA-2014-143336 | 8/27/2014  | 9/1/2014   | Second Class   | ZD-21925    |
| 20     | CA-2014-143336 | 8/27/2014  | 9/1/2014   | Second Class   | ZD-21925    |
| 21     | CA-2014-143336 | 8/27/2014  | 9/1/2014   | Second Class   | ZD-21925    |
| 22     | CA-2016-137330 | 12/9/2016  | 12/13/2016 | Standard Class | KB-16585    |
| 23     | CA-2016-137330 | 12/9/2016  | 12/13/2016 | Standard Class | KB-16585    |
| 24     | US-2017-156909 | 7/16/2017  | 7/18/2017  | Second Class   | SF-20065    |
| 25     |                |            |            |                |             |



# Conditional Columns in Power Query

Conditional Column is just like IF Else formula in Excel without writing any code.

To add a Conditional Column : Add Column -> Conditional Column -> Specify the condition

Queries [1] < 123 EID DEPT DESI SALARY ABC 123 Custom

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

1064 OPS ASSOCIATE 60000 D  
1014 MIS ASSOCIATE 62000 D  
1066 OPS ASSOCIATE 65000 D  
1039 OPS ASSOCIATE 65000 D  
1019 HR ASSOCIATE 66000 D  
1015 OPS ASSISTANT MANAGER 70785 D  
1020 HR ASSOCIATE 71500 D

ROWS Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 9:23 AM



# ASSIGNMENT



- Create a visual to display no of employees on the basis of seniority level (tenure Years: > 5 Senior, 3-5 Junior, 1-3 Intern, <1 - Temp)
- Grade the employees on the basis of salary (A >300000 / B >100000/ C >500000 /NA <= 50000) and create a visual to get the percentage wise bifurcation of the grade.
- Create a visual to display the promotion percentage.
- Using a funnel chart display City wise bifurcation of salary.
- Create a visual to display city wise count of employees bifurcated on the basis of designation.



# Auto Fill in Power Query

Without writing any code you can fill the data

The FILL Option is available under Transform tab.

The screenshot displays the Microsoft Power Query Editor interface. The 'Transform' tab is selected, and the 'Fill' option is highlighted in the 'Replace Values' dropdown menu. The main data area shows a table with columns 'State', 'SubCategory', and 'Sales'. The 'State' column contains values like 'Alabama' and 'Arizona', while 'SubCategory' contains various product types like 'Accessories', 'Appliances', etc. The 'Sales' column contains numerical values. The right sidebar shows 'Query Settings' with 'Properties' and 'Applied Steps' sections. The 'Applied Steps' list includes 'Source', 'Navigation', 'Promoted Headers', and 'Changed Type'. The bottom status bar indicates '656 ROWS' and 'Column profiling based on top 1000 rows'.

|    | State   | SubCategory | Sales    |
|----|---------|-------------|----------|
| 1  | Alabama | Accessories | 2322.83  |
| 2  |         | Appliances  | 208.16   |
| 3  |         | Art         | 301.21   |
| 4  |         | Binders     | 466.82   |
| 5  |         | Chairs      | 3915.54  |
| 6  |         | Copiers     | 899.97   |
| 7  |         | Envelopes   | 105.84   |
| 8  |         | Fasteners   | 3.62     |
| 9  |         | Furnishings | 40.48    |
| 10 |         | Labels      | 506.49   |
| 11 |         | Machines    | 3040     |
| 12 |         | Paper       | 883.02   |
| 13 |         | Phones      | 2706.28  |
| 14 |         | Storage     | 1249.41  |
| 15 |         | Supplies    | 484.51   |
| 16 |         | Tables      | 2376.46  |
| 17 | Arizona | Accessories | 3396.16  |
| 18 |         | Appliances  | 774.432  |
| 19 |         | Art         | 1389.152 |
| 20 |         | Binders     | 2185.353 |
| 21 |         | Bookcases   | 519.213  |
| 22 |         | Chairs      | 6499.08  |
| 23 |         | Envelopes   | 214.52   |
| 24 |         | Fasteners   | 101.232  |
| 25 |         | Furnishings | 2511.648 |



# Grouping in Power Query

**Group By** is used to group the data. This option is available under Transform Menu

The screenshot shows the Microsoft Power Query Editor interface. The 'Transform' tab is selected in the ribbon, and the 'Group By' option is highlighted. A 'Group By' dialog box is open, showing 'SubCategory' as the column to group by and 'Count' as the new column name, with 'Count Rows' as the operation. The background shows a data table with columns 'State', 'SubCategory', and 'Sales'.

| State   | SubCategory | Sales    |
|---------|-------------|----------|
| Alabama | Accessories | 2322.83  |
| Arizona | Accessories | 3396.16  |
| Arizona | Appliances  | 774.432  |
| Arizona | Art         | 1389.152 |
| Arizona | Binders     | 2185.353 |
| Arizona | Bookcases   | 519.213  |
| Arizona | Chairs      | 6499.08  |
| Arizona | Envelopes   | 214.52   |
| Arizona | Fasteners   | 101.232  |
| Arizona | Furnishings | 2511.648 |



# Transpose Data in Power Query

In **Transpose** rows are converted as columns & columns are converted as Rows. This option is available under Transform Menu

The screenshot displays the Microsoft Power Query Editor interface. The 'Transform' tab is selected in the ribbon, and the 'Transpose' option is highlighted with a red rectangle. A tooltip for 'Transpose' is visible, stating: 'Transpose this table, treating rows as columns and columns as rows.'

The main workspace shows a table with the following data:

|   | Column2     | Column3     | Column4    | Column5 | Column6 |        |
|---|-------------|-------------|------------|---------|---------|--------|
| 1 | Alabama     | null        | null       | null    |         |        |
| 2 | SubCategory | Accessories | Appliances | Art     | Binders | Chairs |
| 3 | Sales       | 2322.83     | 208.16     | 301.21  | 466.82  |        |

The right-hand pane shows the 'Query Settings' for the 'Horizontal' query, including the 'PROPERTIES' and 'APPLIED STEPS' sections.





# Unpivot Data in Power Query

Unpivot data is the way to get detailed data from the summarized data, which can be further used for visualization purpose.

The screenshot displays the Microsoft Power Query Editor interface. The ribbon at the top includes tabs for File, Home, Transform, Add Column, View, Tools, and Help. The 'Transform' tab is active, showing options like 'Unpivot Columns', 'Unpivot Other Columns', and 'Unpivot Only Selected Columns'. A context menu is open over a table, highlighting the 'Unpivot Columns' option. The table contains data for various US states and their corresponding values. The 'Query Settings' pane on the right shows the query name 'unpivot' and the applied steps: 'Source', 'Navigation', 'Promoted Headers', and 'Changed Type'.

| State                | Value       |
|----------------------|-------------|
| Alabama              | 6332.48     |
| Arizona              | 13525.291   |
| Arkansas             | 3187.55     |
| California           | 156064.6015 |
| Colorado             | 13243.037   |
| Connecticut          | 5174.987    |
| Delaware             | 4759.319    |
| District of Columbia | 1346.58     |
| Florida              | 22987.038   |
| Georgia              | 8321.48     |
| Idaho                | 2595.482    |
| Illinois             | 28274.522   |
| Indiana              | 11496.71    |
| Iowa                 | 2642.31     |
| Kansas               | 111.12      |
| Kentucky             | 12126.84    |
| Louisiana            | 2963.03     |
| Maine                | 109.48      |
| Maryland             | 9149.253    |
| Massachusetts        | 10919.064   |
| Michigan             | 22321.1     |
| Minnesota            | 7611.35     |
| Mississippi          | 4317.85     |
| Missouri             | 2936.45     |
| Montana              | 63.98       |



# Data type in Power Query

Power Query automatically identifies the data type while loading the data. However if required it can be changed.

The screenshot displays the Power Query interface. The main area shows a table with columns: EID, NAME, and DOB. The DOB column is selected, and a context menu is open, listing various data types: Decimal Number, Fixed decimal number, Whole Number, Percentage, Date/Time, Date, Time, Date/Time/Timezone, Duration, Text, True/False, and Binary. The 'Changed Type' step is visible in the Applied Steps pane on the right.

| EID | NAME                  | DOB                |
|-----|-----------------------|--------------------|
| 1   | 1001 RAMESH GUPTA     | 1.2                |
| 2   | 1002 Sandeep Sharma   | \$                 |
| 3   | 1003 Rajesh Sharma    | 123                |
| 4   | 1004 Yogeshwar Sharma | %                  |
| 5   | 1005 Manoj Kumar      | Date/Time          |
| 6   | 1006 Rohit Gupta      | Date               |
| 7   | 1007 Kapil Sharma     | Time               |
| 8   | 1008 Archana Sharma   | Date/Time/Timezone |
| 9   | 1009 Ranjeeta Goyal   | Duration           |
| 10  | 1010 Komal Singh      | Text               |
| 11  | 1011 AMIT KAPOOR      | True/False         |
| 12  | 1012 MONIKA ARORA     | Binary             |
| 13  | 1013 ROHAN KUMAR      | Using Locale...    |
| 14  | 1014 RAJAT KUMAR      |                    |
| 15  | 1015 ABHISHEK SHARMA  |                    |
| 16  | 1019 RAJAT KAPOOR     | 10/11/1983         |
| 17  | 1020 Rohan Kumar      | 10/10/1989         |
| 18  | 1021 Lalit Sharma     | 10/12/1989         |
| 19  | 1022 Monika Bajaj     | 10/12/1992         |
| 20  | 1023 Devender Kapoor  | 10/10/1982         |
| 21  | 1024 Ravinder Kumar   | 10/10/1985         |
| 22  | 1025 GAURAV GUPTA     | 12/10/1987         |
| 23  | 1026 David            | 12/17/1987         |
| 24  | 1027 KONIKA KAPOOR    | 10/10/1980         |
| 25  | 1028 RAJAT SHARMA     | 1/14/1989          |



# Keep Remove Rows in Power Query

Keep Remove row option is available under Home tab in Power Query. It provide various options to clean the data.

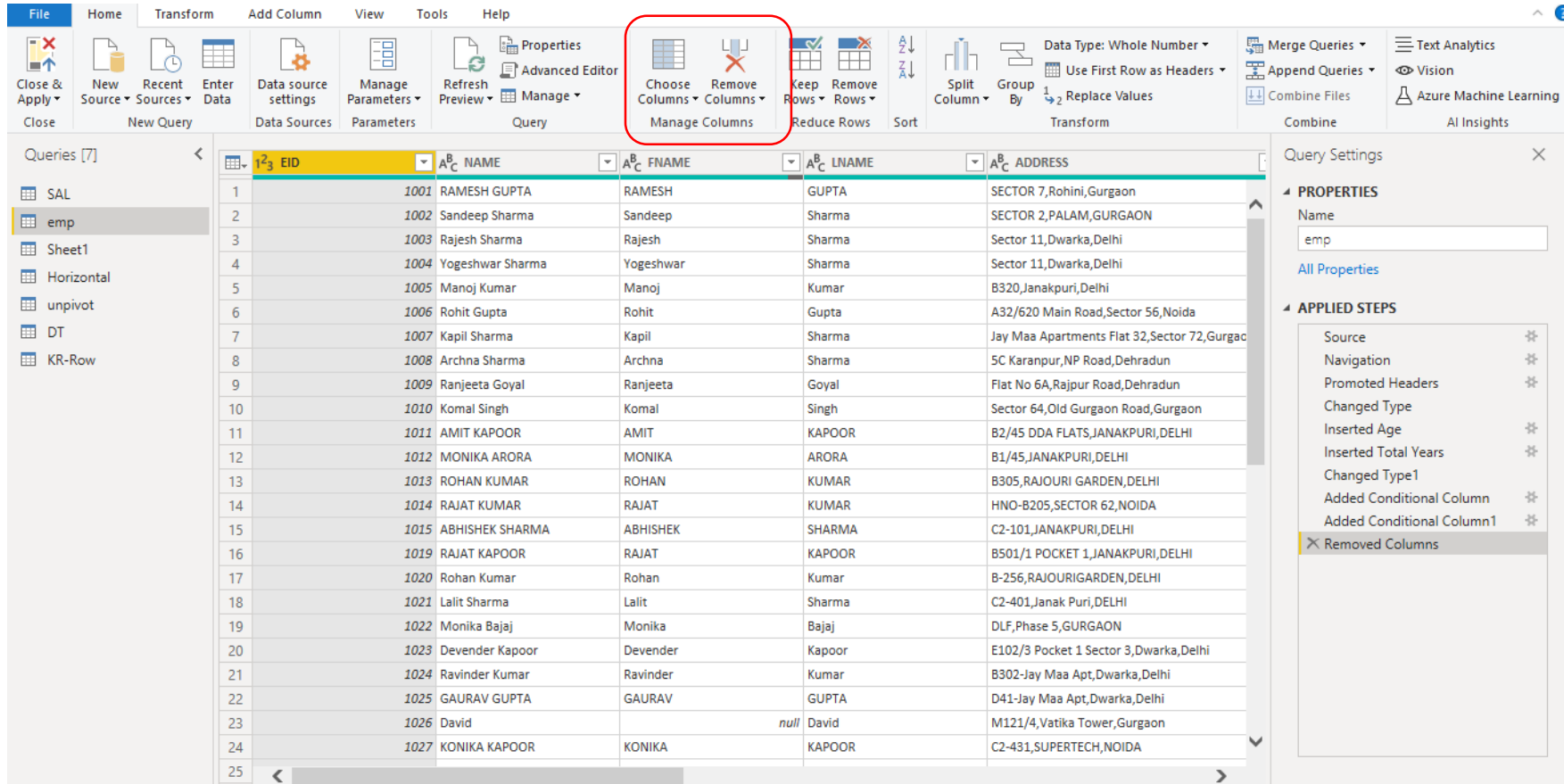
The screenshot displays the Microsoft Power Query Editor interface. The 'Home' tab is active in the ribbon, and the 'Remove Rows' dropdown menu is open, highlighting various options for cleaning data. The main data area shows a table with columns EID, NAME, and DOB. The 'KR-Row' query is selected in the left pane. The right pane shows the 'Query Settings' for 'KR-Row', including 'PROPERTIES' and 'APPLIED STEPS'.

| EID | NAME                  | DOB        |
|-----|-----------------------|------------|
| 1   | 1001 RAMESH GUPTA     | 9/1/1990   |
| 2   | 1002 RAMESH GUPTA     | 9/15/1995  |
| 3   | 1003 Rajesh Sharma    | 3/16/2001  |
| 4   | 1004 Yogeshwar Sharma | xxx        |
| 5   | 1005 Manoj Kumar      | 7/1/1985   |
| 6   | 1006 Rohit Gupta      | 3/31/1992  |
| 7   | 1007 Kapil Sharma     | 9/28/1987  |
| 8   | 1008 Archana Sharma   | 5/10/1985  |
| 9   | 1009 Ranjeeta Goyal   | 12/31/1989 |
| 10  | 1010 Komal Singh      | 3/31/1990  |
| 11  | 1011 AMIT KAPOOR      | 1/1/1992   |
| 12  | 1012 MONIKA ARORA     | 1/1/1982   |
| 13  | 1013 ROHAN KUMAR      | 10/10/1998 |
| 14  | 1014 RAJAT KUMAR      | 10/10/1998 |
| 15  | 1015 ABHISHEK SHARMA  | 10/11/1982 |
| 16  | 1019 RAJAT KAPOOR     | 10/11/1983 |
| 17  | 1020 Rohan Kumar      | 10/10/1989 |
| 18  | 1021 Lalit Sharma     | 10/12/1989 |
| 19  | 1022 Monika Bajaj     | 10/12/1992 |
| 20  | 1023 Devender Kapoor  | 10/10/1982 |
| 21  | 1024 Ravinder Kumar   | 10/10/1985 |
| 22  | 1025 GAURAV GUPTA     | 12/10/1987 |
| 23  | 1026 David            | 12/17/1987 |
| 24  | 1027 KONIKA KAPOOR    | 10/10/1980 |
| 25  | 1028 RAJAT SHARMA     | 1/14/1989  |



# Manipulating Columns in Power Query

The Manage Column option under the Home tab allows us to Choose the column, Remove Column, Navigate to a particular column.



The screenshot displays the Microsoft Power Query interface. The 'Home' tab is selected in the ribbon, and the 'Manage Columns' option is highlighted with a red box. The main area shows a table with columns: EID, NAME, FNAME, LNAME, and ADDRESS. The 'Query Settings' pane on the right shows the 'Properties' tab with the query name 'emp' and a list of 'Applied Steps'.

|    | EID  | NAME             | FNAME     | LNAME  | ADDRESS                                      |
|----|------|------------------|-----------|--------|--|
| 1  | 1001 | RAMESH GUPTA     | RAMESH    | GUPTA  | SECTOR 7,Rohini,Gurgaon                      |
| 2  | 1002 | Sandeep Sharma   | Sandeep   | Sharma | SECTOR 2,PALAM,GURGAON                       |
| 3  | 1003 | Rajesh Sharma    | Rajesh    | Sharma | Sector 11,Dwarka,Delhi                       |
| 4  | 1004 | Yogeshwar Sharma | Yogeshwar | Sharma | Sector 11,Dwarka,Delhi                       |
| 5  | 1005 | Manoj Kumar      | Manoj     | Kumar  | B320,Janakpuri,Delhi                         |
| 6  | 1006 | Rohit Gupta      | Rohit     | Gupta  | A32/620 Main Road,Sector 56,Noida            |
| 7  | 1007 | Kapil Sharma     | Kapil     | Sharma | Jay Maa Apartments Flat 32,Sector 72,Gurgaon |
| 8  | 1008 | Archana Sharma   | Archana   | Sharma | 5C Karanpur,NP Road,Dehradun                 |
| 9  | 1009 | Ranjeeta Goyal   | Ranjeeta  | Goyal  | Flat No 6A,Rajpur Road,Dehradun              |
| 10 | 1010 | Komal Singh      | Komal     | Singh  | Sector 64,Old Gurgaon Road,Gurgaon           |
| 11 | 1011 | AMIT KAPOOR      | AMIT      | KAPOOR | B2/45 DDA FLATS,JANAKPURI,DELHI              |
| 12 | 1012 | MONIKA ARORA     | MONIKA    | ARORA  | B1/45,JANAKPURI,DELHI                        |
| 13 | 1013 | ROHAN KUMAR      | ROHAN     | KUMAR  | B305,RAJOURI GARDEN,DELHI                    |
| 14 | 1014 | RAJAT KUMAR      | RAJAT     | KUMAR  | HNO-B205,SECTOR 62,NOIDA                     |
| 15 | 1015 | ABHISHEK SHARMA  | ABHISHEK  | SHARMA | C2-101,JANAKPURI,DELHI                       |
| 16 | 1019 | RAJAT KAPOOR     | RAJAT     | KAPOOR | B501/1 POCKET 1,JANAKPURI,DELHI              |
| 17 | 1020 | Rohan Kumar      | Rohan     | Kumar  | B-256,RAJOURIGARDEN,DELHI                    |
| 18 | 1021 | Lalit Sharma     | Lalit     | Sharma | C2-401,Janak Puri,DELHI                      |
| 19 | 1022 | Monika Bajaj     | Monika    | Bajaj  | DLF,Phase 5,GURGAON                          |
| 20 | 1023 | Devender Kapoor  | Devender  | Kapoor | E102/3 Pocket 1 Sector 3,Dwarka,Delhi        |
| 21 | 1024 | Ravinder Kumar   | Ravinder  | Kumar  | B302-Jay Maa Apt,Dwarka,Delhi                |
| 22 | 1025 | GAURAV GUPTA     | GAURAV    | GUPTA  | D41-Jay Maa Apt,Dwarka,Delhi                 |
| 23 | 1026 | David            |           | David  | M121/4,Vatika Tower,Gurgaon                  |
| 24 | 1027 | KONIKI KAPOOR    | KONIKI    | KAPOOR | C2-431,SUPERTECH,NOIDA                       |

