



POWER BI – DIRECT QUERY MODE (SQL Server)

Transformations – Possibility Matrix

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Overview:

When using **Power BI in DirectQuery mode**, not all Power Query transformations are supported because queries are pushed directly to the data source (SQL Server). This document provides a **clear possibility matrix** to understand which transformations are supported and which are not, helping in efficient dashboard design.

| Transformation | Possible (Yes / No) |
|---|---------------------|
| Rename column | ✓ Yes |
| Uppercase / Lowercase rows | ✓ Yes |
| Trim / Clean rows | ✓ Yes |
| Remove column | ✓ Yes |
| Replace values | ✓ Yes |
| Filter rows | ✓ Yes |
| Merge 2 columns (Text) | ✓ Yes |
| Merge 2 columns (Int) | ✗ No |
| Merge 2 columns (Different data types) | ✗ No |
| Sorting rows (Ascending / Descending) | ✓ Yes |
| Add new column | ✓ Yes |
| Extract (Year / Month / Week) | ✓ Yes |
| Group By | ✓ Yes |
| Choose Column / Go to Choose Column | ✓ Yes |
| Duplicate column | ✓ Yes |
| Conditional column using parameters | ✓ Yes |
| Reorder columns | ✓ Yes |
| Convert single column into Int to Float | ✓ Yes |
| Convert single column into Float to Int | ✗ No |
| Keep first rows | ✓ Yes |
| Keep last rows | ✗ No |
| Append queries | ✓ Yes |
| Count rows | ✗ No |
| Convert column to list | ✗ No |
| Trigonometry functions | ✓ Yes |



| | |
|--|-------|
| Statistical functions | ✓ Yes |
| Scientific functions | ✓ Yes |
| Information function – SIGN | ✓ Yes |
| Information functions – IS EVEN / IS ODD | ✗ No |
| Remove duplicates | ✗ No |
| Remove blank rows | ✗ No |
| Remove top rows | ✗ No |
| Remove bottom rows | ✗ No |
| Remove alternate rows | ✗ No |
| Remove errors | ✗ No |
| Split column | ✗ No |
| Index column | ✗ No |
| Reverse rows | ✗ No |
| Fill Down / Fill Up | ✗ No |
| Use first row as header | ✗ No |
| Date filter | ✗ No |
| Detect data type | ✗ No |
| Capitalizing the Rows | ✗ No |
| Adding Prefix/Suffix | ✗ No |

Key Notes:

- DirectQuery prioritizes **query folding**, so unsupported transformations are restricted.
- Some operations are **partially supported** depending on SQL translation.
- Understanding these limitations helps in **better data modeling and performance optimization**.