Table manipulation functions

INTERMEDIATE DAX IN POWER BI

Maarten Van den Broeck
Content Developer at DataCamp

datacamp

Table manipulation functions overview

Previously seen functions

```
DISTINCT(<table> | <table>)
```

Removes duplicate rows from a table or values from a column

```
SELECTCOLUMNS(<table>, <name>, <expression>)
```

Returns the selected columns from another table as a new table

New functions

```
ADDCOLUMNS(<table>, <name>, <expression>)
```

Returns the input table appended with the selected columns from another table

```
SUMMARIZE(<table>,
          <groupBy_columnName>,
          <name>,
          <expression>)
```

Returns a summary table for the requested totals over a set of groups

ADDCOLUMNS()

```
ADDCOLUMNS(<table>, <name>, <expression>)
```

Returns the input table appended with the selected columns from another table

```
ADDCOLUMNS(Fact_table,
           "Profit",
           Revenue - Costs)
```

ADDCOLUMNS()

```
ADDCOLUMNS(<table>, <name>, <expression>)
```

Returns the input table appended with the selected columns from another table

```
ADDCOLUMNS(Fact_table,
           "Profit",
           Revenue - Costs)
```

Revenue	Costs	Profit
100	25	**75**
150	25	**125**

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SELECTCOLUMNS(<table>, <name>, <expression>)
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Returns the selected columns from another table as a new table

```
SELECTCOLUMNS(Fact_table,
              "Profit",
              Revenue - Costs)
```

Profit
75
125

SUMMARIZE()

```
SUMMARIZE(<table>,
          <groupBy_columnName>,
          <name>,
          <expression>)
```

Returns a summary table for the requested totals over a set of groups

SUMMARIZE()

```
SUMMARIZE(<table>,
          <groupBy_columnName>,
          <name>,
          <expression>)
```

Returns a summary table for the requested totals over a set of groups

Year	Category	Amount
2019	Tickets	50
2019	Postcards	500
2020	Tickets	200
2020	Tickets	400

```
SUMMARIZE(Amounts,
          Amounts[Year],
          Amounts[Category],
          "Total Amount",
          SUM(Amounts[Amount]))
```

SUMMARIZE()

```
SUMMARIZE(<table>,
          <groupBy_columnName>,
          <name>,
          <expression>)
```

Returns a summary table for the requested totals over a set of groups

Year	Category	Amount
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```
SUMMARIZE(Amounts,
          Amounts[Year],
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          SUM(Amounts[Amount]))
```

Year	Category	Total Amount
2019	Tickets	50
2019	Postcards	500
2020	Tickets	600

SUMMARIZE() best practices

- Created columns of `SUMMARIZE()` can give unexpected results based on context

```
SUMMARIZE(Amounts,
          Amounts[Year],
          Amounts[Category]),
          "Total Amount",
          SUM(Amounts[Amount])
```

- Best practice is to wrap `ADDCOLUMNS()` around `SUMMARIZE()` when creating new columns

```
ADDCOLUMNS(
    SUMMARIZE(Amounts,
                Amounts[Year],
                Amounts[Category]),
    "Total Amount",
    SUM(Amounts[Amount])
)
```

Let's practice!

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Table manipulations using DAX

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