Handling Sets - Under the Hood of Calculated Members

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Engineering customer requests and compliance
What is set and why to use the set?

Creating sets in MDX

Use cases
DEFINITION OF SET

A set is a well-defined collection of distinct objects. The objects that make up a set can be anything.

\{4, 2, 1, 3\}
\{blue, white, red\}
\{1, 2, 3, \ldots, 1000\}
\{n^2 - 4 : n \text{ is an integer, and } 0 \leq n \leq 19\}
DEFINITION OF SET

A collection of dimension members

{{Issue}.Program overview.PO-1 Account management},
{{Issue}.Program overview.PO-2 Accounts overview},
{{Issue}.Program overview.PO-3 Account subscription},
{{Issue}.Program overview.PO-4 INTRO 78},
{{Issue}.Program overview.PO-7 Leary's elusively whoever eloquence Basie's deal},
{{Issue}.Program overview.PO-8 Parnassus JFK's clamorous disputing consorted sailfish proverbial climb},
{{Issue}.Program overview.PO-9 Dominguez's Meyers snuffbox's},
...

DEFINITION OF SET

Order and Hierarchy
Why to use the set

Aggregate members

Custom measures on sets

Finding a specific dimension member
Why to use the set

Aggregate members

Custom measures on sets

Finding a specific dimension member
Why to use the set

Aggregate members

Custom measures on sets

Finding a specific dimension member
WHY SETS?

Aggregated members
WHY SETS?

Aggregated members
WHY SETS?

Aggregated members

Define calculated member formula

```plaintext
Aggregate{
  [Project].[DEMO Alpha],
  [Project].[DEMO Beta]
}
```
WHY SETS?

Aggregated members

Define calculated member formula

Aggregate({ [Project].[Demo Alpha], [Project].[Demo Beta] })
WHY SETS?

Custom measures on sets
WHY SETS?

Custom measures on sets
WHY SETS?

Custom measures on sets
WHY SETS

Finding the element
WHY SETS

Finding the element

```plaintext
-- annotations.group = 8 Handling sets
Order(
    Filter(
        [Time].[Day].Members,
        [Measures].[Issues created]>0
    ),
    [Time].CurrentMember.StartDate,
    BDESC
).Item(0).StartDate
```
How to create the set

Enumeration
List all the members of set

Range of members
“.”, Tail, Head, Item, Rank, etc.

Iteration
Iterate over the members and filter by patterns (Members, Descendants, Children)
**How to create the set**

**Enumeration**
List all the members of set

**Range of members**
“:”, Tail, Head, Item, Rank, etc.

**Iteration**
Iterate over the members and filter by patterns (Members, Descendants, Children)
How to create the set

Enumeration
List all the members of set

Range of members
".": Tail, Head, Item, Rank, etc.

Iteration
Iterate over the members and filter by patterns (Members, Descendants, Children, etc.)
Hands-on option
CREATING SETS

Enumeration

- Individual members with full path
- Typeahead feature and bookmarking
- Alternative: Filter by pattern
CREATING SETS

Range of dimension members

- Define range using “:”
- Time dimension might have missing members
Questions?

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