SQL Queries

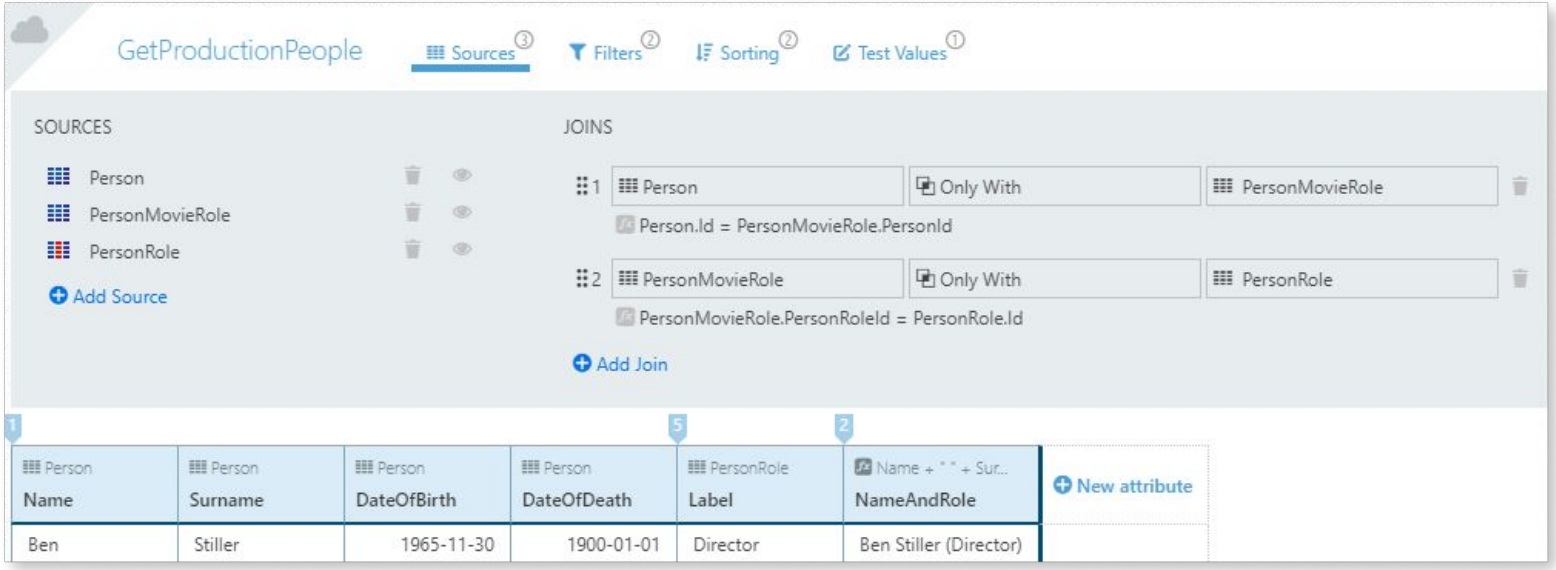
Advanced Queries

SQL Tool

- Overview
- Input / Outputs
- Testing Queries
- Non-Select Queries

Advanced Queries

- Retrieving the correct data from the database can often be complex



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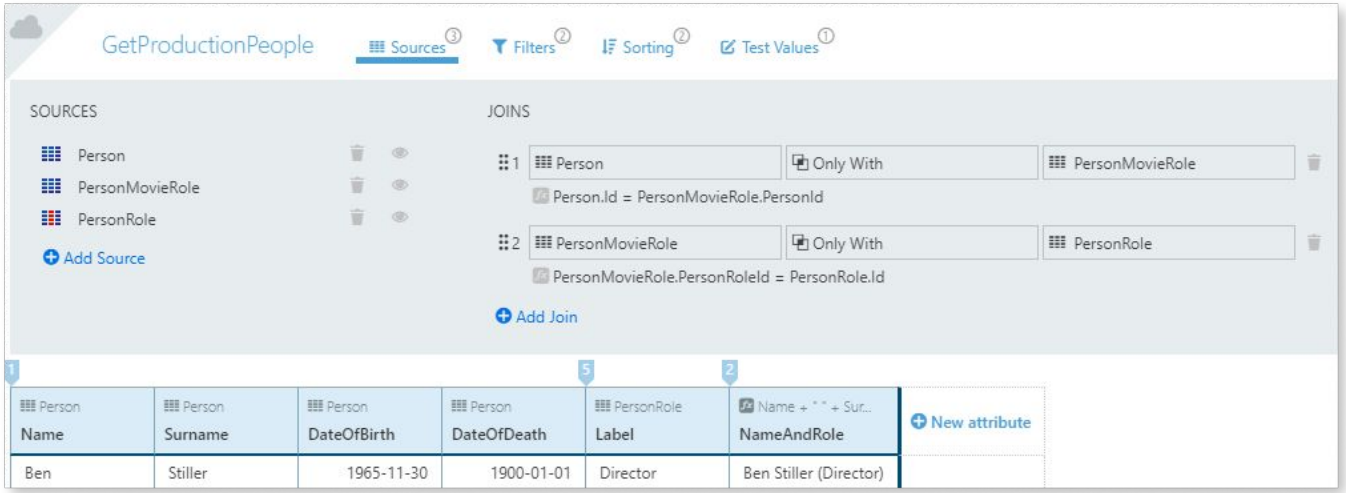
Advanced Queries

- Retrieving the correct data from the database can often be complex



- It is also possible to write SQL statements
  - SQL Tool

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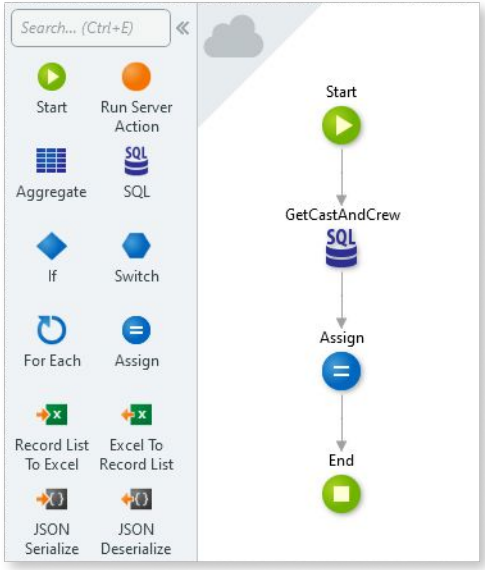
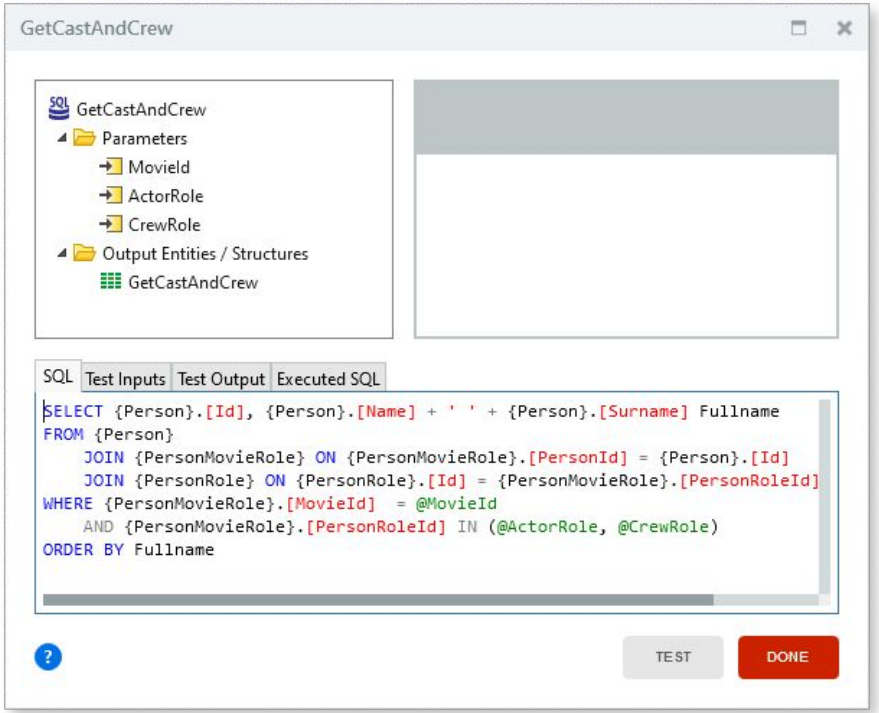
SQL Tool

- Can be used in server-side flows
  - Server Actions
  - Screen Data Actions





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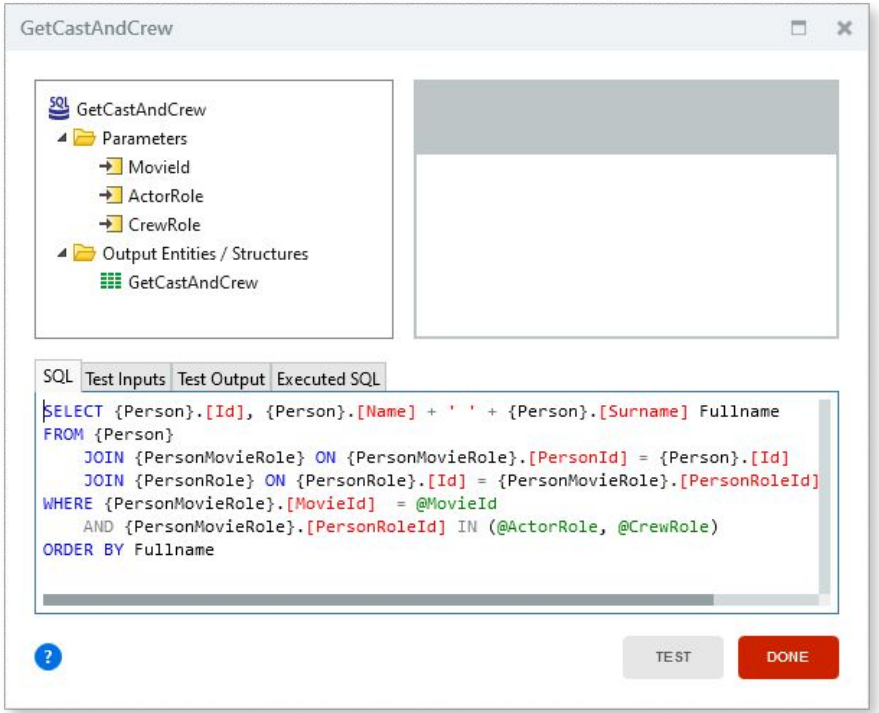
SQL Tool

- Can be used in server-side flows
  - Server Actions
  - Screen Data Actions
- Input and outputs are specified visually
- Allows writing SQL statements
  - SQL syntax checking



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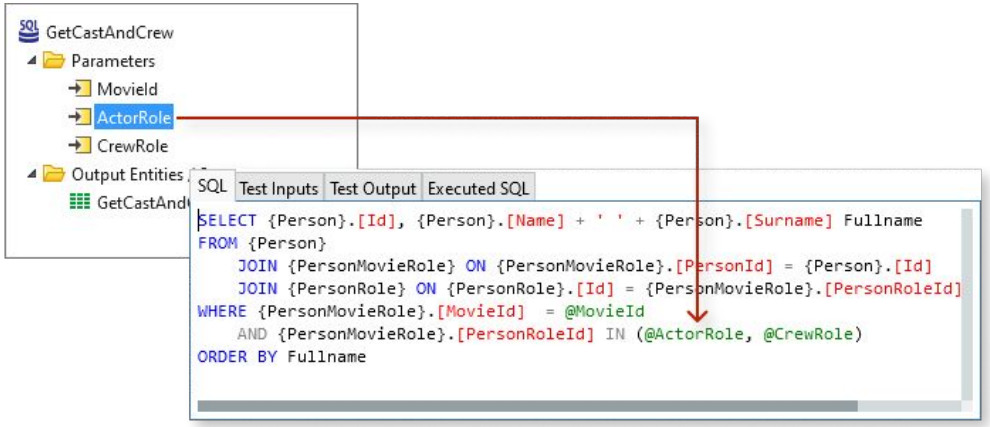
Inputs

- SQL Tools are “black boxes”
  - Parameters pass information to it
  - No access to outside scope



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SQL Query

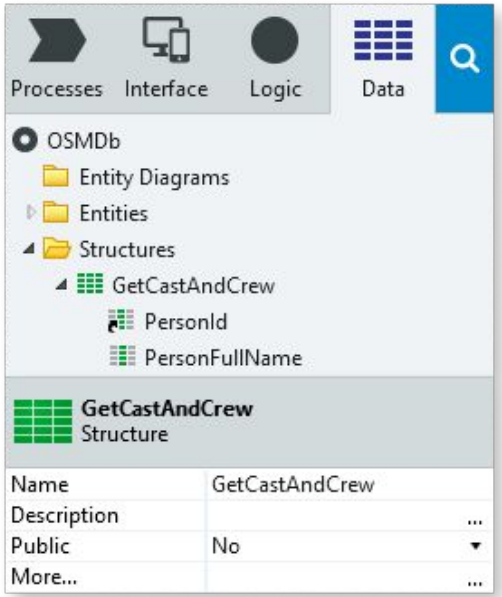
- SQL is written manually and DBMS-specific
  - TOP vs LIMIT
- Use of abstract names for Entities and Attributes
  - Write Entity names and attribute names as {Entity}.[Attribute]

SQL | Test Inputs | Test Output | Executed SQL

```
SELECT {Person}.[Id], {Person}.[Name] + ' ' + {Person}.[Surname] Fullname
FROM {Person}
    JOIN {PersonMovieRole} ON {PersonMovieRole}.[PersonId] = {Person}.[Id]
    JOIN {PersonRole} ON {PersonRole}.[Id] = {PersonMovieRole}.[PersonRoleId]
WHERE {PersonMovieRole}.[MovieId]  = @MovieId
    AND {PersonMovieRole}.[PersonRoleId] IN (@ActorRole, @CrewRole)
ORDER BY Fullname
```

Structures

- Structures are custom compound data types
- Used to store compound data in memory
  - Definition of a data type
  - The Structure itself does not hold any value
  - Structures are not variables
- Structures are defined by attributes of any data type
  - Including other Structures, Entities and Lists



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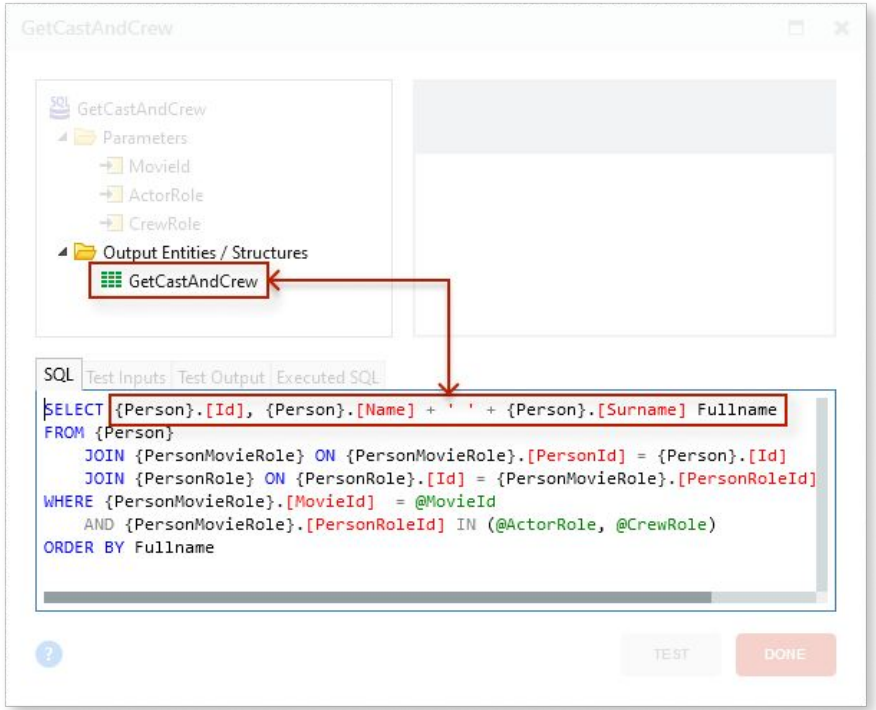
Outputs

- Outputs Entities / Structures
  - Mandatory to have at least one
  - Can use Entities or Structures
  - Need to map the columns in the SELECT clause



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Outputs

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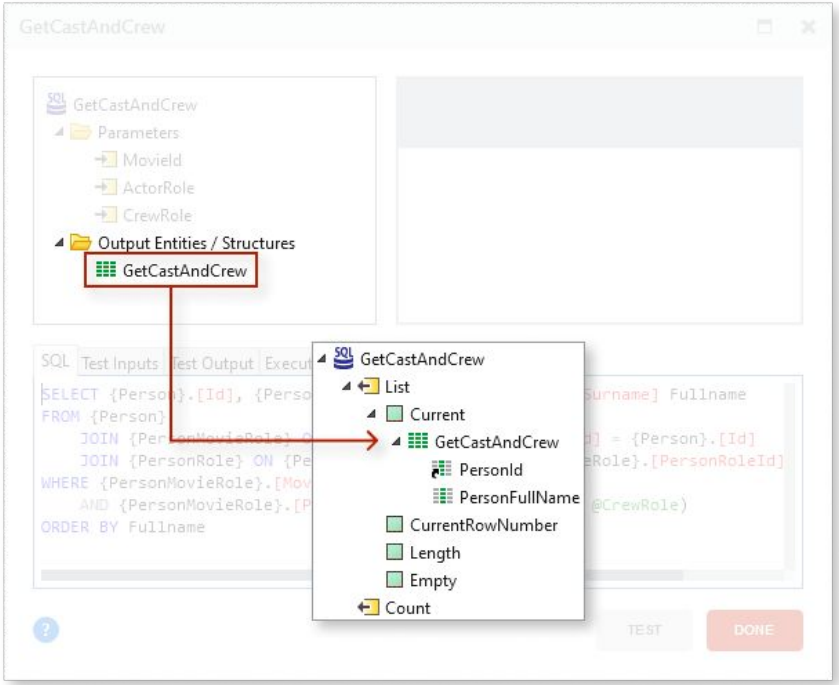
- The output of the SQL Tool is the same as in Aggregates
  - List
  - Count



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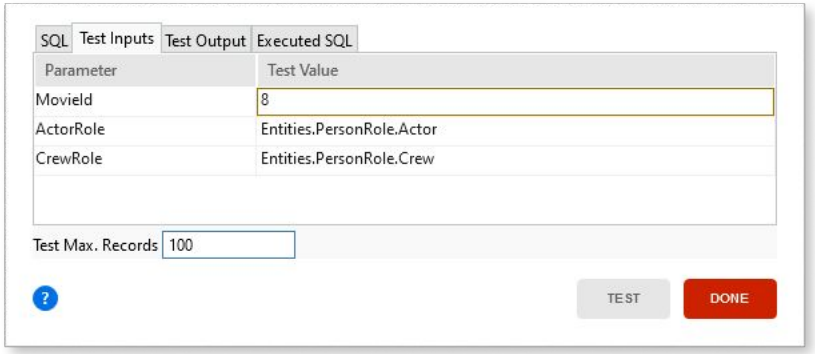
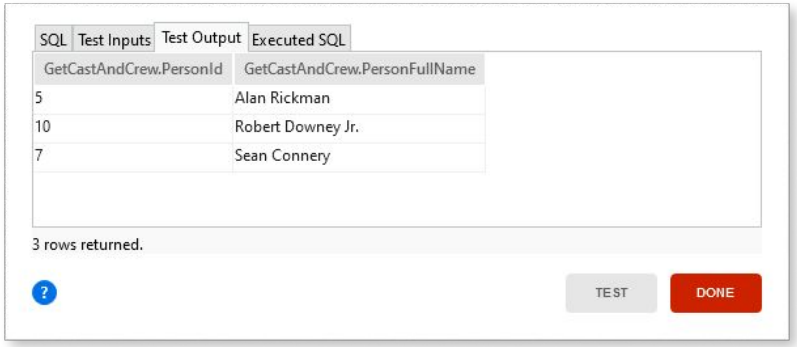
Testing Queries

Setting Input Parameters



Testing the SQL Tool query



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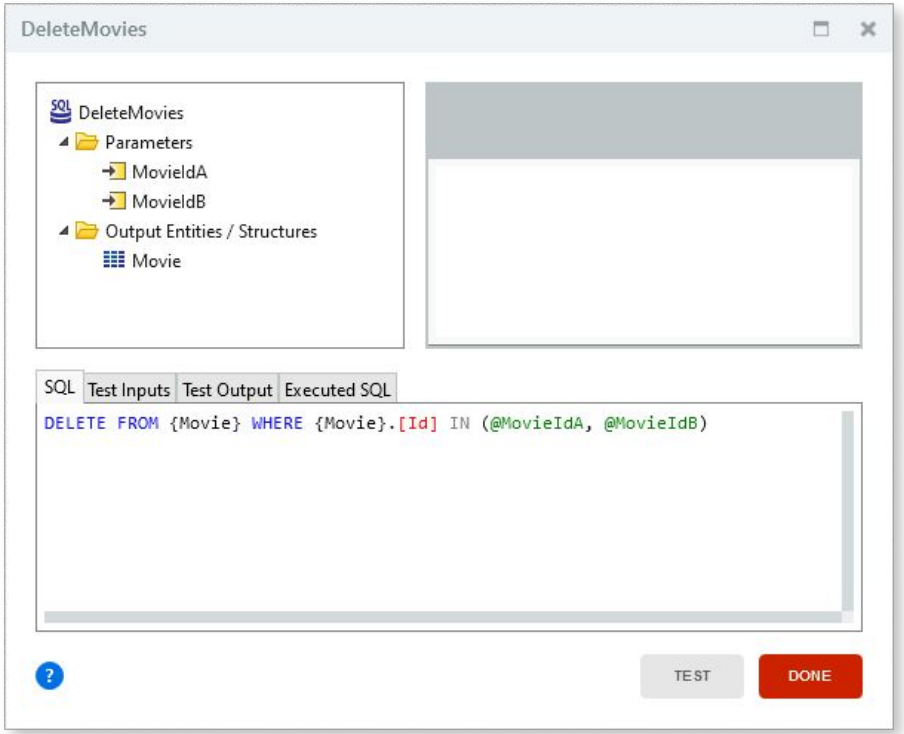
Non-SELECT Queries

- SQL Tools can also be used for non-SELECT statements
  - Delete
  - Insert
  - Update
- SQL statement can be written normally
- A “dummy” Output Structure still needs to be provided
  - Structure attributes are irrelevant



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Questions?

Thank you

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