Intersect, Except & Apply

New tools for your SQL Toolbox

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PASS

SQL saturday

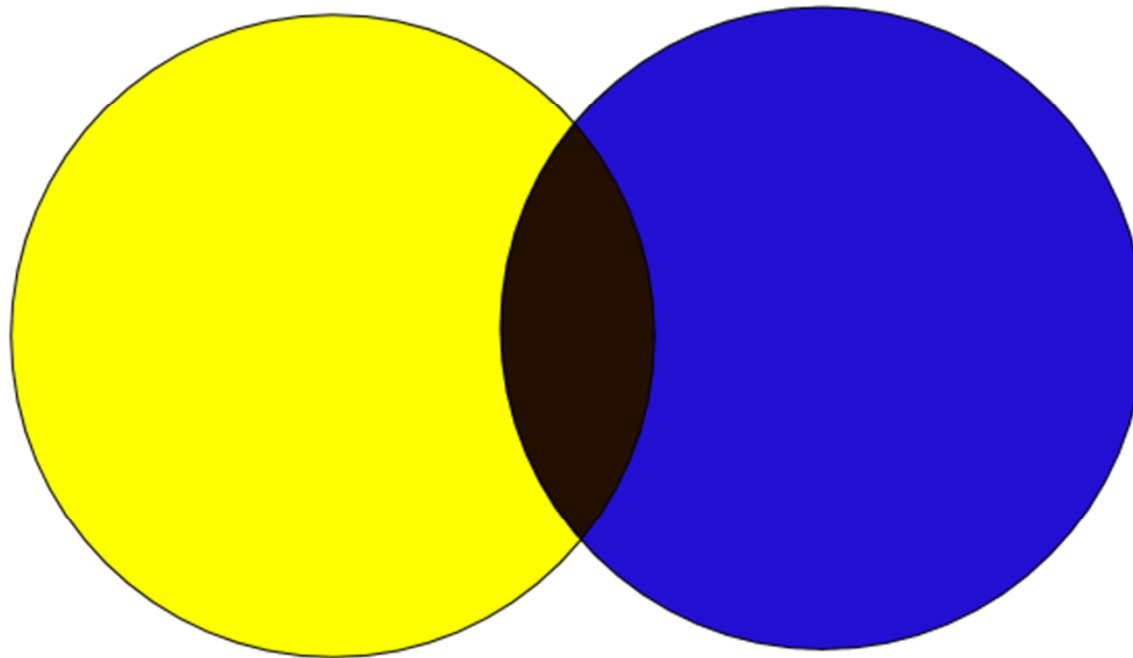#1 | ORLANDO 2007

Rudy Rodarte

- Started on SQL Server 2000
- MCTS, MCITP
- SSRS / SSIS
- Windows Phone 7
- Twitter: @ShadyRudy
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Agenda

- INTERSECT
- EXCEPT
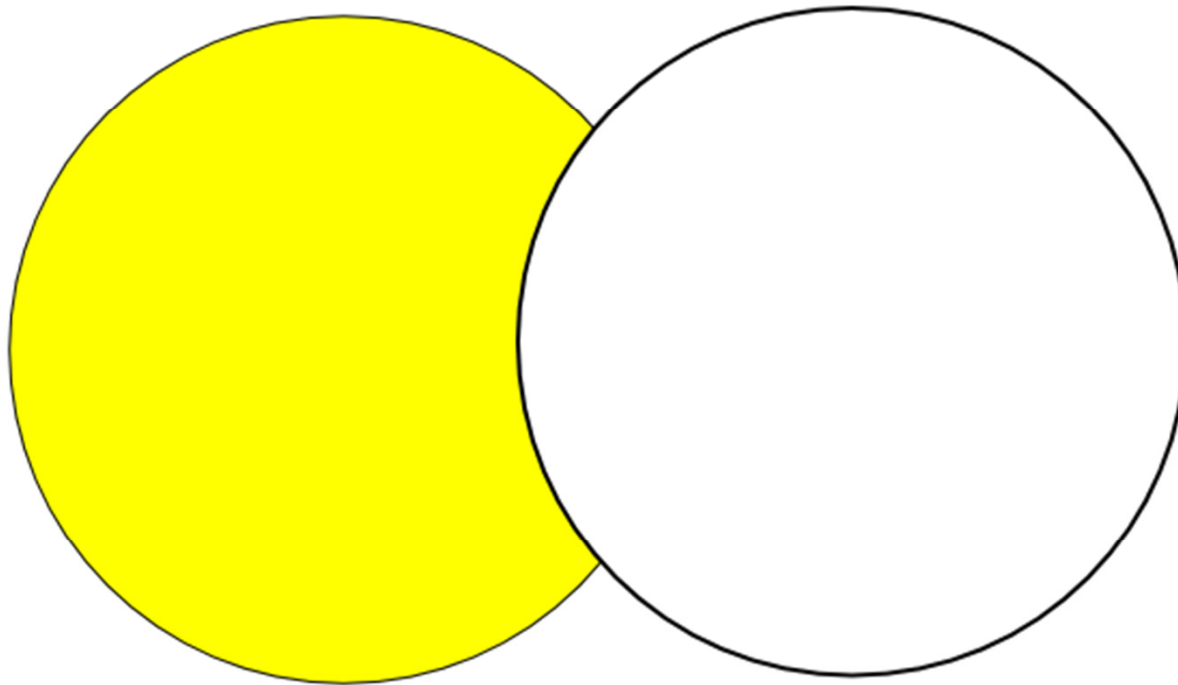- CROSS APPLY
- OUTER APPLY

INTERSECT

INTERSECT

- INTERSECT returns distinct values on the left and right sides of the INTERSECT
- The number and order of the columns must be the same in all queries
- The data types must be compatible

INTERSECT

- You may also like
  - UNION [ALL]
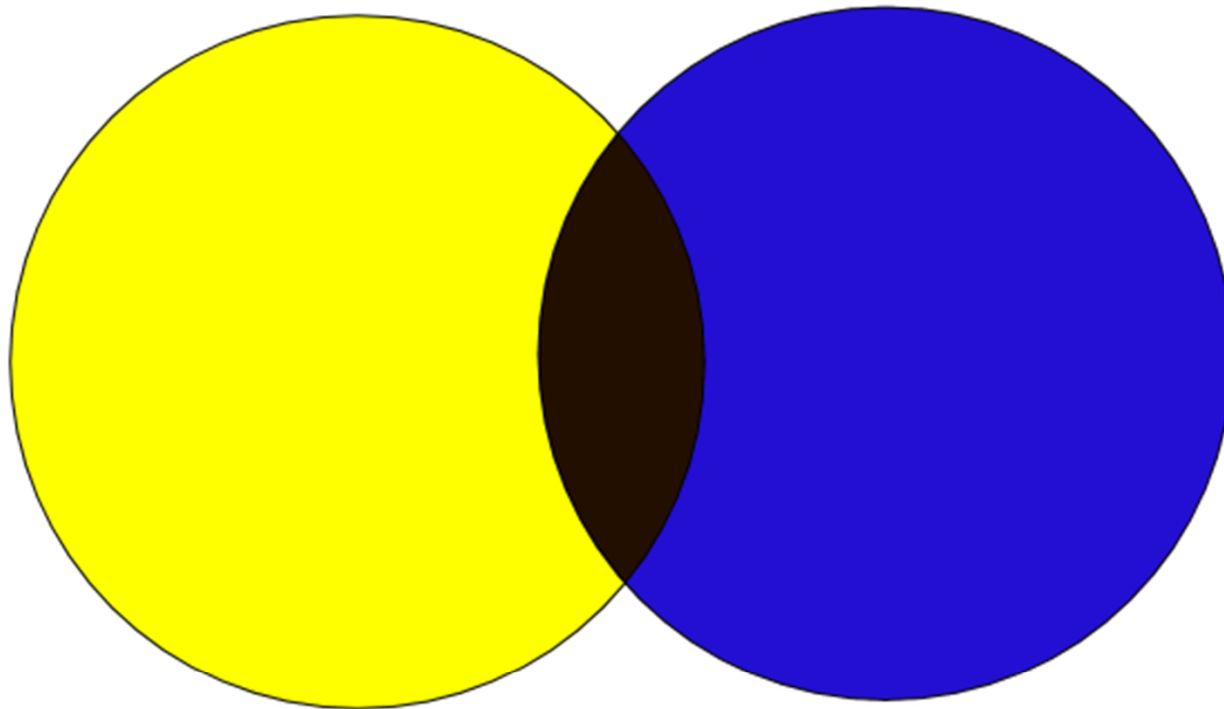 - INNER JOIN
  - IN
  - EXISTS

EXCEPT

EXCEPT

- EXCEPT returns any distinct values from the left query that are **<u>not</u>** also found on the right query
- The number and order of the columns must be the same in all queries
- The data types must be compatible

EXCEPT

- You may also like
  - NOT IN
  - NOT EXISTS
  - OUTER JOINS?

CROSS APPLY

CROSS APPLY

- The APPLY operator allows you to invoke a table-valued function for each row returned by an outer table expression of a query.

CROSS APPLY

In the field, you'll see this:

```sql
SELECT *
FROM sys.dm_exec_query_stats QS
CROSS APPLY
sys.dm_exec_sql_text(QS.sql_handle) ST
```
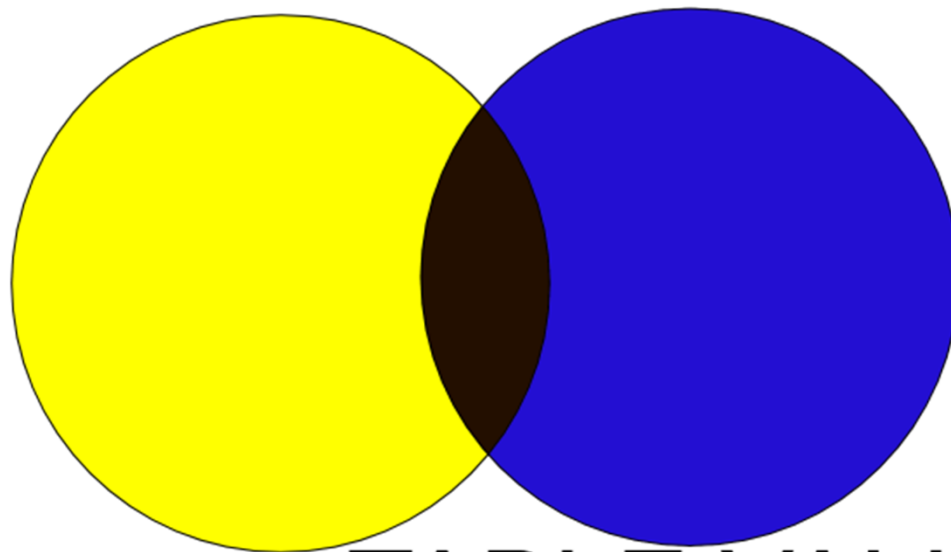
CROSS APPLY

CROSS APPLY

Bring us rows from

```
SELECT *
FROM sys.dm_exec_query_stats QS
```

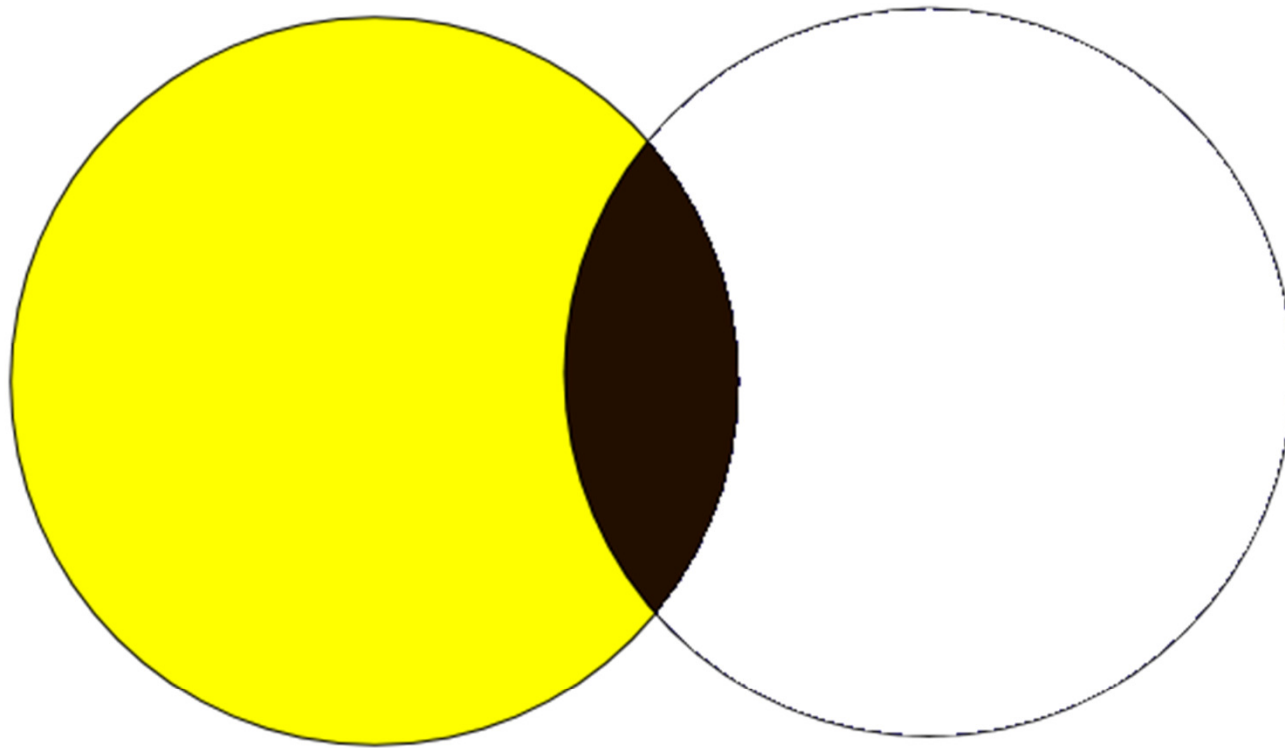where the DMF sys.dm_exec_sql_text returns data

```
CROSS APPLY
sys.dm_exec_sql_text(QS.sql_handle) as ST
```

CROSS APPLY

- You may also like:
  - SUB SELECT
  - INNER JOIN
  - IN ?

OUTER APPLY

OUTER APPLY

- OUTER APPLY returns both rows that produce a result set, and rows that do not, with NULL values in the columns produced by the table-valued function.

OUTER APPLY

In the field, you'll see this:

```
select *
from sys.dm_exec_query_stats QS
cross apply
sys.dm_exec_sql_text(QS.sql_handle) ST
outer apply
sys.dm_exec_plan_attributes(QS.plan_handle) PA
```
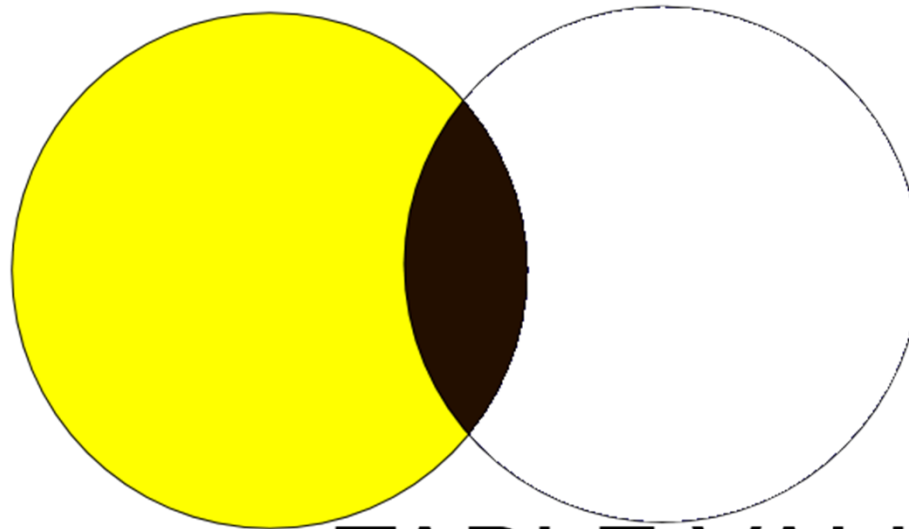
OUTER APPLY

SELECT STATEMENT

TABLE VALUED FUNCTION

OUTER APPLY

Bring us rows from

```
Select *
FROM sys.dm_exec_query_stats  QS
    CROSS APPLY sys.dm_exec_sql_text(QS.sql_handle) ST
```

where the DMF sys.dm_exec_plan_attributes returns data

```
outer apply sys.dm_exec_plan_attributes(QS.plan_handle)
PA
```

OUTER APPLY

- You may also like:
  - SUB SELECT
  - LEFT OUTER JOIN
  - NOT IN ?

Demo

When to use

When do I use these instead of the other operators?

It depends

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