

Ordering and Paging



Ami Levin

ANIMAL RIGHTS ACTIVIST

@ami_levin

www.amilevin.com



Ordering and Paging



Whose job is it anyway?

ORDER BY

Determinism and tiebreakers

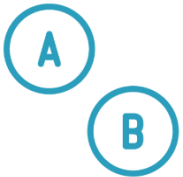
Paging result sets



Law of Order



A set which has been ordered, is no longer a set, it is a cursor



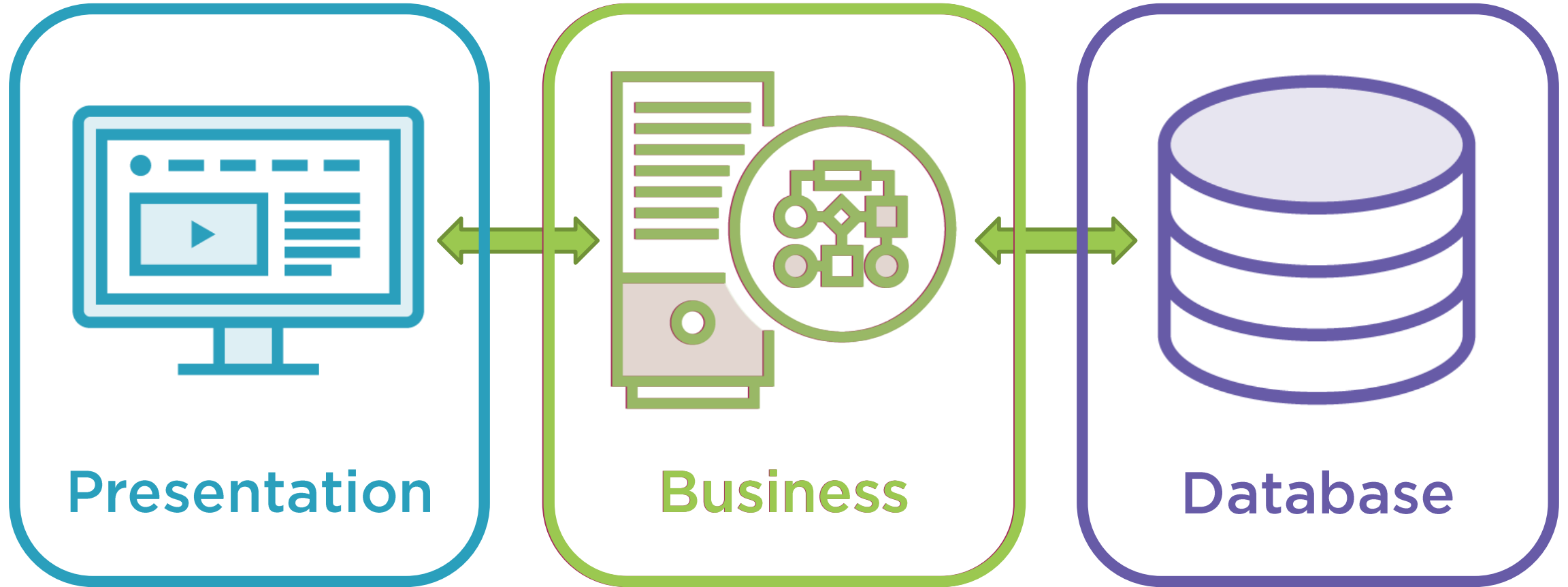
The relational model deals exclusively with sets, not with cursors



Ordering is very useful, but is it the database's responsibility?



Three Tier Architecture



ORDER BY

$f(n)$

Any valid expressions evaluated by the SELECT list



Can use the aliases that were defined in the select list



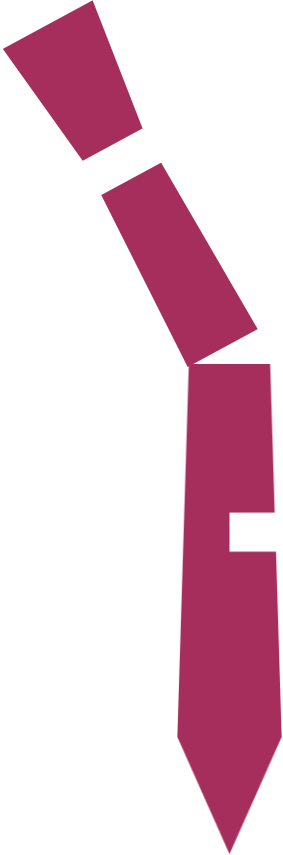
Ascending (default) or descending ordering



NULLs in T-SQL assume the lowest ordering value

Query Determinism and Tiebreakers

ORDER BY OrderID, Item



Order ID	Item	Quantity	Price
1	Pencil	1	0.75
1	Pen	2	1.50
2	Marker	3	3.00



Paging

ORDER BY OrderID

Order ID	Item	Quantity	Price
1	Pen	2	1.50
1	Pencil	1	0.75
2	Marker	3	3.00
3	Marker	1	3.00
4	Pen	4	1.50



```
SELECT TOP(5) WITH TIES OrderID  
FROM Orders  
ORDER BY OrderDate DESC;
```

```
SELECT OrderID  
FROM Orders  
ORDER BY OrderDate DESC  
OFFSET 0 ROWS  
FETCH NEXT 5 ROWS ONLY;
```

```
LIMIT 5 OFFSET 0;
```

- ◀ Proprietary T-SQL
 - ◀ Can handle ties
 - ◀ Can use percentage
 - ◀ Allowed without an ORDER BY
 - ◀ No offset
-
- ◀ ANSI/ISO standard syntax
-
-
- ◀ Most other database engines



Demo



ORDER BY

Paging



A query without an order by clause will **NOT** return rows in any specific order!



Review



Whose job is it anyway?

ORDER BY

Determinism and tiebreakers

Paging result sets

