

# Data Model Integrity



Indexes

Referential Integrity

# Indexes

- Speed up data retrieval over certain attributes
  - Costs additional writes and storage space
  - Reference attributes have automatically created indexes
- Custom indexes can be created

The screenshot shows the 'Order' entity configuration window in OutSystems. The 'Indexes' tab is selected, displaying a list of indexes on the left and their configuration on the right.

**Indexes List:**

- AutoIndex\_CustomerId
- AutoIndex\_Status
- Index\_CreatedOn

**Index Configuration (for Index\_CreatedOn):**

Name	Index_CreatedOn
Description	
Unique	No

**Attributes:** (Add Attribute)

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The window includes a 'More options' button, a 'Name' field with the value 'Order', a 'Description' field, and a 'CLOSE' button at the bottom right.

# Unique Indexes

- Avoid duplicates
- Define the Index as **Unique**
- Combine one or more attributes

The screenshot shows the 'OrderProduct' form in the OutSystems IDE. The 'Indexes' tab is selected, showing a list of indexes. A new index, 'UniqueProductPerOrder', has been created and is highlighted. The index is defined with the following attributes:

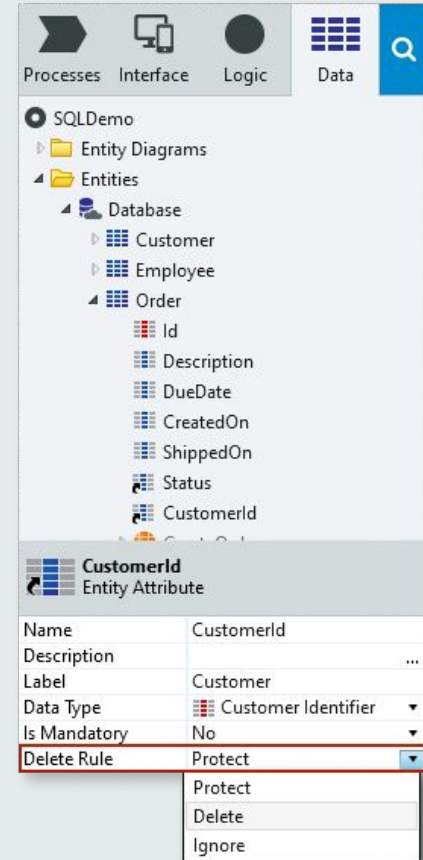
Attribute	Value
Name	UniqueProductPerOrder
Description	
Unique	Yes
Attributes	
Attribute 1	OrderId
Attribute 2	ProductId
(Add Attribute)	

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The form also includes fields for 'Name' (OrderProduct) and 'Description'. At the bottom, there is a 'CLOSE' button.

# Referential Integrity

- **Delete Rule** property of the reference attribute
- Applied when deleting a record from the referenced Entity (e.g. Customer)
  - **Protect** - does not allow deleting the record
    - Customer with Orders is not deleted
  - **Delete** - deletes the record and cascades delete all the records that reference it
    - Customer and all its Orders are deleted
  - **Ignore** - does not guarantee referential integrity
    - Customer is deleted. Orders are kept



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# Questions?

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# Thank you

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