

Example 1: Composite Relationship Between Two Tables

This example demonstrates how to model a **composite foreign key relationship** between two tables using Go struct annotations and a repository pattern.

Tables: Order and OrderItem

Order Entity

```
type Order struct {  
    _      DbField[any]      `db:"table(orders)"`  
    OrderId DbField[uint64]    `db:"primaryKey"`  
    Version DbField[int]      `db:"primaryKey"`  
    Note    DbField[string]    `db:"length(200)"`  
}
```

- Composite primary key: (OrderId, Version)

OrderItem Entity

```
type OrderItem struct {  
    _      DbField[any]      `db:"table(order_items)"`  
    Id      DbField[uint64]    `db:"primaryKey;autoIncrement"`  
    OrderId DbField[uint64]    `db:"index(order_ref_idx)"`  
    Version DbField[int]      `db:"index(order_ref_idx)"`  
    Product DbField[string]    `db:"length(100)"`  
    Quantity DbField[int]  
}
```

- Composite index: (OrderId, Version) with shared name order_ref_idx to mark relationship.

Repository Definition

```
type OrderRepository struct {  
    TenantDb  
    Orders    Queryable[Order]  
    OrderItems Queryable[OrderItem]  
}
```

Declare Relationship in Init()

```
func (r *OrderRepository) Init() {  
    r.NewRelationship().  
        From(r.Orders.OrderId, r.Orders.Version).  
        To(r.OrderItems.OrderId, r.OrderItems.Version)  
}
```

Optional SQL Output (Manual or Dialect-based)

```
ALTER TABLE order_items  
ADD CONSTRAINT fk_order_items_orders  
FOREIGN KEY (order_id, version)  
REFERENCES orders(order_id, version);
```

This would be generated automatically if `GenerateForeignKeyConstraintsSql()` is implemented.

Summary

Table	Key	Description
<code>orders</code>	<code>(order_id, version)</code>	Composite primary key
<code>order_items</code>	<code>(order_id, version)</code>	Composite foreign key index

The `Init()` method is where relationships can be declared for automatic SQL generation, validation, or query planner use.