

## CRM - Ordering &amp; Invoicing

## WAREHOUSE

```
-----
WhCode          nvarchar  10  Primary key
WhName          nvarchar  40  Cannot be empty:
                                'Invalid warehouse name'
                                Cannot be duplicated in WAREHOUSE:
                                'Duplicate warehouse name'
```

N.B.: Cannot delete a 'WhCode' if exists in QUANTITY  
'Warehouse code in use. Deletion denied'

## ITEM\_CATEGORY

```
-----
ItemCatCode     nvarchar   4  Primary key
ItemCatName     nvarchar  40  Cannot be empty:
                                'Invalid item category name'
                                Cannot be duplicated in ITEM_CATEGORY:
                                'Duplicate item category name'
```

N.B.: Cannot delete an 'ItemCatCode' if exists in ITEM  
'Category code in use. Deletion denied'

## ITEM

```
-----
ItemCode        nvarchar   10  Primary key
ItemName        nvarchar  100  Cannot be empty:
                                'Invalid item name'
                                Cannot be duplicated in ITEM:
                                'Duplicate item name'
ItemCatCode     nvarchar   4  Cannot be empty and should exist in ITEM_CATEGORY:
                                'Invalid item category code'
ItemUnit        nvarchar   6  Cannot be empty:
                                'Invalid item unit'
```

N.B.: Cannot delete an 'ItemCode' if exists in QUANTITY  
'Item code in use. Deletion denied'  
Cannot delete an 'ItemCode' if exists in ORDER  
'Item code in use. Deletion denied'

## CUSTOMER

```
-----
CustomerCode    nvarchar   10  Primary key
CustomerName    nvarchar  100  Cannot be empty:
                                'Invalid customer name'
                                Cannot be duplicated in CUSTOMER:
                                'Duplicate customer name'
```

CustomerAddress nvarchar 200 not null default ''

N.B.: Cannot delete an 'ItemCode' if exists in ORDER  
'Customer code in use. Deletion denied'

## QUANTITY

```
-----
ItemCode        nvarchar   10  Primary key: (ItemCode,WhCode)
WhCode          nvarchar   10
QtyOnHand       decimal    10,2 not null default 0
```

## ORDER

```
-----
CustomerCode    nvarchar   10  not null default ''
                                Primary key: (CustomerCode,ItemCode,OrdNumber)
ItemCode        nvarchar   10  not null default ''
OrdNumber       integer     10  not null default 0
QtyOrdered      decimal    10,2 not null default 0
QtyDelivered    decimal    10,2 not null default 0
```

## ORDER\_HEADER

```
-----
OrdNumber       integer     10  Primary key
                                For each new sales order increment MAX(OrdNumber) by 1
OrdDate         date        10  not null
CustomerCode    nvarchar   10  Cannot be empty and should exist in CUSTOMER:
                                'Invalid customer code'
```

## ORDER\_DETAILS

```
-----
OrdNumber       integer     10  Should exist in ORDER_HEADER
```

ItemCode	nvarchar	10	Cannot be empty and should exist in ITEM: 'Invalid item code'
ItemQuantity	decimal	10,2	not null default 0
ItemPrice	decimal	15,2	not null default 0

N.B.: 1- For each inserted row:  
Find {ORDER\_HEADER.CustomerCode,ItemCode,OrdNumber) in ORDER.  
Insert a new row if it does not already exist. In all cases make an update  
in ORDER set QtyOrdered=QtyOrdered+ItemQuantity  
2- For each deleted row:  
Find {ORDER\_HEADER.CustomerCode,ItemCode,OrdNumber) in ORDER.  
Make the following update set QtyOrdered=QtyOrdered-ItemQuantity

#### INVOICE\_HEADER

InvNumber	integer		Primary key For each new invoice increment MAX(InvNumber) by 1
InvDate	date		not null
CustomerCode	nvarchar	10	Cannot be empty and should exist in CUSTOMER: 'Invalid customer code'
WhCode	nvarchar	10	Cannot be empty and should exist in WAREHOUSE: 'Invalid warehouse code'
OrdNumber	integer		not null default 0

#### INVOICE\_DETAILS

InvNumber	integer		Should exist in INVOICE_HEADER
ItemCode	nvarchar	10	Cannot be empty and should exist in ITEM: 'Invalid item code'
ItemQuantity	decimal	10,2	not null default 0
ItemPrice	decimal	15,2	not null default 0

N.B.: 1- For each inserted row:  
1.1- Find {INVOICE\_HEADER.CustomerCode,ItemCode,INVOICE\_HEADER.OrdNumber) in ORDER.  
If a corresponding row was not found  
'invalid sales order number'  
If a row was found  
make the following update set QtyDelivered=QtyDelivered+ItemQuantity  
1.2- Find (ItemCode,INVOICE\_HEADER.WhCode) in QUANTITY.  
Insert a new row if it does not already exist. In all cases make an update  
set QtyOnHand=QtyOnHand-ItemQuantity  
2- For each deleted row:  
2.1- Find {INVOICE\_HEADER.CustomerCode,ItemCode,INVOICE\_HEADER.OrdNumber) in ORDER.  
Make the following update set QtyDelivered=QtyDelivered-ItemQuantity  
2.2- Find (ItemCode,INVOICE\_HEADER.WhCode) in QUANTITY.  
Make the following update set QtyOnHand=QtyOnHand+ItemQuantity