**Project Documentation**

Our company “The Digital Hub” sells several products such as mobile phones, tablets etc. You can even purchase one or more products if it is in stock , Customers can also view their order and its detail. We offer our customers delivery services for their ease. They can directly communicate with the shipper through his phone number or using an email address.

**ERD:**

Diagram

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**Table name and details:**

* Table Name “Company” includes Company code as PRIMARY KEY, Company Name and Company Type which does not allow any NULL value, and Location of the company into it.

Table

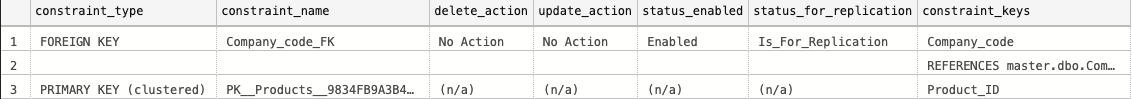
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* Table Name “Products” includes Product ID as PRIMARY KEY, Product Name , Quantity columns which does not allow NULL values , Add Company code column in table as FOREIGN KEY.

Table

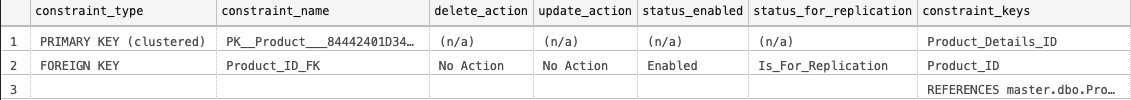
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* Table Name “Products Details” includes Product Details ID as the table’s PRIMARY KEY, Storage, Size, Color, Price as NOT NULL constraint, Product Description which also allows NULL values into it. Lastly, the table adds Product ID from Products table as a FOREIGN KEY.

Table

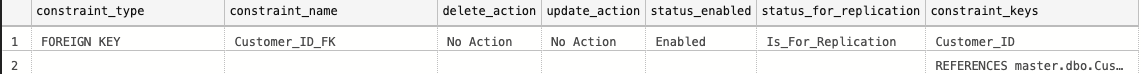
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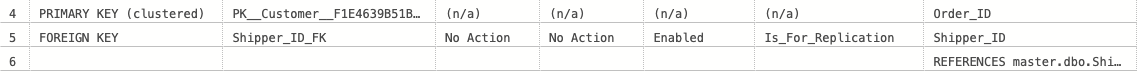


* Table Name “Customer Order” has Order ID as PRIMARY KEY, Customer ID , Shipper ID as FOREIGN KEY from tables Customer and Shipper respectively. This table includes Order Date which is required field to fill.

Table

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* Table Name “Order Details” has Details ID as PRIMARY KEY, Quantity having NOT NULL constraint, column named Product Price; Order ID , Product ID, Product Details ID as FOREIGN KEYS.

Table

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Table

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* Table Name “Customer” includes Customer ID as PRIMARY KEY, Customer Name , Email Address having NOT NULL constraint, and a column named Phone.

Table

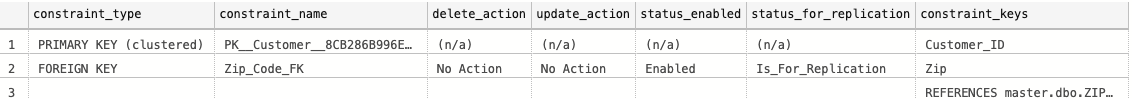
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* Table Name “Customer Address” having Customer ID - PRIMARY KEY, Customer Address - NOT NULL, Zip as FOREIGN KEY from table named ZIP.

Table

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* Table Name “ZIP” which includes following data:

Zip as the table’s PRIMARY KEY; City, Customer State as NOT NULL

Table

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* Table Name “Shipper” includes Shipper ID as their PRIMARY KEY, Shipper Name, Email Address, Phone all having NOT NULL constraint.

Table

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**Database or Table Owner name:**

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A picture containing rectangle

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Calendar

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Table

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**Primary / Unique keys:**

* In company’s table:

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* In Product’s table:



* In Product Details table:



* In Order table:



* In Order Details table:



* In Customer table:



* In Customer Address table:



* In ZIP table:

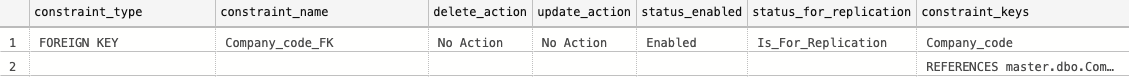


* In Shipper table:



**Relationships(Foreign keys):**

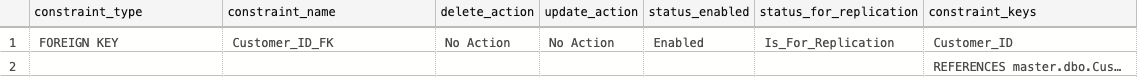
* In Product’s table:

****

* In Product Details table:

****

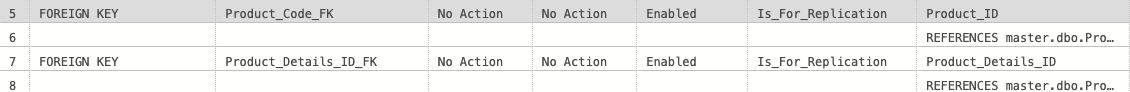
* In Order table:

****



* In Order Details table:





* In Customer Address table:



**Check constraints:**

* In Order table I added check constraint which check that order ID should proceed with COR followed by any combination of letters or digits.

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* In Order Details table this check constraint check that product price in combination with quantity should be greater than 850 if it is not then does not allow you to proceed further.

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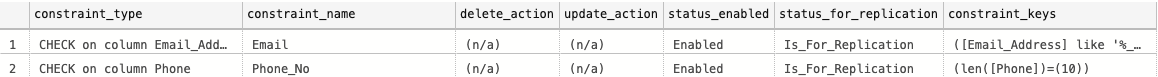
* In Customer table it checks that the length of phone number is equal to 10.



* In ZIP table we allow Toronto city to be entered as we provide our services on that place only.



* In Shipper table I added two check constraint first one checks that user enters valid email or not or it includes @ symbol or not, and second one checks the length of phone number that it should be equal to 10.



**Sequences:**

I added sequence in the “**product**” table which automatically generates all the ID’s using the start which is 101 and increments by 1 . Hence, the sequence is generate like, 101, 102, 103, and so on.

Table

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**Database Index Information:**

* Company table:



* Product table:



* Product Details table:



* Order table:



* Order Details table:



* Customer table:

Graphical user interface, application

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* Customer Address table:



* ZIP table:



* Shipper table:

Table

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**Duplicate Row Information:**

Here, We do not allow duplicate rows as we remove all the duplicity in the normalization phase of our project, which do not allow us to place any duplicate rows into our tables.

**Business Glossary:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Table Name** | **Column Name** | **Data Type** | **Nullable** | **Description** |
| Products | Quantity | Numeric | No | By Quantity term we mean that the product is available in stock or not. |
| Product\_Details | Product\_Details\_ID | Varchar(10) | No | Primary key, It is ID of the table which contains the details of the products. |
| Product\_Details | Storage | Varchar(5) | No | It is the storage of the product such as mobile phone has 128GB of storage. |
| Product\_Details | Product\_Description | Varchar(200) | yes | Contain the detailed description of the product. |
| Product\_Details | Size | Varchar(15) | No | It is the size of the mobile phone, tablets etc. like 14 inch. |
| Customer\_Address | Customer\_Address | Varchar(30) | No | It is the address of the customer like building number, house number etcetera. |
| ZIP | Zip | Varchar(10) | No | Primary key, It is the unique code of the area of given address by the customer. |
| ZIP | City | Char(20) | No | City should be Toronto only as we provide our services only there. |
| Order\_Details | Details\_ID | Varchar(10) | No | Primary Key, of order details table contains details such as quantity of items to be purchased, Price of products. |
| Order\_Details | Quantity | Numeric | No | It is the quantity of the items which the customer is going to purchase. |
| Order\_Details | Product\_Price | Numeric | No | It is the price of the particular product. |
| Customer\_Order | Order\_Date | Date | No | It is the date on which the order is placed. |