Database Design Document

# Introduction

ThinkCube is a small electronic parts company, with a store of products and service available to their customers. This database created for ThinkCube Aims to organize the company’s data for improved data collection and retrieval.

The Physical ERD for this database was created in pgmodeler and it’s DDL statements are stored in PorstgreSQL 9.5.21.

# Assumption and Constraints

Since there’s the “to” and “ship to” boxes in the invoice, we assumed we’d have to have 2 relationships between customer and invoice table to get information for both customers on the same invoice.

We placed the company’s information (ex: Company name, address, email…etc) in the invoice table as that information is static.

We created an invoice\_line table separate from the invoice table because an invoice may have multiple lines of invoice.

# Identified Issues

Identify any issues you have identified and list possible work arounds:

DDL ran successfully, but when running a second time we receive

ERROR: relation "invoice\_line" already exists

ERROR: relation "invoice\_line" already exists.

# Personnel

Identify who is working on the project, responsibilities, etc. Example jobs below. It is possible to be more than one of these.

* Analyst Akhond Sarah Mesbah, Alper gungor, Nathan Macdonnell.
* Architect Akhond Sarah Mesbah, Nathan MacDonnell, Alper Gungor.
* Quality Assurance Akhond Sarah Mesbah, Nathan MacDonnell, Alper Gungor.
* Documentation Specialist Nathan MacDonnell, Sarah Mesbah.

# Entities

Database Name: Think Cube Revision: 2.0

Date: 06/08/2020

Author: Nathan, Sarah

|  |  |  |
| --- | --- | --- |
| Entity Name | Entity Type | Relates to |
| invoice | Table | customer, sale, invoice\_line |
| customer | Table | invoice |
| sale | Table | invoice |
| invoice\_line | Table | invoice |
| product | Table | Invoice\_line |
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Notes:

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# Entity Details

Database Name: Think Cube Revision: 2.0

Entity Name: invoice Date: 06/08/2020

Author: Nathan MacDonnell, Akhond Sarah Mesbah

|  |  |  |  |
| --- | --- | --- | --- |
| Field Name | Data type | Field Properties | Relates to |
| invoice\_number | bigint | Primary key |  |
| invoice\_date | date | default |  |
| invoice\_shipmethod | charvar(30) | default |  |
| invoice\_shipterm | charvar(30) | default |  |
| invoice\_delivdate | date | default |  |
| invoice\_payterm | charvar(30) | default |  |
| invoice\_duedate | date | default |  |
| invoice\_company | charvar(30) | default |  |
| invoice\_address | charvar(60) | default |  |
| invoice\_phone | Character(8) | default |  |
| invoice\_email | Charvar(30) | default |  |
| sale\_person | Charvar(30) | Fk not null | sale |
| Cust\_id1 | serial | Fk not null | customer |
| Cust\_id2 | serial | Fk not null | customer |

Notes:

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Database Name: Think Cube Revision: 2.0

Entity Name: sale Date 06/08/2020

Author: Nathan MacDonnell, Akhond Sarah Mesbah

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| --- | --- | --- | --- |
| Field Name | Data type | Field Properties | Relates to |
| Sale\_person | Charvar(30) | Primary key | invoice |
| cust\_name | Charvar(60) | default |  |

Notes:

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Database Name: ThinkCube Revision: 2.0

Entity Name: invoice\_line Date: 06/08/2020

Author: Nathan MacDonnell, Akhond Sarah Mesbah

|  |  |  |  |
| --- | --- | --- | --- |
| Field Name | Data type | Field Properties | Relates to |
| Invoice\_number | bigint | Primary key | invoice |
| Invoice\_line | integer | Primary key | invoice |
| Prod\_number | Character(5) | Foreign key | product |
| Line\_unit | integer | Not null |  |
| Line\_price | Decimal(100) | Not null |  |

Notes:

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Database Name: ThinkCube Revision: 2.0

Entity Name: product Date: 06/08/2020

Author: Nathan MacDonnell, Akhond Sarah Mesbah

|  |  |  |  |
| --- | --- | --- | --- |
| Field Name | Data type | Field Properties | Relates to |
| Prod\_number | Characer(5) | Primary key | Invoice\_line |
| Prod\_description | Charvar(50) | Not null |  |
| Prod\_quantity | integer | Not null |  |
| Prod\_price | Numeric(6,2) | Not null |  |
| Prod\_discount | Numeric(2.2) | Default |  |

Notes:

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# BASIC ERD

product

Customer

Customer

Sale

invoice\_line

invoice

# 8 PHYSICAL ERD

