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An SQLite Database Assignment

Rock Scalers

For all your climbing needs

# Part 1

## Outline

The purpose of this software/Database is to provide a backend for a rock climbing store that sells products for a mark up from other stores. In order to provide a low work profit. This backend will be based in SQLite and will hold a list of products, their respective suppliers, manufacturers and customer they’ve been sold too. There are many steps required to complete this task, To start off it is required to conceptualize the plan/idea for the task, As previously mentioned this task is a rock climbing store. Secondly it is required to confirm that the data is able to be collected, so a piece of python code to scrape the data from various websites was created and the data integrity was verified. After that the plan needs to be set in stone by creating this planning document. The investigation part first then the design then final edits. Finally the Database needs to be developed, insert queries for the data first then the rest of the queries for the front end and lastly compiling it all together in a flask based python back end. Then the entire project can be finalized, this includes final edits in the document, front end, and any other final touches. You can see this visually laid out in the timeline below:

## Timeline

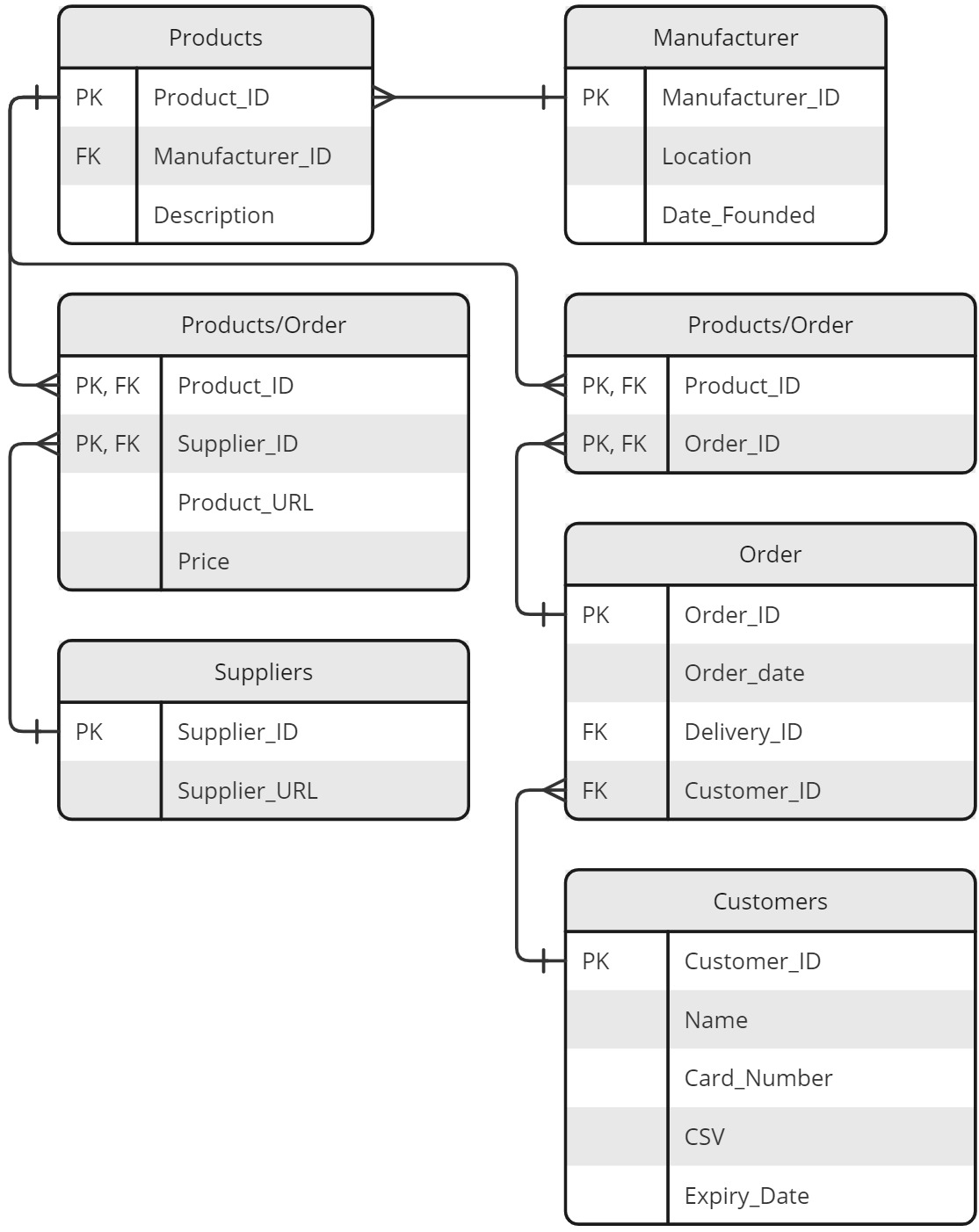
Description

Requirements

Ethical, Legal and Security issues Quality of Data

## Design

Entity Relationship Diagram



Relational Notation

Products(ProductID, ManufacturerID (FK), Description) Manufacturers(ManufacturerID, Location, DateFounded)

Product-Supplier(ProductID (FK), SupplierID (FK), ProductURL, Price)

Suppliers(SupplierID, SupplierURL)

Product-Order(ProductID (FK), OrderID (FK))

Orders(OrderID, CustomerID (FK), DeliveryAddress, BillingAddress, DeliveryRequest, Total)

Customers(CustomerID, Name)

Data Dictionary

|  |  |  |  |
| --- | --- | --- | --- |
| Element Name | Data Type | Description | Constraints |
| ProductID | Integer | A Unique identify for each product. | Must be unique, >= 0 and not null |
| ManufacturerID | Integer | A Unique identify for each manufacturer. | Must be unique, >= 0 and not null |
| Description | String | The descriptor for each product. | No constraints |
| Location | String | General location of the manufactuer companies origin. | Max Length 50 Characters |
| DateFounded | Integer | Year the company was founded | Must be > 0, <= Current Year and not null |
| SupplierID | Integer | A Unique identify for each supplier. | Must be unique, >= 0 and not null |
| ProductURL | String | The URL to order the product. | Max Length 100 Characters and not null |
| Price | Float | The price of the product | Must be > 0 and not null |
| SupplierURL | String | The URL to view the suppliers website | Max Length 100 Characters and not null |
| OrderID | Integer | A Unique identify for each order. | Must be unique, >= 0 and not null |
| CustomerID | Integer | A Unique identify for each customer. | Must be unique, >= 0 and not null |
| DeliveryAddress | String | The Address for the order to be delivered to. | Max Length 200 Characters and not null |
| BillingAddress | String | The Billing address required by law to invoice the purchase to. | Max Length 200 Characters |
| DeliveryRequest | String | Any special requests for the delivery such as ATL. | Max length 500 Characters |
| Total | Float | The price of the order. | Must be >= 0 and not null |
| Name | String | The Customer name used for shipping and addressing them. | Max Length 50 Characters |

Outline of Queries

# Part 2