

Group 40

Members: Ariana Jimenez, Jeffrey Ngo

Website URL: <http://flip3.engr.oregonstate.edu:5007/>

Project Step 7 Portfolio Assignment

Summary

There were many changes throughout the course of this project. Our original project proposal was to create a database driven website to help keep track of sales for our online and brick-and-mortar electronics stores. In our original plan we had 6 entity tables, Employees, Customers, Products, Locations, Orders, and Inventory. With 5 relationships that consisted of a Many to Many between Products and Brands, One to many between Products and Locations, One to Many between Locations and Employees, Many to Many between Orders and Products and One to Many between Orders and Customers.

Later on we felt that we had too many entities and decided to remove some. We ended up removing entities Employees, Inventory and their attributes. The plan now was to have 4 entities, Customers, Products, Location and Orders. With a One to Many relationship between Customers and Orders, a Many to Many between Products and Orders, One to Many between Products and Locations, and One to Many between Locations and Orders.

We then made some changes throughout the project from the feedback and suggestions we received from the TAs and classmates. A new entity named Details was created, this entity is our junction table explaining the many to many relationship between orders and products. There were also some small changes to data types and constraints of a few attributes. Such as int to decimal, char to varchar, not NULL to Nullable. A classmate suggested that we should have a nullable relationship between Products and Locations since items may not be instock. We agreed and made the storeID attribute of Products nullable. The detailsID primary key was removed from the Details entity, and made the orderID and productID foreign keys as the primary key in order to normalize the table. The relationship between products and location changed from 1:M to M:M and back to 1:M since our table was designed around it. We also removed the price attribute from the Details table because we felt that it was not needed.

The following changes were made to the SQL files since it was pointed out that they were missing

- Added the M:M Relationship Query between Products and Locations (Missing)
- Added the M:M Deletion Query (Missing)
- Changed some data type lengths (ZipCode, State Abbreviations do not need 255 Chars)
- Added ON DELETE CASCADE to foreign key constraints (Missing)

Website Changes

- UI changes to make it more user friendly
- Styling changes to increase readability, some text was hard to read.

Updated Project Outline and Database Outline, ERD and Schema

Project Overview

“Bits N Bytes” is a store with multiple locations and online that sells electronics. Some of the electronics it sells include computers, accessories, cameras, phones, gadgets, and other gizmos. Originally a storefront with locations around the US, it recently opened an online store to serve customers worldwide. In order to keep track of the sales of both its physical storefronts and the online store, a database driven website will help record Sales Orders of Products to Customers. Having these sales records in one database will help the company analyze which products sell the most/ sell the least and the overall total sales performance for both store types.

Entities

Customers : records details about customers that shop at this store

- customerID - int, PK, auto_increment, unique, not NULL
- firstName - varchar, not NULL
- lastName - varchar, not NULL
- username - varchar, not NULL
- password - varchar, not NULL
- dateOfBirth- date, not NULL
- phoneNumber - varchar , not NULL
- email - varchar, not NULL
- street - varchar, not NULL
- city - varchar, not NULL
- state - varchar
- zip - varchar, not NULL
- country - varchar, not NULL
- Relationship - 1:M between Customers and Orders (a customer can place many orders, but an order can only have one customer)

Products: records details about products sold at this store

- productID - int, PK, auto_increment, unique, not NULL
- productName - varchar , not NULL
- price - decimal , not NULL
- brand - varchar , not NULL

- category - varchar, not NULL
- storeID - int, FK (Nullable Relationship between products and locations since items can be out of stock)
- Relationship - M:M between Products and Orders (a product can be ordered many times, and a order may have many products)

Locations: Store locations

- storeID - int, PK, auto_increment, unique, not NULL
- street - varchar, not NULL
- city - varchar, not NULL
- state - varchar, not NULL
- zip - varchar, not NULL
- country - varchar, not NULL
- phoneNumber - varchar, not NULL
- Relationship - 1:M between Products and Locations (a location can have multiple products, and a product can be at one location)
- Relationship - 1:M between Locations and Orders (a location can have many orders, but an order can only come from 1 location)

Orders: Records details about orders

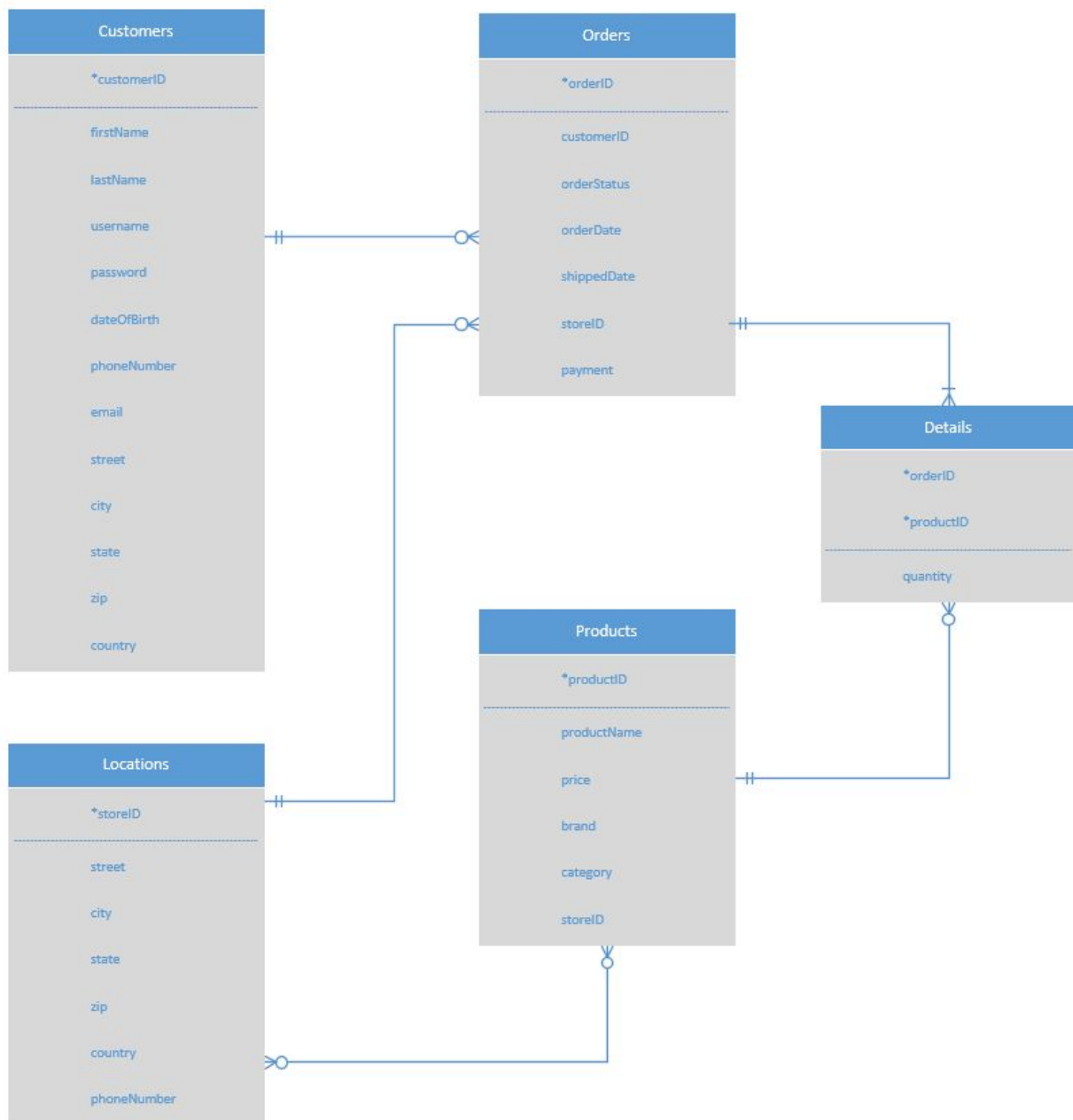
- orderID - int, PK, auto_increment, unique, not NULL
- customerID - int, FK , not NULL
- orderStatus - varchar, not NULL
- orderDate - date, not NULL
- shippedDate - date
- storeID - int, FK , not NULL
- payment - decimal , not NULL
- Relationship - 1:M between Customers and Orders (a customer can place many orders, but an order can only have one customer)
- Relationship - M:M between Products and Orders (a product can be ordered many times, and a order may have many products)

Details: Junction table that explains the Many to Many relationship between Orders and Products. Records all items in an order.

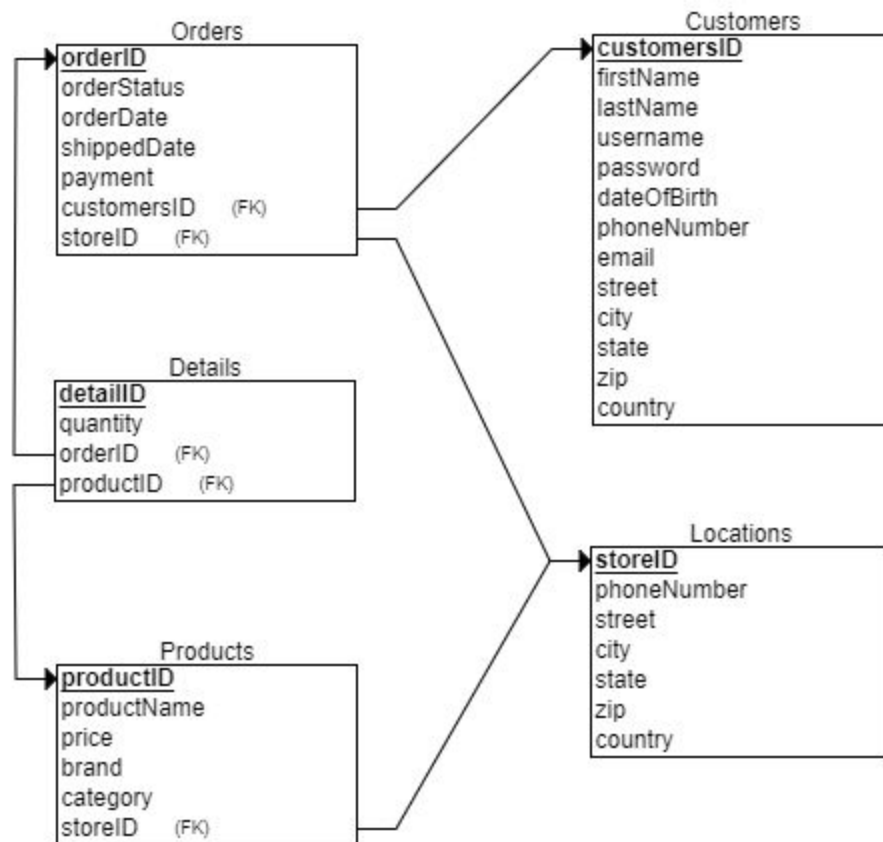
- orderID - int, FK, not NULL (composite key)
- productID - int, FK, not NULL (composite key)
- quantity - int, not NULL
- Relationship - 1:M between Orders and Details (an Order can have many Details, but the Detail must refer to only one Order)

- Relationship - 1:M between Products and Details (a Product can be in many Details, but a Detail must refer to only one Product)

ERD Diagram




Schema



Home Page with Navigation Bar

BITS N BYTES

HomeOrdersCustomersProductsLocations



Welcome to Bits N Bytes

"Bits N Bytes" is a store with multiple locations and online that sells electronics. Some of the electronics it sells include computers, accessories, cameras, phones, gadgets, and other gizmos. Originally a storefront with locations around the US, it recently opened an online store to serve customers worldwide. In order to keep track of the sales of both its physical storefronts and the online store, a database driven website will help record Sales Orders of Products to Customers. Having these sales records in one database will help the company analyze which products sell the most/ sell the least and the overall total sales performance for both store types.

Create/Read/Update/Delete/Display/Filter Orders Page

BITS N BYTES

HomeOrdersCustomersProductsLocations

Orders

Add Order

Customer ID

900000000

Order Date:

mm/dd/yyyy

Store ID:

1

Payment:

Add Order

Filter Orders

Filter by Customer ID

900000000

Filter

Filter by Store ID

1

Filter

All Orders

Order ID	Customer ID	Order Status	Order Date	Shipped Date	Store ID	Payment	
1000000	900000000	Shipped	Tue Mar 03 2020 00:00:00 GMT-0800 (PST)	Fri Mar 06 2020 00:00:00 GMT-0800 (PST)	6	123456789	View Details Edit Delete
1000001	900000001	Shipped	Thu Mar 05 2020 00:00:00 GMT-0800 (PST)	Sat Mar 07 2020 00:00:00 GMT-0800 (PST)	5	987654321	View Details Edit Delete
1000002	900000002	Shipped	Thu Apr 09 2020 00:00:00 GMT-0700 (PDT)	Sat Apr 11 2020 00:00:00 GMT-0700 (PDT)	1	759132648	View Details Edit Delete
1000003	900000003	Shipped	Sun May 10 2020 00:00:00 GMT-0700 (PDT)	Fri May 15 2020 00:00:00 GMT-0700 (PDT)	5	315974268	View Details Edit Delete
1000004	900000004	In Progress	Wed May 13 2020 00:00:00 GMT-0700 (PDT)		2	987654321	View Details Edit Delete
1000005	900000005	In Progress	Thu May 14 2020 00:00:00 GMT-0700 (PDT)		4	789123456	View Details Edit Delete

Read/Update Edit Order Page

BITS N BYTES

HomeOrdersCustomersProductsLocations

Edit Order:

Order Status:

In Progress

Shipped Date:

Store ID:

1

Payment:

123456798

Update

Create/Read/Display Add Details to Order Page

BITS N BYTES

HomeOrdersCustomersProductsLocations

Add Items to Order
Your Order ID#: 1000006

Product Name

MacBook

Quantity

Add Item

Current Items in Order

Order ID	Product ID	Quantity
1000006	1	1
1000006	2	1

Done

Read/Display Details for a specific order Page

BITS N BYTES

HomeOrdersCustomersProductsLocations

Order Details

This page will display details data for the the selected order. Sample Below:

Order ID	Product ID	Quantity
1000000	1	1
1000000	2	5
1000000	3	3

Create/Read/Update/Delete/Display/Search Customers Page

BITS N BYTES

HomeOrdersCustomersProductsLocations

Customers

Add Customer

First Name:

Last Name:

Username:

Password:

Date of Birth:

Phone Number:

Email:

Street:

City:

State:

Zip:

Country:

Add Customer

Search Customers

Search By First Name:

Search

Search By Last Name:

Search

All Customers

Customer ID	First Name	Last Name	Username	Password	Date of Birth	Phone Number	Email	street	city	state	zip	country	
900000000	John	Doe	jdoe	12345	Tue Jan 01 1980 00:00:00 GMT-0800 (PST)	(123) 555-0909	jdoe@email.com	123 Foggy Street	Riverview	CA	90001	US	<div>EditDelete</div>
					Fri Dec 12 1980								

Read/Update Edit Customers Page

BITS N BYTES

HomeOrdersCustomersProductsLocations

Edit Peter Parker:

First name:

Peter

Last name:

Parker

Phone:

(555) 123-4567

Email:

spidey@email.com

Update

Create/Read/Update/Delete/Display/Filter Products Page

BITS N BYTES

HomeOrdersCustomersProductsLocations

Products

Add a Product

Product Name:

Price:

Brand:

Category:

Store ID: 1

Add Product

Filter Products by Store: 1

Filter

Product ID	Product Name	Price	Brand	Category	Store ID	
1	MacBook	2000	Apple	Laptop	1	<div>EditDelete</div>
2	MacBook	2000	Apple	Laptop	2	<div>EditDelete</div>
3	65" OLED 4K TV	2600	LG	TV	2	<div>EditDelete</div>
4	Desktop Computer	1000	Dell	Computer	3	<div>EditDelete</div>
5	PS4 Pro	400	Sony	Games	3	<div>EditDelete</div>
6	a7R III	2800	Sony	Camera	1	<div>EditDelete</div>

Read/Update Products Page

BITS N BYTES

HomeOrdersCustomersProductsLocations

Update Product: 1

Product Name:

MacBook

Price:

2000

Brand:

Apple

Category:

Laptop

Store ID:

1

Update

Create/Read/Update/Delete/Display/Filter Locations Page

BITS N BYTES

HomeOrdersCustomersProductsLocations

Locations

Add Location

Street:

City:

State:

Zip:

Country:

Phone Number:

Add Location

Filter Locations by ID 1

Filter

Store ID	Street	City	State	Zip	Country	Phone Number		
1	1234 Silicon Valley	San Jose	CA	95113	US	408-123-4567	Edit	Delete
2	910 City Street	San Francisco	CA	94105	US	415-987-6543	Edit	Delete
3	5678 Palm Tree	Los Angeles	CA	90012	US	213-345-6789	Edit	Delete

Read/Update Locations Page

BITS N BYTES

HomeOrdersCustomersProductsLocations

Update Location: 1

Street:

1234 Silicon Valley

City:

San Jose

State:

CA

Zip:

95113

Country:

US

Phone Number:

408-123-4567

Update