Comp 306 – Term Project
Final Report

Team: Synthetic Join
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Introduction

This project aims to prepare an e-commerce web site that utilizes SQL in the background. Involvement of the group members are:

Project Description

In this project, we will design an online shopping platform similar to n11.com. Our hypothetical platform has various products from many categories and customers can easily choose between products and purchase them with any of the available payment options. In order to buy any product, users should sign up to the website. Membership option can be either standard or premium like Amazon Prime.

Each product on the website has a set of properties such as title, description, price, weigt, color…etc. Users can also specify the shipment option and they are charged differently for different shipment options and also according to their membership type.

Stock management of the products can be managed by the store managers. A store manager can add or remove products, form new product types, update the number of products in the stock. The price of the products is also determined by the managers.

Design
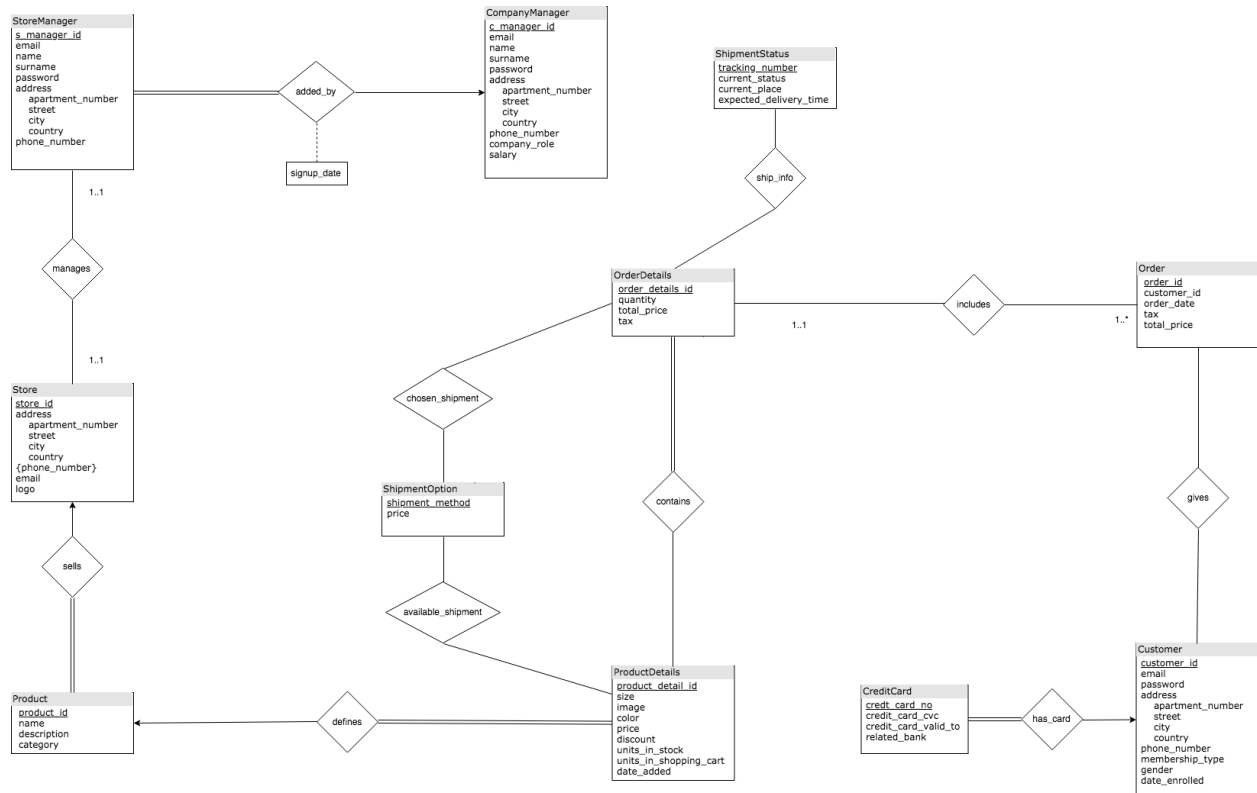
Updated Database Schema:

Entities

StoreManager (s_manager_id, email, name, surname,password, apartment_number, street, city, country, phone_number)

Store(store_id, apartment_number, street, city, country, email, logo)

Product(product_id, name, description, category)

CompanyManager(c_manager_id , email, name, surname, password, apartment_number, street, city, country, phone_number, company_role, salary)

ShipmentStatus(tracking_number, current_status, current_place, expected_delivery_time)
OrderDetails(order_details_id, quantity, total_price, tax)

ShipmentOption(shipment_method, price)

Order(order_id, customer_id , order_date, tax, total_price)

Customer(customer_id, email, name, surname, password, apartment_number, street, city, country, phone_number, membership_type, gender, date_enrolled)

CreditCard(credit_card_no, credit_card_cvc, credit_card_valid_to, related_bank)

ProductDetails(product_detail_id, size, image, color, price, discount, units_in_stock, units_in_shopping_cart, date_added)

Store_phone(store_id , phone_number)

Relations

Sells(store_id, product_id)

Added_by(c_manager_id , s_manager_id, signup_date)

Ship_info(tracking_number, order_details_id)

Chosen_shipment(order_details_id , shipment_method)

Contains(order_details_id, product_detail_id)

Defines(product_detail_id, product_id)

Includes(order_id, order_details_id)

Has_Card(customer_id, credit_card_no)

Available_Shipment(product_detail_id, shipment_method)

Implementation

As most of us has no prior PHP experience, parts with the PHP took a little much time for us. We spent a lot of effort learning and investigating PHP at first.

Login authentication and sign up as a customer pages are created using both PHP and HTML/CSS. In the login part, our backend code decides the user type and set up a home page according to that user type. In the signup part, created user is added to the database synchronously.

In Add/Remove product page (store manager home page), the code is similar to the sign up page. The user fills a form and the triggered event makes necessary changes in the database and returns a result if it is necessary.

Our customer home page lists the products from the database and if a user clicks a specific product, the product details of that product is returned to the user. These details include the color or size of the product. User can choose a product from that page and can fill his/her basket.

Non-trivial Queries:
- Find the number of total premium users and the total money that is gained from them.
- Find the most demanded product of the last month.
- Find the most demanded store.
- Find the store who has earned the most money.
- Find the orders from clothing category.
- Find the product that has the largest supply currently.
- Find the current listed products in the market.
- Add a new user to the Customer table considering password restrictions.
- Find the Product Details of a Product in the market.
- Add new product to a store
- Remove a product from the store

Results

This project made us familiar to using SQL in a real-world application using PHP and MySQL. We had not much experience in PHP before starting this project, so learning part took some time and this held us back to implement some extra features to our project. We believe that our initial proposal had a lot of extra part. In the implementation process, we saw that some parts of our proposal were redundant and actually forms a different new project. Our current project is capable of simulating an e-commerce platform with fundamental features. We have some fancy UI in some parts.

All in all we learnt a lot through the progress.