**COSC 304 Project:**

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**Executive Summary:**

*We’ll have to revamp parts of this before submitting, but the basic stuff is there. We put the rest of the info to add in the A2 Scratchpad file.*

We are planning to build an apparel marketplace website (*No title as of yet*). This website will provide customers with product information and product discounts on items that they are interested in (although we will not be implementing any payment modules, as you have instructed us Dr. Mohamed).

A brief description of the project: Our product marketplace, at periodic time intervals, will have random products from the product inventory go on sale at deeply discounted prices.

We are marketing the system for the demographic of people that, 1) are most likely to purchase products online, and, 2) may be looking for a discount on apparel products, in part due to additional monetary stresses (ex. Post-secondary education, dependants, debts, etc.). We believe that our target demographic would range between the ages of approximately 15 to 40 years old, with more emphasis on the lower half (~15-30 years of age). This estimation seems reasonable to us because we are planning to market apparel from brands that appeal to people within this age range. Examples of this type of apparel would be ‘skate’ shoes, patterned pants and shirts, branded accessories and items from brands such as ‘Nixon’, ‘Quicksilver’, and other brand names that appeal to these demographics.

Part of the appeal of our website is what is described in the Initial Design section as “The Deal” (see below for more information). We would like to build a website with a reputation among people for having occasionally amazing deals, which could lead to a regular routine amongst users to check “The Deal” frequently to see if products that they like are on deep discount. It is a fantastic gimmick that has proven very popular for big companies, such as Valve’s “Daily Deal” on software through their “Steam Client”.

By marketing products online, a clearly popular form of marketing/purchasing within our demographic, we are able to distribute items to customers with minimum overhead costs (ex. Brick and mortar costs) and provide these products at competitive prices.

The main focus of the site will be to promote a single, highly discounted item from the inventory available at our site. The main page of the website will be to promote this item (called “The Deal”), displaying images of the product with a list of what is available of that product, such as sizes, quantities, and colours. Users will be able to select an item form the list, choose how many they would like, and add it to a “basket”. The page will also have a timer displaying how long the item is for sale for, and what the discount is on the product. When the timer runs out, another item would be randomly selected from the inventory to promote as the new “The Deal” product, and will update the main page to reflect the new item.

The next most important area of the site would be the list of all other products available from our site. These items are also discounted from their normal price, but not as much as the main ‘the deal’ on the front of the site. This area would also have recommendations for users, when logged in, so that we can promote other items to the user based on past purchases or pre-set favourites which are selected on account creation. The page will display all inventory available, but also provide users with the ability to filter the displayed inventory by item type, brand, gender, and more. Users can select an item from the list to be taken to an item page that displays information about the item with a similar layout and functionality to the main page. Selecting one of the recommendations, for logged in users, would also take the user to the items page.

When a new customer comes to our site they will have to provide some basic demographic information as well as some of their preferred brands or items that our site carries, as well as picking a username and password. The users preferences will also update based on past purchases so that our promotions to the user can more accurately reflect their likings.

When a customer selects an item from inventory they should be asked to log in, creating a new account if necessary, so that the product can be held in their “basket”, and the remaining inventory should update to reflect that there is less stock left of that product. Items should remain in the basket unless the user chooses to remove them, or until the user has paid for their items. When the user decides to check out they would be redirected to a PayPal page to proceed to process payment of the item(s).

**Features:**

**Assumptions:**

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**Product Schema**

CREATE TABLE Products(

pname VARCHAR(30),

pid INTEGER,

price DOUBLE NOT NULL,

photoID integer NOT NULL,

stock INTEGER,

ptype VARCHAR(30),

pgender CHAR(1),

pdescription VARCHAR(250),

size INTEGER,

thumbID INTEGER,

CHECK ( pgender = 'U' OR pgender = 'M' OR pgender = 'F')

PRIMARY KEY(pid,size);

);

//Account Schema

CREATE TABLE Users(

uname VARCHAR(25) PRIMARY KEY,

pword VARCHAR(15) NOT NULL,

fname VARCHAR(20) NOT NULL,

lname VARCHAR(20) NOT NULL,

age INTEGER NOT NULL,

street VARCHAR(50) NOT NULL,

city VARCHAR(15) NOT NULL,

prov CHAR(2) NOT NULL,

postalcode VARCHAR(6) NOT NULL,

gender CHAR(1) NOT NULL

);

//Shopping Cart Schema

CREATE TABLE Basket(

uname VARCHAR(25),

pid INTEGER,

quantity INTEGER,

prodtype VARCHAR(30),

price NUMERIC(15,2),

shipped BOOLEAN NOT NULL,

discount DOUBLE DEFAULT 0,

size INTEGER,

FOREIGN KEY (uname) REFERENCES Users(uname),

FOREIGN KEY (pid) REFERENCES Products(pid)

);

//Account History

CREATE TABLE UserHistory(

uname VARCHAR(25),

pid INTEGER,

FOREIGN KEY (uname) REFERENCES Users(uname),

FOREIGN KEY (pid) REFERENCES Products(pid)

);

//Main Deal

CREATE TABLE Deals(

saleNum INTEGER PRIMARY KEY auto\_increment,

pid INTEGER,

startDate DATETIME,

discount DOUBLE,

duration INTEGER NOT NULL,

FOREIGN KEY (pid) REFERENCES Products(pid)

);

DELIMITER ;;

CREATE TRIGGER setStartDate BEFORE INSERT ON Deals

FOR EACH ROW BEGIN

SET NEW.startDate = NOW();

END;;

DELIMITER ;