



PROPOSAL FOR NINASTEA WEBSITE UPGRADE

May 26, 2021



ABSTRACT

Proposal of upgrading current static website to dynamic, database driven website for NINAsTEA company.

Xiaojing Shi

Flash Web Design

Table of Contents

Proposal for NINAsTEA Website Upgrade	2
Introduction	2
Features and Functions	2
For customers	2
For admin users	3
Database	3
SECURITY	4
XSS protection	4
CSRF protection.....	4
SQL injection protection	4
A Sample Form Submission	4
Post.....	4
Redirect.....	5
Get.....	6
Sitemap.....	7
Front End Sitemap	7
Back End Sitemap.....	8
Physical Data Model	9

Proposal for NINAsTEA Website Upgrade

To: Steve George

From: Xiaojing Shi, Flash Web Design

Date: May 26, 2021

Introduction

NINAsTEA is a new local retailer based in Winnipeg, Manitoba selling teas. The owner, Nina opened first NINAsTEA store in Dec 18, 2020. The brand core concept is healthy drink healthy life. They are currently looking for a web development company to upgrade the current static website into a dynamic, database driven website in order to increase user experience and administrative management efficiency.

The main technology that will be used to make the upgrade are PHP and MySQL. First, we will create a database with MySQL with all data we need for the website organized and stored in different tables. Second, we will use PHP to convert all existing HTML pages into PHP pages with MVC(Model-View-Controller) pattern. This can better organized codes and make maintenance and changes easily. Third, with PHP and MySQL, we can get data from the database and dynamically render pages.

Features and Functions

The overall goal is to upgrade the current website to a dynamic and database driven website. The upgraded website should have the following features:

For customers

1. Search products. Customers can search products by keyword. Search bar is located on top of each page.
2. Sorted products. Customers can view products sorted by different categories.
3. Products list and detail information pages.
4. Make online orders. Customers can add products into shopping bag, edit quantities, view order subtotals, and make payment.
5. Add products to wish list. Customers can add products into wish list, as well as remove products from wish list. They can also save the list for later use.
6. Registration authentication. When a customer registers, the email provided will be verified and make sure it is unique in the database.
7. Log in and Log out authentication. Passwords entered will be encoded for website security.

8. After logging in, customers can view profile, wish lists, previous orders and make new orders.

For admin users

1. Log in and Log out authentication.
2. After logging in, admin users can view products, customers, orders and logs.
3. On view products page, admin users can view, edit, and delete a current product, add a new product, and update database accordingly.
4. On view customers page, admin users can view all current customers.
5. On view orders page, admin users can view all previous orders.
6. On view logs page, admin users can view administration daily logs.

Database

There are 5 tables in the database: customers table, teas table, orders table, order_tea table, and log table; including following data type: integer, varchar, decimal, enum, boolean, text, char, date, datetime.

1. For customers table, data is collected mainly through registration process. We are collecting user's name, email, password, age, phone, address, city, province, postal code, country from registration form. With email and password, customers can log in and view profile, previous orders, wish list and make an online order. Beside, an unique customer id will be generated in database automatically. In order to distinguish a regular user and an admin user, privilege level is added with default value 0 for regular user and 1 for admin user.
2. For teas table, data is collected from NINAsTea company. This table is the primary table for the website. It includes all information of all products: product id, name, price, weight, type, caffeine, origin, expire date, organic, ingredients, description, SKU number, image. Customers can view product list and product details; sort products by caffeine level, tea type; search product with keyword; Admin users can add, view, edit and delete products from back end admin page.
3. For orders and order_tea tables, data is collected from online order processes. After customers successfully make an online order, customer id, order date, subtotal, gst, pst and total amount will be stored in orders table with an auto-generated id. Tea ids, unite price, quantity and line price will be stored in order_tea table. These two tables can interact with same order id. Orders table and customers table can interact with same customer id. Teas table and order_tea

table can interact with same tea id. In the end, we can use all these information to display a detailed order receipt.

4. For log table, data is collected when any user visit, view or interact with NINAsTea website. Every time an interaction occurred, it triggers the log function and file information of current date, request method, request uri, http status of the request, information about the user's browser to the log table in database. Only admin users are able to view it after logging in.

SECURITY

XSS protection

Cross site script injections are prevented by using PHP built-in `htmlspecialchars()` function to sanitize data. By using this function, it makes sure that all data get sanitized before getting used throughout the website.

CSRF protection

Cross-site request forgery attacks are prevented by adding CSRF tokens to forms and session. Tokens are random and encoded values. When submitting, the token will be verified and the form will be submitted only if the token matches the setting.

SQL injection protection

SQL injections are prevented by using prepared statements. When interacting with database, to avoid the input be taken as part of SQL command, we bind parameter and thus force the input to be handled as parameters.

A Sample Form Submission

Use customer registration form as an example:

Post

Users can access register form from any page of the website. They are required to fill in the form below and make sure every field meets the requirement to successfully be registered. If any input doesn't meet the validation an error will be display under that field indicating the error. Also, this form is "sticky", so users don't have to type the same data again and again.

NINAsTEA

HomeTeasRewardsShipmentContacts

Register Form

Please fill in all fields to be successfully registered.

Name

Nina

Address(street)

Test Ave

City

Winnipeg

Province

MB

Postal Code

123456

*postal code is not valid.

Country

Canada

Phone

2041231234

Email

test@gmail.com

*email is already exist. Please log in or use another email address to register

Password

.....

*password must be at least 8 characters long, and contain at least one special character, one uppercase letter and one number.

Confirm Password

*confirm password is a required field.

Submit

Reset

Redirect

Once users complete the form and hit submit, and all fields pass validations, a new record will be created in database. Users will be logged in automatically and redirect to profile page. And a flash message will show in the top indicating the success of the registration.

Get

Once a user gets redirect to the profile page, PHP will interact with database to retrieve the user information and render a profile with all the information of that user. (not including password)

You have successfully Registered!

NINAsTEA

[Home](#) [Teas](#) [Rewards](#) [Shipment](#) [Contacts](#)

Account Info

[My Profile](#)
[My Orders](#)
[My Wish List](#)

Your Profile

Name: Nina

Email: test3@gmail.com

Phone: 2041231234

Address: Test Ave

City: Winnipeg

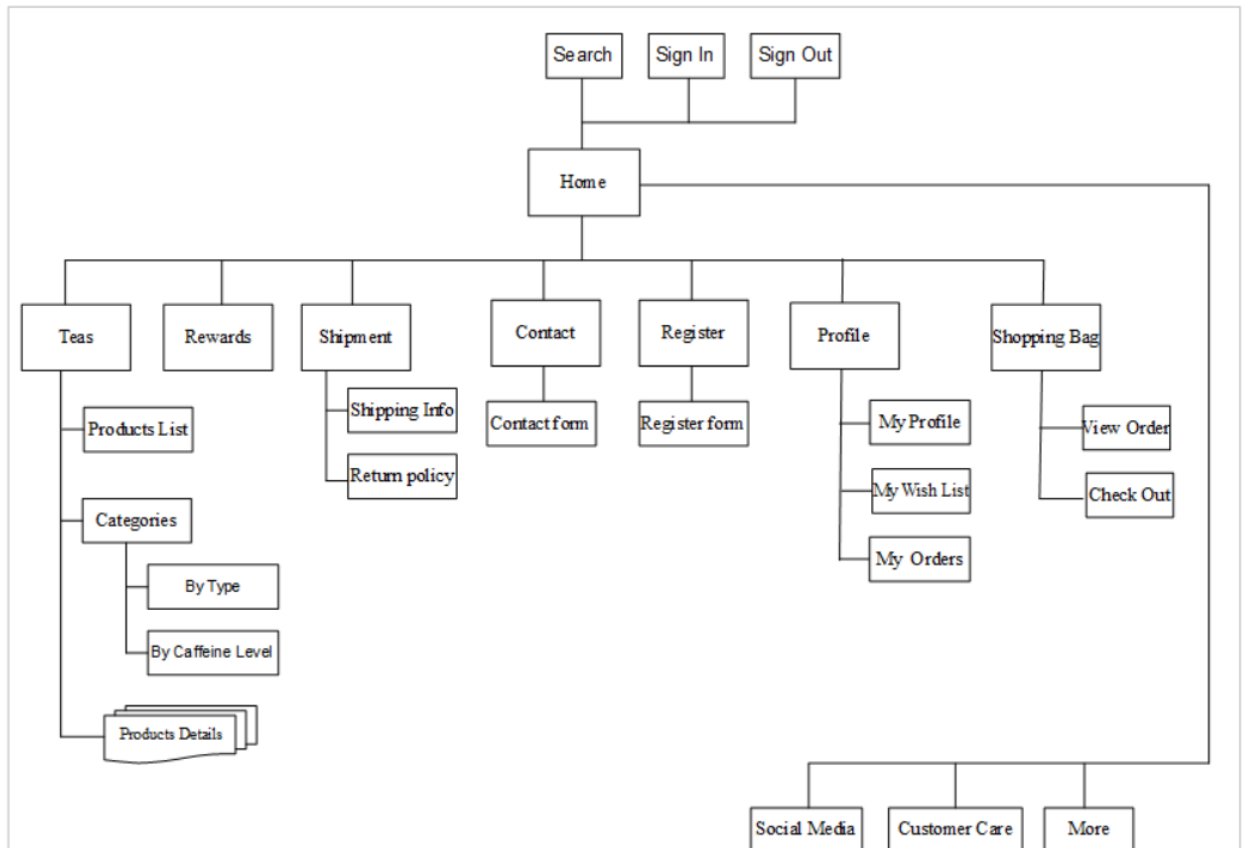
Province: MB

Postal_code: T1T 1T1

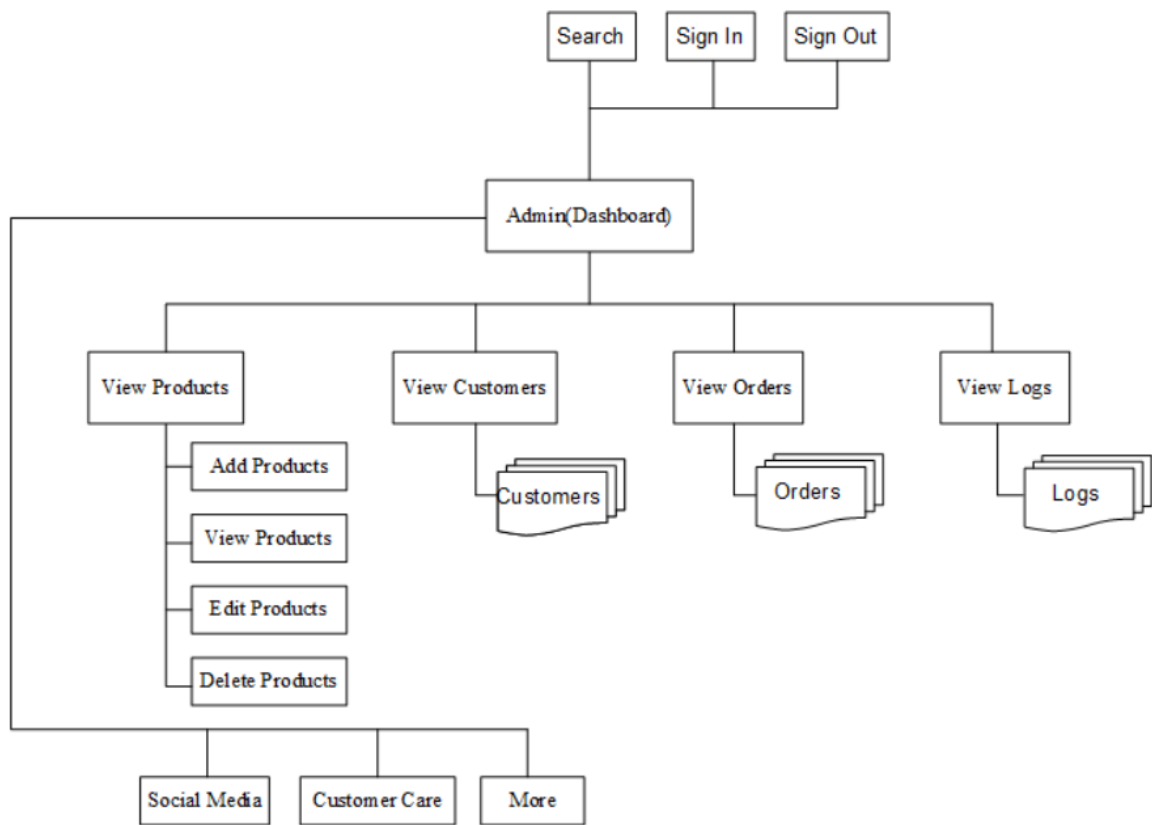
Country: canada

Sitemap

Front End Sitemap



Back End Sitemap



Physical Data Model

