SOFE 3650 - Fall 2021
Software Design and Architectures
Project Proposal

Electronics Online Store

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Project Description

This is a web application for an online store. Users will be able to sign up for an account, browse our products and make purchases on the website.

Functional Requirements

1. Cart Function/Checkout Option
   Users will be able to add, delete and edit items in their cart.
   The cart will have a total cost pre and post tax.
   Any promotions for items will be automatically applied and displayed in the cart.
   The user will be presented with a button to checkout.

2. Payment Processor
   We will connect our app to a third party payment processor - Stripe. Stripe will process all payments made by users as well as refunds.

3. Support Chat
   There will be an icon on the website for the user to be able to speak to a customer service representative about any concerns or questions that they may have.

4. Products Display
   This is the bread and butter of the website. It will display all of the current products on offer. Information about each product will be accessible by the user here. They will be able to check prices, availability, photos, promotions, etc. This information on the website will be fetched and maintained on a database.

5. Business Description

This is a section on the website explaining our business and telling our story.

6. Login Systems
This is where users can sign up in order to make purchases on our website. Users will be able to sign up and sign in using their google/facebook accounts.

7. Owner Dashboard Analytics
This will be a separate website available to admins. This application will be used to track business statistics using visualization tools.

Nonfunctional Requirements

1. Usability
The user experience and user interface is a top priority for our application. We believe that having a great application comes down to delivering on the functionality while having a pleasant experience.

2. Performance
Our goal is to have the website never go down. We also want the performance of the website to be as optimized as possible. This will entail using performant tools to build our website like using a frontend framework to make it a single page application.

3. Security
User accounts will be through Google or Facebook so user account information will be handled through them and cannot be accessed through us. We will not be handling payments ourselves so Stripe which is a secure platform which will handle

user sensitive information such as credit cards so information is secure at all times for the user.

4. Maintainability
   Our goal is to set up the application in a way where products can be changed and added easily. The goal is to decouple most sections so they are independent to each other, so if the product views are changed there are not any effects in the model. This will allow us to keep costs low and allow the system to be updated frequently based on new products, without an effect on core functionality.

5. Scalability
   The application will be set up such that it can be easily scalable to any expansion to our line of products and locations. Tools like Microsoft Azure or Amazon Web services can be leveraged to achieve this.

6. Reliability
   The system will be set to process all transactions efficiently, give customers a consistent experience.