

Positron

Online eCommerce Website for Electronics

“A positive & electrifying shopping experience”

Application Description

Positron is an online eCommerce website specifically for selling a vast catalog of electronics. Users are allowed to use the site either as registered users or as guests if they do not wish to save their personal information on our database systems. Registered users gain the benefit of securely storing their personal information on our database systems for a more streamline shopping experience. Rather than having to input their personal information each time they wish to shop, they simply add items to their cart and go.

Sellers on the site must register and go through a rigorous verification process in order to sell on Positron. For simplicity's sake, this likely be included but on a small scale for this project, but the underlying concept will still be present.

The interactive catalog will have a vast range of features including filters to filter by price range and the category the item falls under. This will make it easier to find the right item for you in a timely manner. Items will store descriptions from manufacturer/seller and specifications about the item. A rating system will also be implemented in order to allow customers to rate their experience with individual items and leave feedback. This system will prove useful for both customers and sellers/manufacturers as customers can warn other customers about negative experiences or recommend a certain product. Manufacturers can read feedback from customers that purchased their product and find ways to improve for future customers.

Core Features

Users Registration/Login: Users are able to register with the site and securely store their personal information on the database. This streamlines the shopping experience, by inputting their information one time, the next time they shop, they simply login, shop, and checkout. If users do not wish to register, they are allowed to use the website as a guest.

Electronics Catalog: Users of the site will be able to search, filter, and browse for electronics that they are interested in purchasing. Categories will vary but filters will allow for keywords, price range, and category.

Transaction / Purchase History: Users who are logged in will be able to see their previous transactions and purchases from the site. Details will include the items purchased, the quantity, and a breakdown of price.

Review System: Users who have purchased electronics have the ability to leave reviews and star ratings on the items that they purchased in order to recommend items to other customers or leave feedback to sellers/manufacturers on how they can improve their product.

Delivery Status: Users who have successfully purchased an item will be able to track the delivery of the item to their delivery address. For simplicity's sake of this project, this will only be a mockup, but a database table will exist for this system that would be updated by a backend system.

Database Structure

Users Table

- id :: uint primary_key
- username :: varchar(18)
- password :: varchar(256)
- name :: varchar(40)
- phone number :: varchar(15) null
- email :: varchar(256)
- address :: text

Product Table

- item_id :: unit primary_key
- Item_name :: varchar(256)
- seller_id :: foreign_key
- price :: float
- stock :: unit
- rating :: float
- description :: text
- category :: varchar(256)
- color :: varchar(25)

Reviews Table

- id :: unit primary_key
- buyer_id :: unit foreign_key

- product_id :: unit foreign_key
- rating :: float
- Description :: text null

Sellers Table

- id :: unit primary_key
- username :: varchar(18)
- password :: varchar(256)
- name :: varchar(256)
- phone number :: varchar(15)
- address :: text
- company_name :: varchar(256)
- rating :: float

Transactions Table

- id :: unit primary_key
- seller_id :: unit foreign_key
- buyer_id :: unit foreign_key
- transaction_total :: float
- payment_status :: varchar(15)
- delivery_status :: varchar(15)

CRUD Operations

Table	Create	Read	Update	Delete
Users	New person registers with the site	View profile	Update account details	Delete account
Product	Sellers create new product	Users able to browse catalog and view products	Sellers update product listing	Sellers delete product listing
Reviews	Users able to create reviews on product	Other users able to read other users reviews	Users able to update reviews after	Users delete reviews at their discretion
Sellers	Sellers register with site	View profile	Update account detail	Delete seller account
Transactions	Transaction created when user purchases	Users able to view past transactions	N/A	Transaction deleted when user cancels order

Expected Outcome

The expected outcome of this project is a functional prototype of the webpage described above. Users will be able to register with the site and make mock purchases. Real purchases will not be able to be made since this is a concept thus far and to make real purchases requires an underlying infrastructure of sellers and manufacturers. This project will server as a full-stack experience from designing a User Interface to actually coding back and front-end software.