Hardware Online

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Section I

Introduction

1. Team 3
   a. Camerin Figueroa
   b. Christopher Fioti
   c. Chris Danyluk

Our Business is Hardware Online. We are a home-depot like store, providing building supplies, electrical supplies, plumbing supplies, and other hardware requirements for DIY projects. However, we are focused more closely on tools, such as power drills, saws, hammers, wedges, etc.

The goal of this project is to design a website and system for Hardware Online. It allows for the creation of user profiles for customers, employees, administrators, and stakeholders. It will be an inventory tracking system, and allow for a variety of functions on the website to allow for all users to interact with our systems in some forms.

Our userbase will be customers looking to purchase DIY materials, tools, etc., as well as employees looking to update, track, add, and remove stock, and administrators to allow them to track employees' logs, create employee accounts, and act on administrative needs. Stakeholders will also be able to use our system to view the company and ensure their money is not being wasted.

Our stakeholders include:

1. Page Lumber
2. Klein Tools
3. Makita
4. Bostitch
5. Lutron

And more

- Project Development
  - The Agile Manifesto
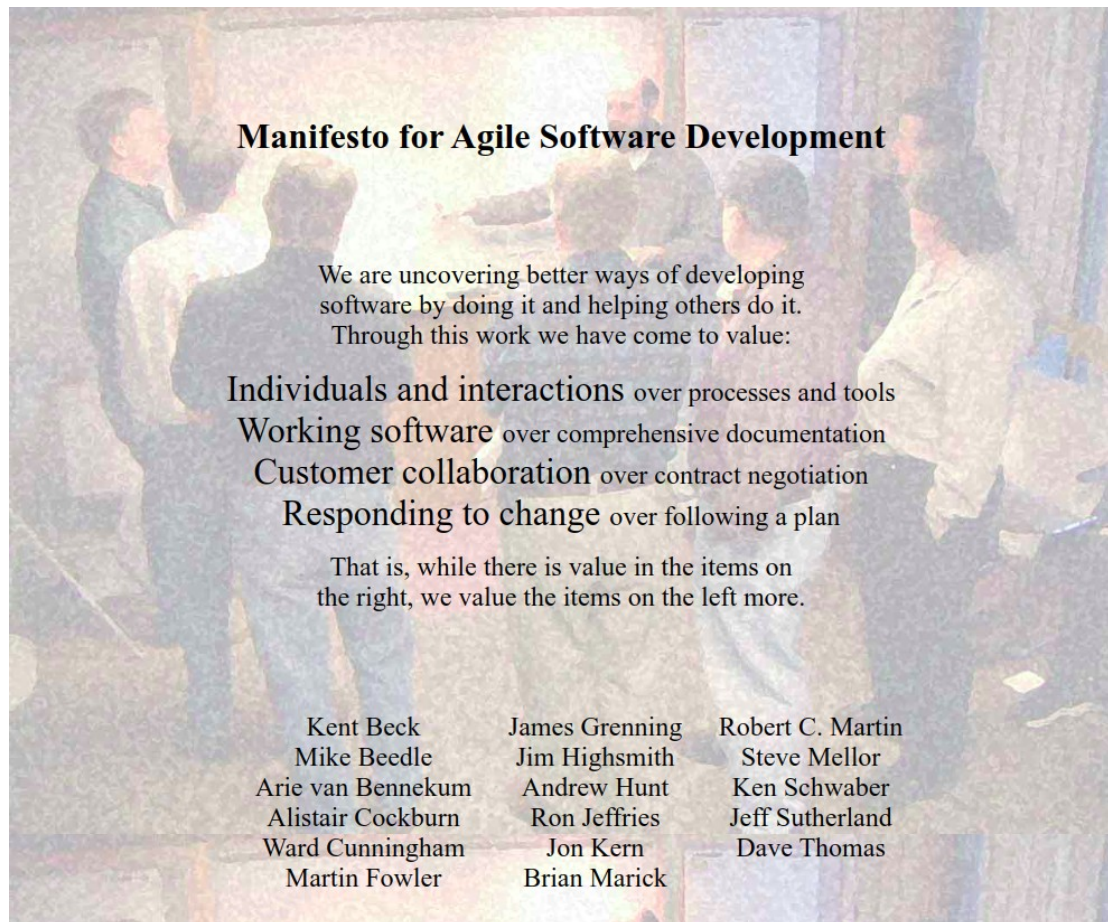
  - What Agile Principles will your team be using
    - Working software is the primary measure of progress.
    - Continuous attention to technical excellence and good design enhances agility.
    - Simplicity–the art of maximizing the amount of work not done–is essential.
    - The best architectures, requirements, and designs emerge from self-organizing teams.
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  - Key Project steps (ex: requirements gathering, feature design, Unit testing, etc.) – describe what they are
    - Gather Requirements and Planning
      - At this step we are tasked with collecting requirements and input from users of the system.
   - Define Requirements

- At this stage, requirements will be defined and solidified in order for the team to understand how they will be working together.
- Feature Designing
  - A design plan is drafted up at this stage, and specifications of the system are decided at this stage.
  - Deciding what software will be used, what hardware will be needed that can support our system.
- Building
  - At this stage, the project is actually built.
  - Scrums will be used to help keep track and organize the order when parts of the project will be built.
- Unit Testing
  - At this stage, the software is tested for issues, bugs, or anything that needs to be fixed before release.
  - Automated testing or fuzzing will be used at this stage to help find problems with the system and to even determine security risks.
  - Beta testers can be used here to watch the system in it's natural habitat.
- Deployment
  - At this stage the system is ready for release and is open to the users that it was meant for.

Section III

Requirements and Software Used

For this project we will be using a combination of HTML, CSS, JavaScript, PHP, and SQL on a Windows OS. Specifically, we will be developing the HTML and PHP in Visual Studio Code, while our SQL will be produced using MySQL. In addition, the PHP server will be hosted through Abyss, another Microsoft product. This will be a client/server application and will make use of HTTP requests.

User stories are within the table on the next page, as well as an image of our stories on post-its.
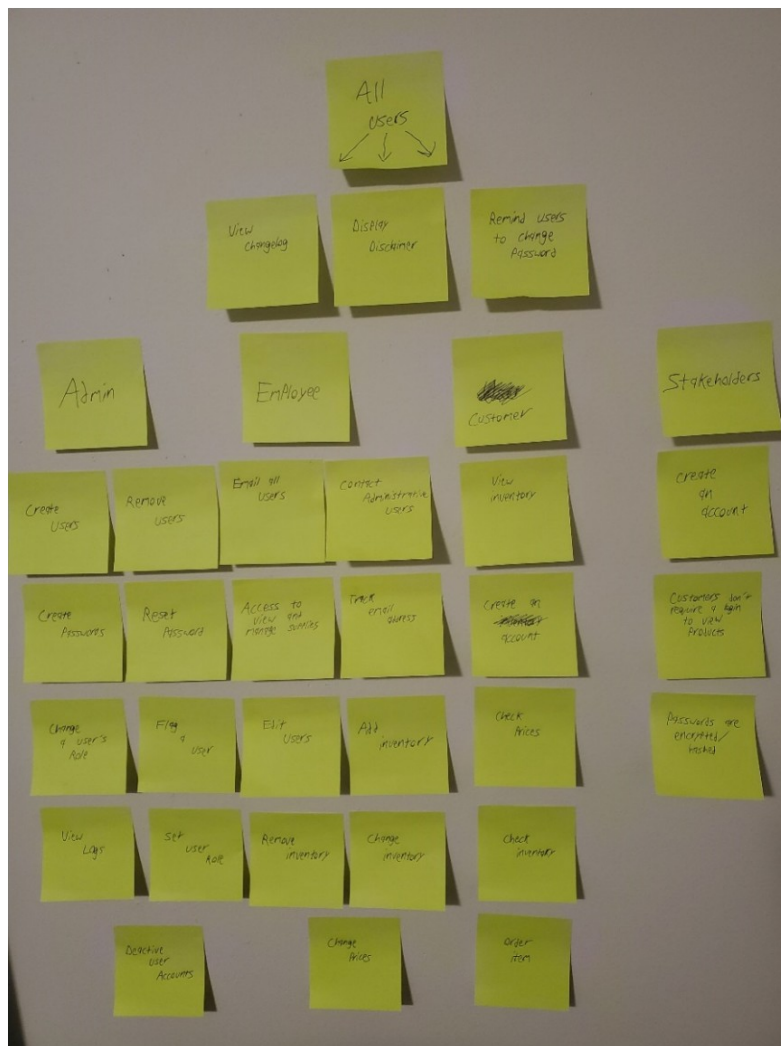
Number	Individual	I want to...	So that I can...
1	Admin	Create Users	Add people to the system
2	Admin	Remove Users	Remove people from the system
3	Admin	Create Passwords	secure the system
4	Admin	Reset passwords	Allow employees who forgot their password back in
5	Admin	Change a user's role	Promote and demote people
6	Admin	Flag a user	Review the profile later
7	Admin	View Logs	Monitor user activity, and diagnose issues.
8	Admin	Set User Role	Allocate role to appropriate users
9	Admin	Deactivate User Accounts	Prevent malicious users from accessing the website.
10	Employee	Email all users	Send out Promotional Emails
11	Employee	Contact Administrator Users	Contact Administrators to notify them of issues, questions, etc.
12	Employee	Access to view and manage suppliers	Add, edit, deactivate, or view suppliers and their info.
13	Employee	Track Email Address	Find a user's email address in order to contact them
14	Employee	Edit Users	Can edit passwords and usernames
15	Employee	Add Inventory	Update when we receive new products
16	Employee	Remove Inventory	Update when we no longer sell products
17	Employee	Change Inventory	Update certain products
18	Employee	Change prices	Update prices for items
19	Customer	View Inventory	Buy things
20	Customer	Create an Account	Keep my information loaded for my next purchase
21	Customer	Check Prices	See what is the lowest cost
22	Customer	Check Inventory	See what is in stock
23	Customer	Order Item	Purchase Item
24	Stakeholder	Create an account	See what is happening in the business
25	Stakeholder	Customers don't need a login to view products	Easier access to what we have without needing to take time to create account.
26	Stakeholder	Passwords are encrypted/hashed	Prevent view of passwords in database breaches.
27	All Users	View Changelog	Understand what has changed on the website and to see that it is being actively worked on.
28	All Users	Display Disclaimer	In order to cover the company in case someone wants to sue us.
29	All Users	Remind user to change password	To keep the website secure

Features List

Feature Number	Description	Priority (H, M, L)	User Story Number
1	Create Users	H	1
2	Remove Users	H	2
3	Create Passwords for users	H	3
4	Reset passwords for users	M	4
5	Change a user's role	M	5
6	Flag a user	M	6
7	View Logs	M	7
8	Set User Role	H	8
9	Deactivate User Accounts	H	9
10	Email all users	M	10
11	Contact Administrator Users	M	11
12	Access to view and manage suppliers	M	12
13	Track Email Address	L	13
14	Edit Users	H	14
15	Add Inventory	H	15
16	Remove Inventory	H	16
17	Change Inventory	H	17
18	Change prices	H	18
19	View Inventory	H	19
20	Create an Account	H	20
21	Check Prices	H	21
22	Check Inventory	H	22
23	Order Item	M	23
24	Create an account	H	24
25	Customers don't need a login to view products	L	25
26	Passwords are encrypted/hashed	H	26
27	View Changelog	M	27
28	Display Disclaimer	M	28
29	Remind user to change password	L	29

Section IV

Design
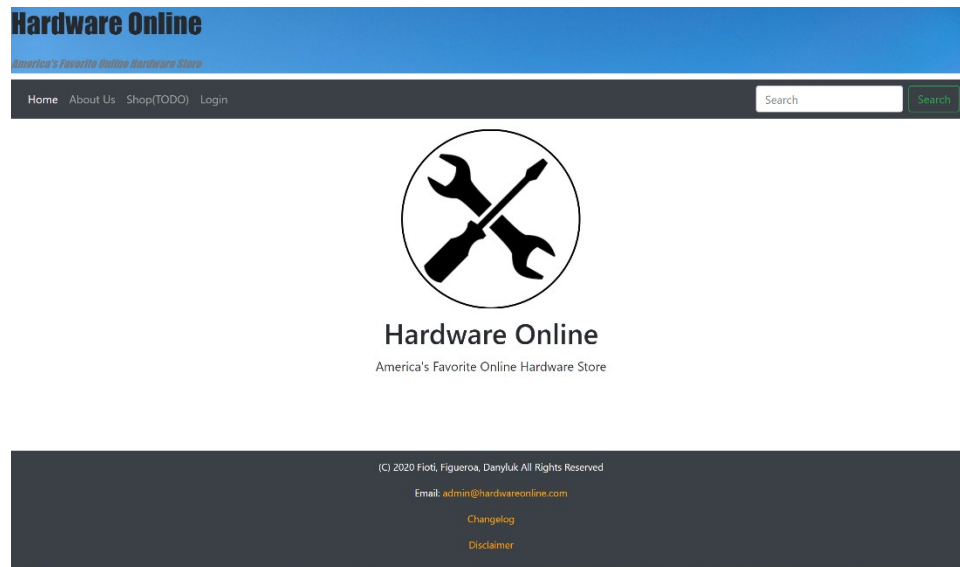
Software Used

   We will be using HTML, CSS, JavaScript, PHP, and MySQL to achieve our desired end
result

- HTML
- CSS
- JavaScript
- PHP
- SQL

Tables

t3_users

Field	Attribute	Definition
username	TEXT(256), UNIQUE, PRIMARY_KEY	User's ID for login
pwHash	TEXT	Password Hash Code
hashType	TEXT	Hashing algorithm used with this user's hash. This is useful so we can update our password hashes later on to more secure algorithms.
rankID	ENUM	Connects to the Permissions table to determine what permissions this user has
active	TINYINT	Stores a 1 if the account is active, and 0 if the account is deactivated.

t3_product

Field	Attribute	Definition
vendorID	INT	Unique ID for vendor
productID	TEXT, UNIQUE, PRIMARY_KEY	Unique Product ID Number
model	TEXT	Model number of product
product	TEXT	Name of product
stock	INT, DEFAULT(0)	Quantity of product in stock
desc	TEXT	Product Description
price	DOUBLE(10,2)	Price of product
active	TINYINT	Stores a 1 if the product should be active, and 0 if the product is no longer sold.

t3_vendors

Field	Attribute	Definition
vendorID	INT, UNIQUE, PRIMARY_KEY	Unique ID for vendor
name	TEXT	Name of vendor
address	TEXT	Address of vendor
phone	INT	Phone number for contact of vendor

Functional Diagram