

ASSIGNMENT 2 FRONT SHEET

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Student declaration I certify that the assignment submission is entirely my own work and I fully understand the consequences of plagiarism. I understand that making a false declaration is a form of malpractice.			
		Student's signature	

Grading grid

P5	P6	P7	M4	M5	D2	D3

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Introduction

In the report, it will be performing the design stage and software implementing base on scenario that is given by assignment brief. Including test plans and documentation about application.

I. **Software Design Stage**

1. Requirement

Client must have a page to view all product, select and see detail item. Admin can log in and log out by account. Admin must have ability to manage and operate the website such as adding, editing or deleting products, changing system interface. Admin needs to know all products, categories in the system.

2. UML use-case diagram

The website will have two subjects of using: admin and client. As the require of brief, basic website will include:

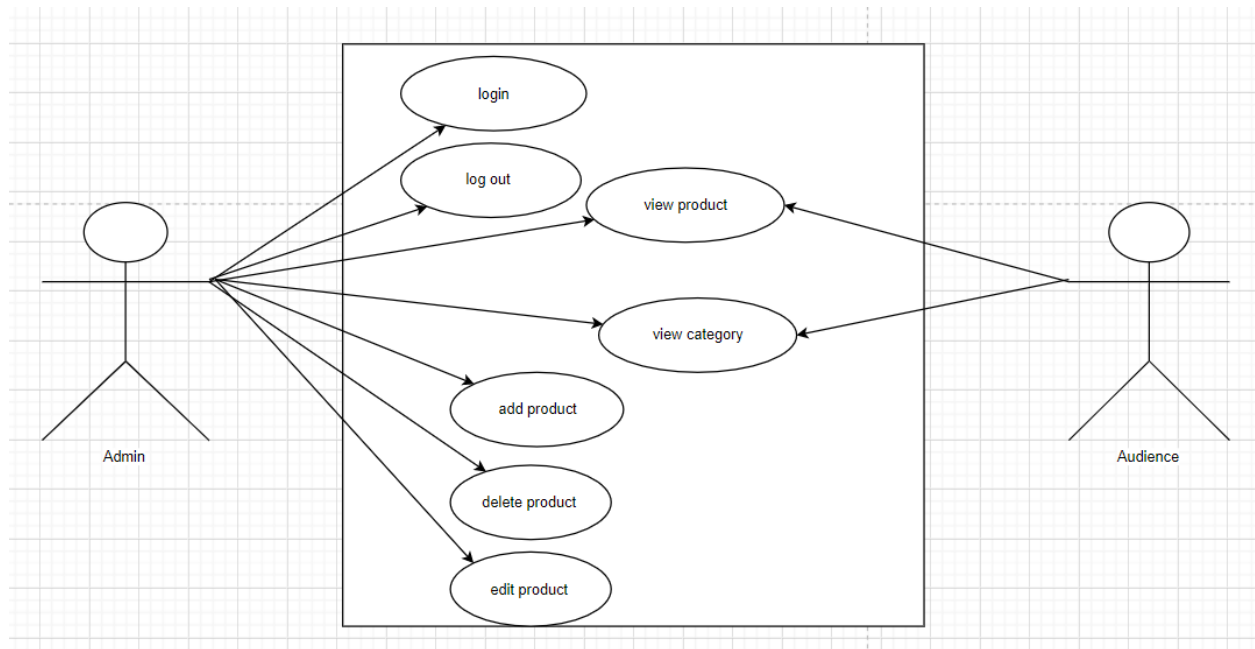
Admin will have some basic function like adding the new product in the system, editing the information about product present in the system, deleting product, reviewing database and re-structure of system. Admin also have ability to access in the system by account.

Client can review all product and category in database and seeking detail of each product.

The website is created for shopping high-tech products, toward users who want to shopping online instead of going out.

In the real case scenario, there are more functions but in the short time for implementing and determine the purpose. the application only meets the basic requirements that the topic has set.

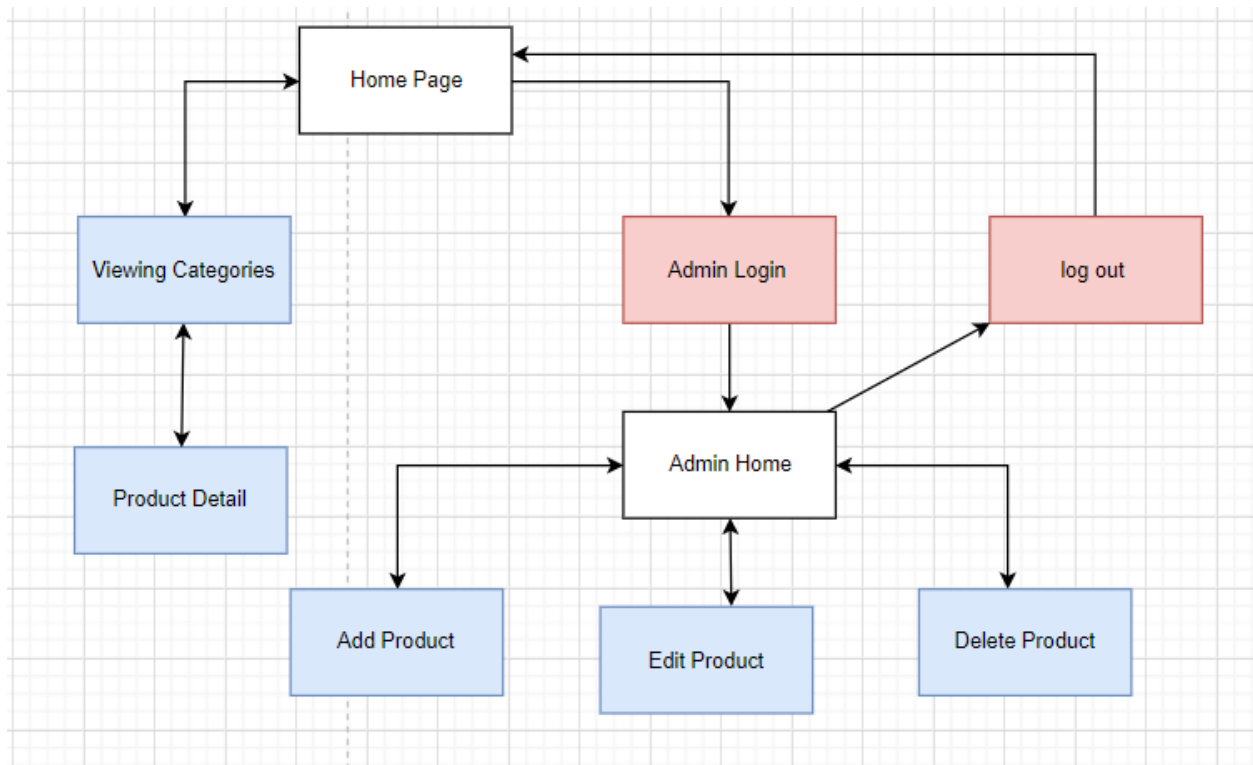
Figure 1: URL Diagram



3. Site-map and wireframe

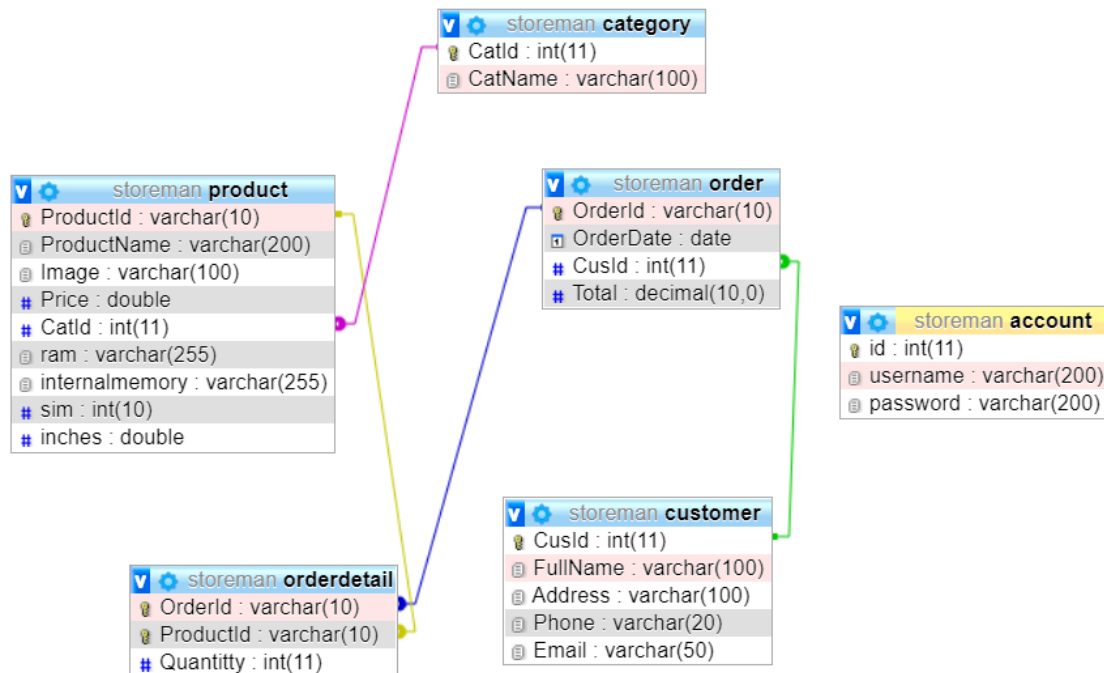
The website application site map is shown below:

Figure 2: Site-Map



4. ERD of Back-End Database

Figure 3: ERD of Back End



As for project back-end implementation, I used localhost, which is a hostname that means this computer. It is used to access the network service that are running through on the host via the loopback network interface. This Localhost structure helps the project to organize more clearly, reduce the time for developing simple function class or complex class. It remains the core of PHP coding concept, still require knowledge about PHP and spend a lot of time for searching on the internet. (G, 2019).

5. Synthesize client-side scripting languages and server-side scripting languages

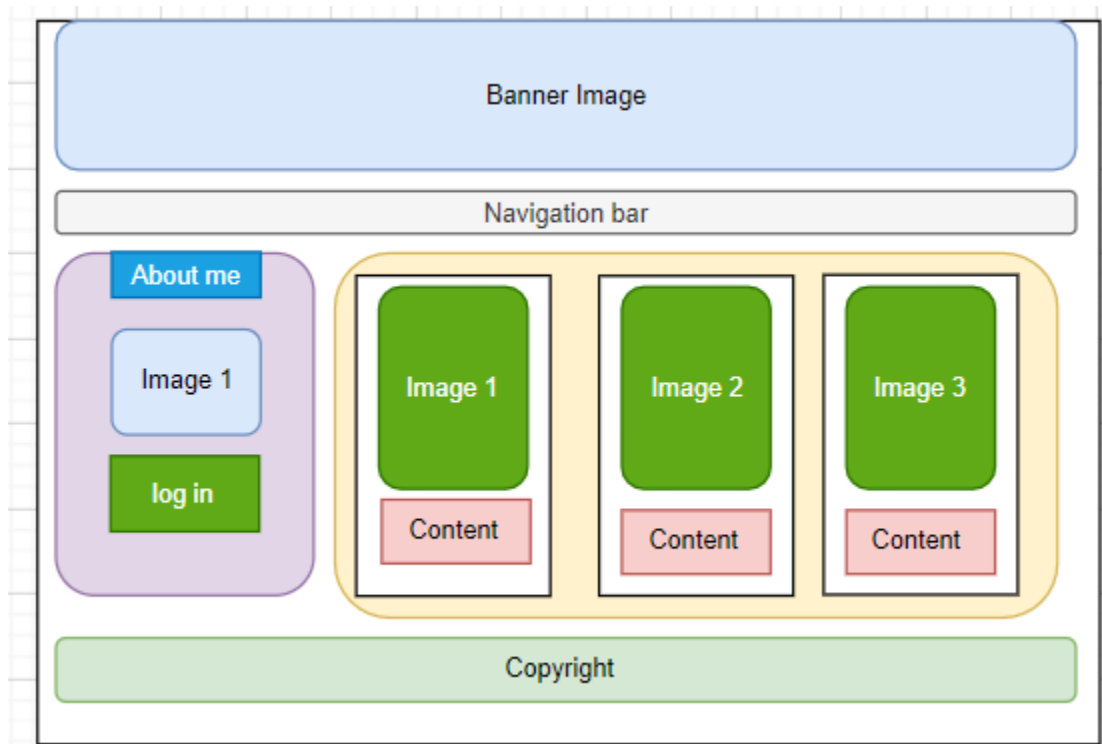
a. *Client-side*

For client-side scripting languages, CSS will be used for build the core for the user interface (GUI).

Design of GUI is based on some pre-bootstrap component like form-control, button but mostly based on handwritten CSS style grids.

Home Page

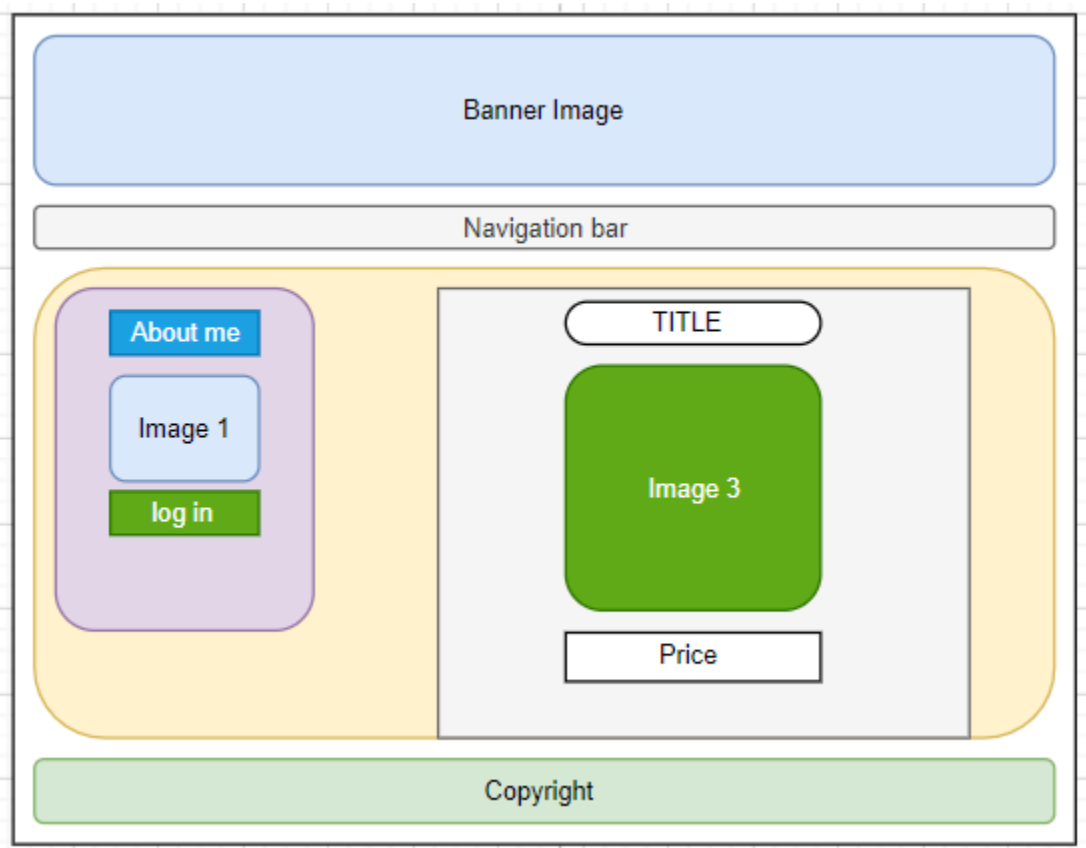
Figure 4: Wire-frame Homepage



- ✓ Banner image: take a picture on it.
- ✓ Navigation bar: include Home, all categories and each button link to one page.
- ✓ Left content: the information, button log in.
- ✓ Right content: viewing all product in the database system.

Detail product

Figure 5: Wire-frame Detail Product



- ✓ Banner image: take a picture on it.
- ✓ Navigation bar: include Home, all categories and each button link to one page.
- ✓ Left content: the information, button log in.
- ✓ Right content: viewing each product detail in the database system.

b. Server-side

In the server-side, I will use Sublime-Text to implement the process in the server-side. It has supported many programming languages and markup languages.

Login

Figure 6: Wire-frame Login

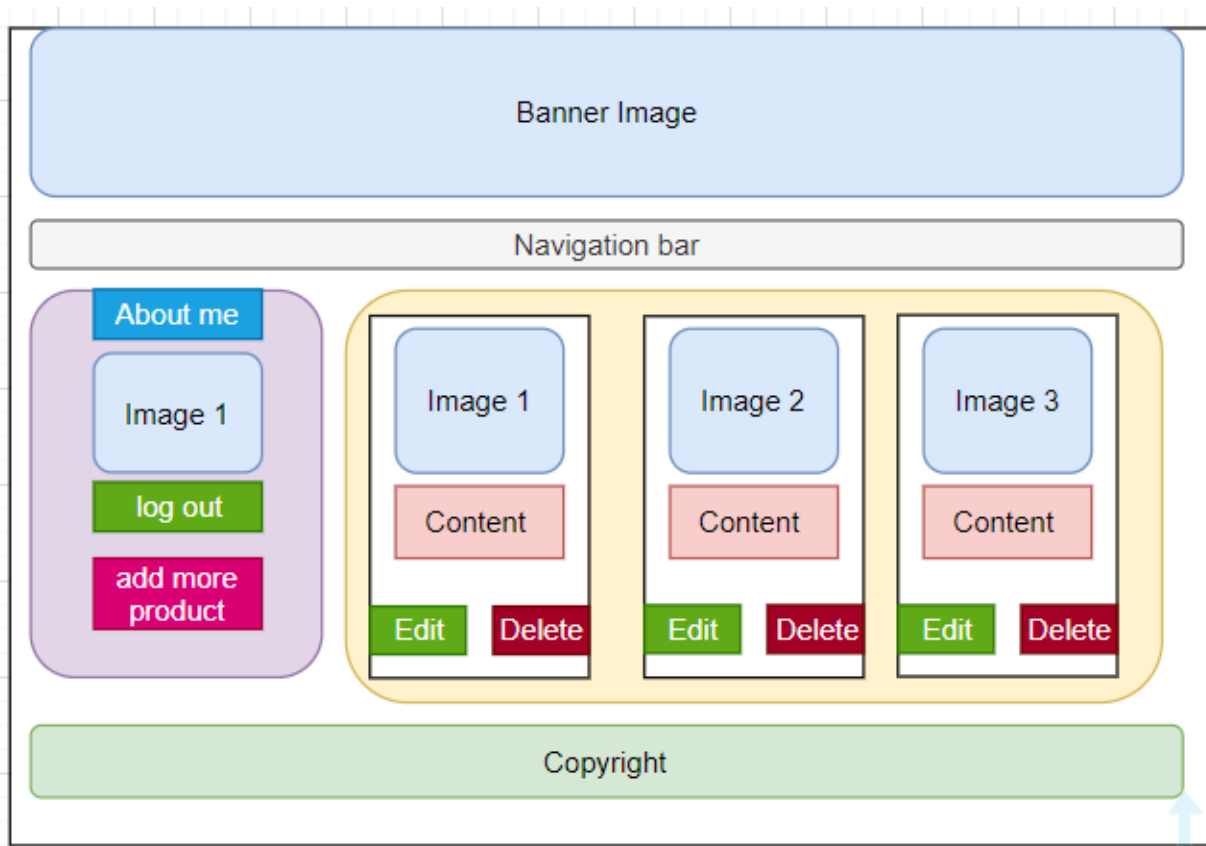


A wire-frame login form centered on a light green rectangular background. At the top of the green area, the word "LOGIN" is written in bold, red, uppercase letters. Below the title, there are two white, rounded rectangular input fields with thin blue borders. The first field contains the text "username" and the second field contains the text "password". Below these fields are two more rounded rectangular buttons with thin blue borders. The first button is light red and contains the text "Login" in red. The second button is light grey and contains the text "reset" in red. The entire green box is centered within a larger white rectangular frame.

- ✓ In this fields, user need an account to login. When login execute successful, direct to Home Admin.

Admin Homepage

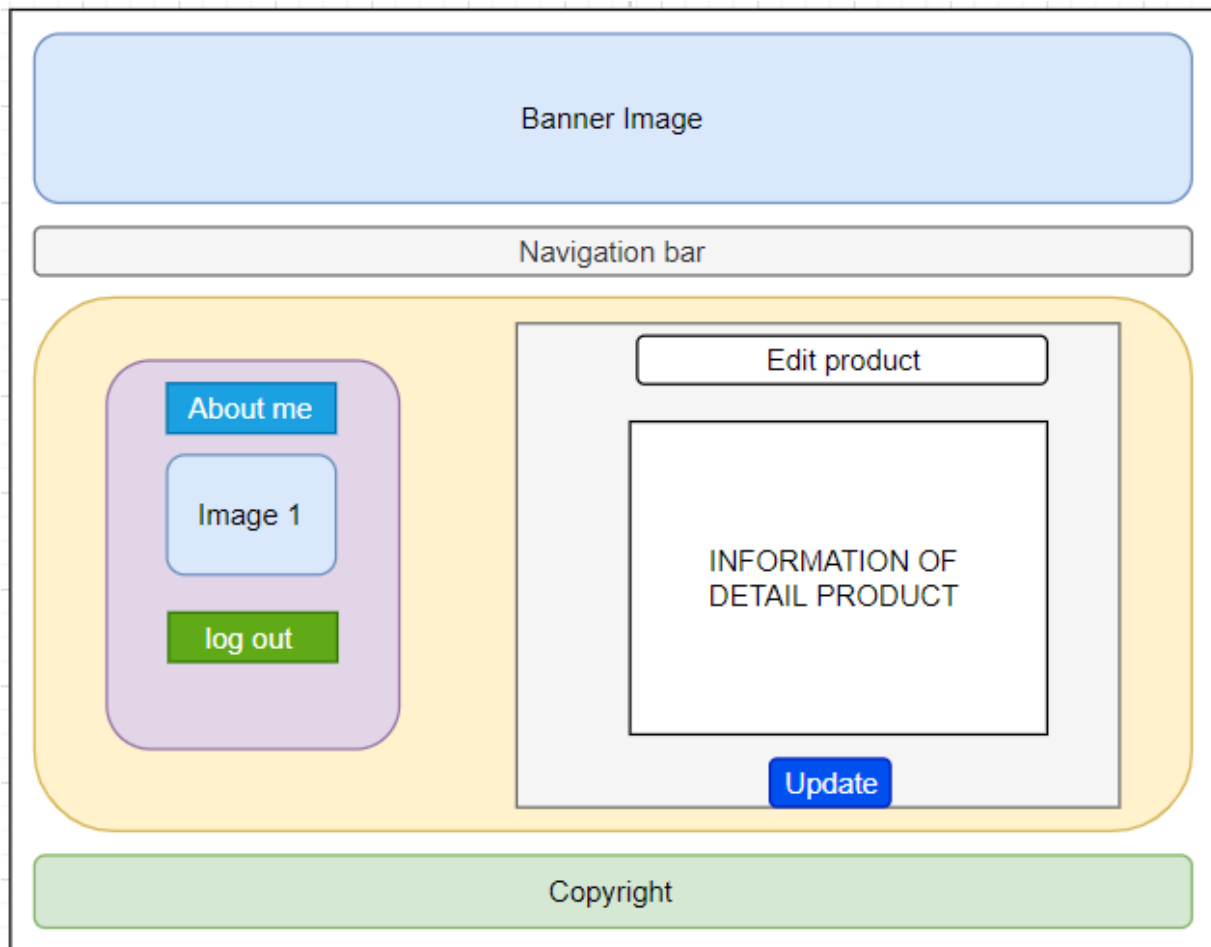
Figure 7: Wire-frame Admin Homepage



- ✓ Banner image: take a picture on it.
- ✓ Navigation bar: include Home, all categories and each button link to one page.
- ✓ Left content: the information, button log out and button add product.
- ✓ Right content: viewing all categories in system. Admin can edit and delete each product.

Edit product

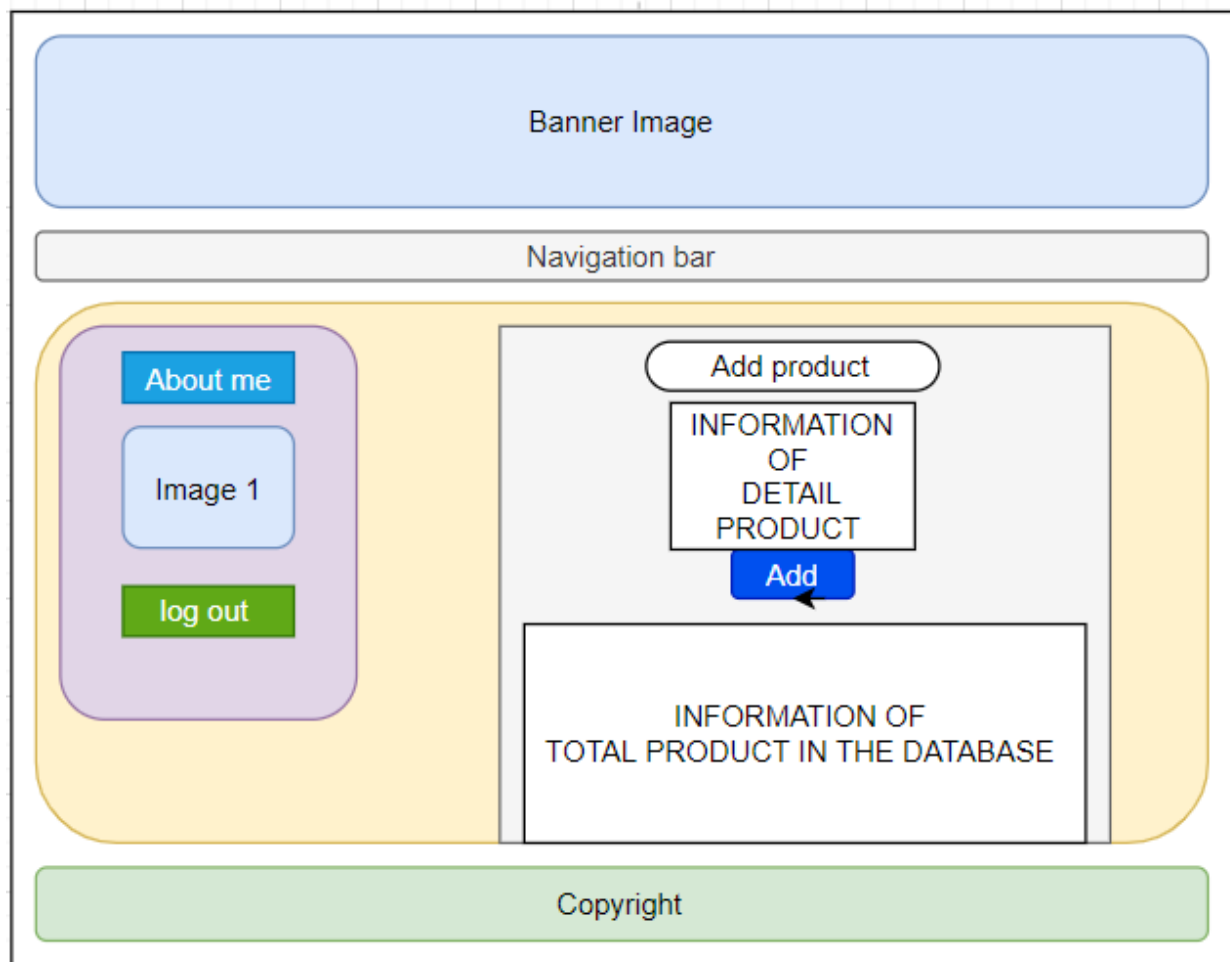
Figure 8: Wire-frame Edit Product



- ✓ Banner image: take a picture on it.
- ✓ Navigation bar: include Home, all categories and each button link to one page.
- ✓ Left content: the information, button log out.
- ✓ Right content: appear all the information about 1 product, admin can edit information if it's wrong.

Add product

Figure 9: Wire-frame Add Product



- ✓ Banner image: take a picture on it.
- ✓ Navigation bar: include Home, all categories and each button link to one page.
- ✓ Left content: the information, button log out.
- ✓ Right content: above have a table for adding new product information. Below is table for showing all product in the system.

Because of using Sublime Text, the processing of website will be pass through all the models, which are classes represent the tables of data on the database. In addition, the files that contain HTML, CSS to build the GUI and PHP code is embedded to help processing the data.

II. Principles of Design

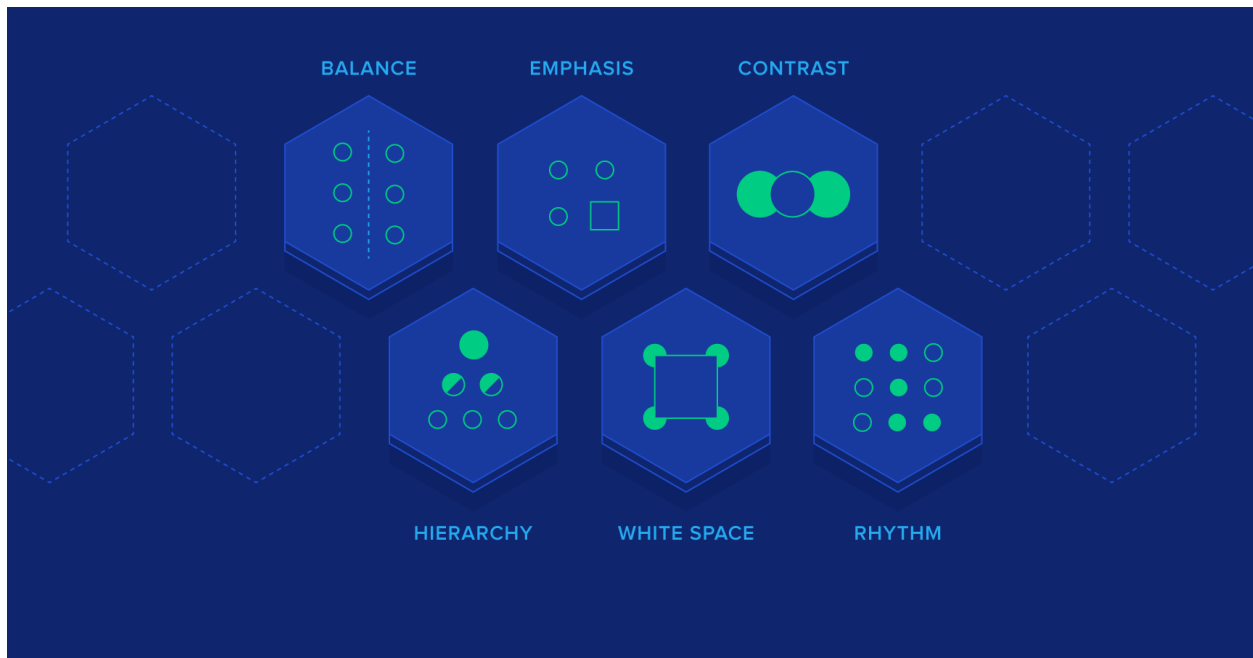
1. Definition

According to (Museum, 2011), The principles of design describe the ways that artists use the elements of art in a work of art.

2. The Principles Design

- **Balance:** it's the weight distributed in design by placement of your elements, such as colors, texture or space. These elements should be balance to make the design feel stable.
- **Emphasis:** it's the part of design that is catching the viewer's attention which stand out than other areas.
- **Movement:** is the path of design that viewer takes through the work of art, usually focus on areas.
- **Pattern:** repeating of the object all over the work of art.
- **Repetition:** the repetition of design creates the unity within the work of art.
- **Proportion:** when all the pieces that are created have dimensions related to each other.
- **Rhythm:** is created when elements are used many times to create the feeling movement.
- **Variety:** using of several design around the work of art.
- **Unity:** is feeling between all work of art, created a complete feeling.

Figure 10: Principles of Design



(source: toptal.com. January-2020)

3. Principles of good website design

According to (McConnell, 2018), there are 9 principles of good website design.

a. *Purpose*

The website has to accomplish the needs of user. Having a simple intention all over pages will have users interact with what you have to offer. There are 4 core purposes common to all website: describing expertise, building reputation, generating leads and sales and after care.

b. *Simplicity*

It is the best way to do when you want your user experience and usability of your website. Color, type and imagery are one of the best ways to achieve simplicity through design.

c. *Navigation*

It is the way to find information used on website where visitors are finding what they are looking for. Keeping navigation simple, intuitive and consist on every page is key.

d. *F-shaped pattern reading*

One of the most common way to scan text on the website. People usually see is in the top and left area of the screen. An effective website works with a readers natural pattern of scanning the page.

e. *Visual hierarchy*

It is arrangement of elements is order of importance. One of the most important functions is to establish a focal point, it will show where is the most important information is.

f. *Content*

Using compelling language content can attract visitors and convert them into customers.

g. *Grid based layout*

It helps your content organized, clean and align elements. The grid-based layout arranges content, impose order and results into an aesthetically pleasing website.

h. *Load time*

Waiting for a website for loading data will lose visitors. Optimizing image sizes will help website loading faster.

i. *Mobile friendly*

People often browse in the website by their phone. It's important to building the website with responsive layout where website can adjust to different screens.

Figure 11: Good Website Design

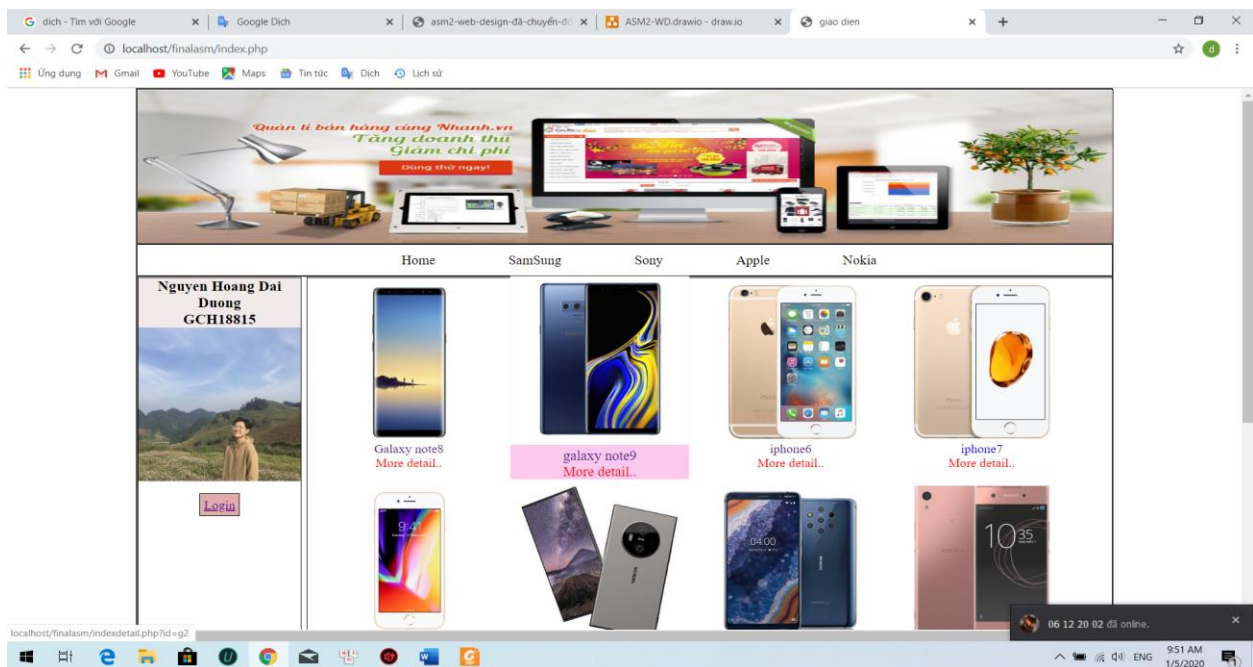


III. Implement of website

After draw a wire-frame design on draw.io. the next step is design a website based on that wire-frame design.

1. Homepage

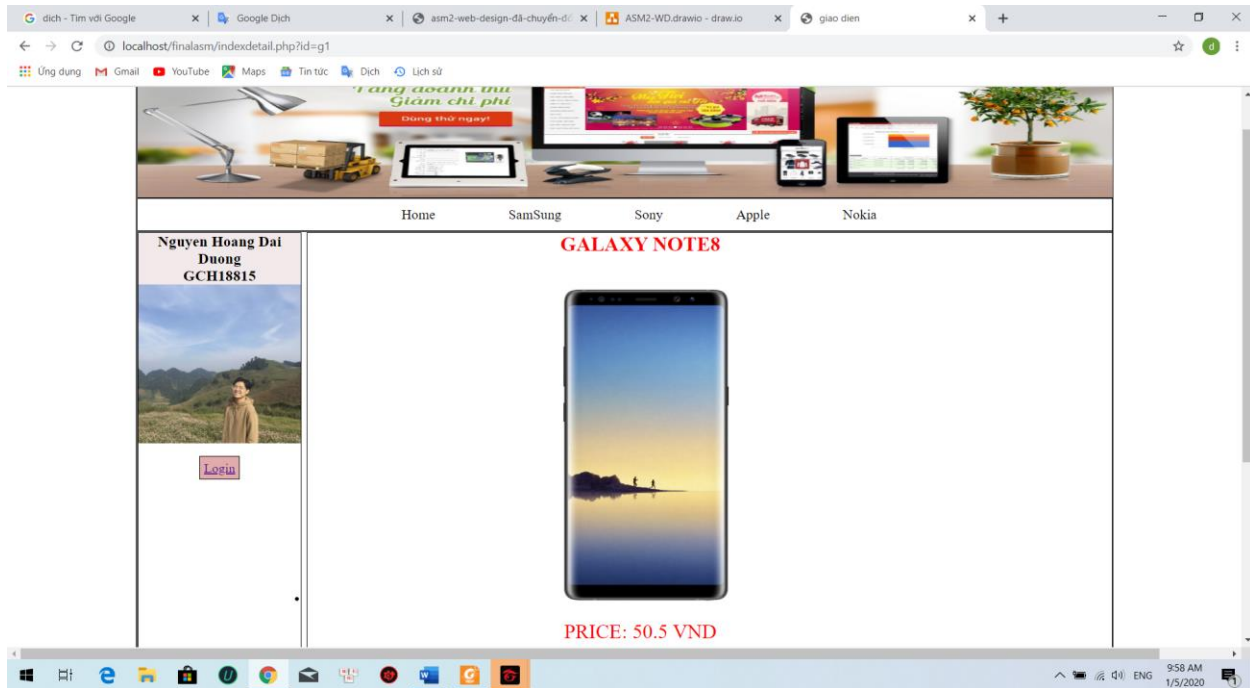
Figure 12: Implementing Homepage



In the interface, clients conduct a few fundamental assignments. Viewing each category in navigation bar. Seeking information of each product by click each image on the screen.

2. Product Detail

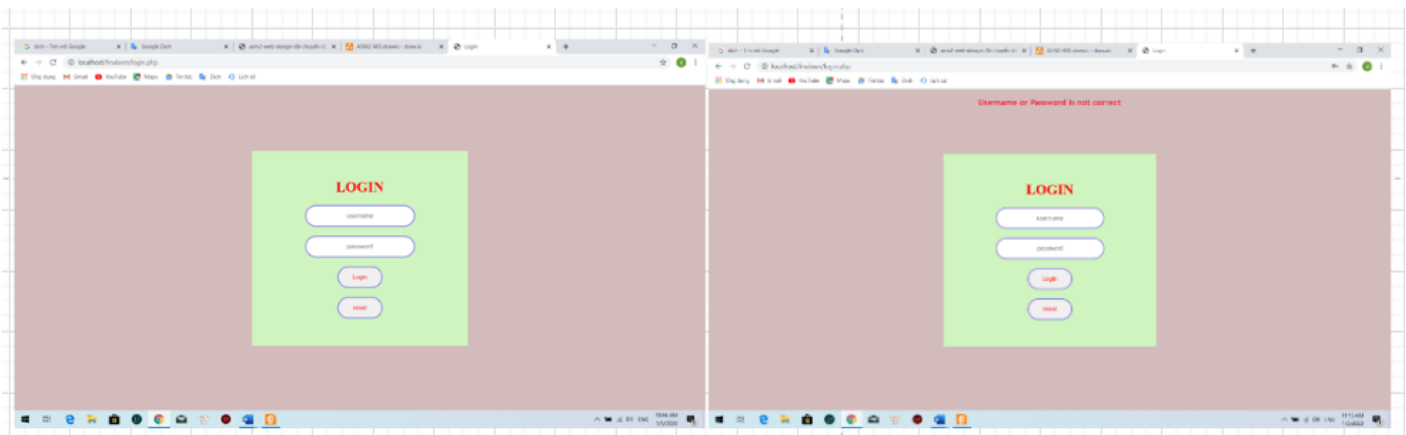
Figure 13: implementing Product Detail



In this interface, product type appears on the screen of window including name, image and price of product.

3. Login

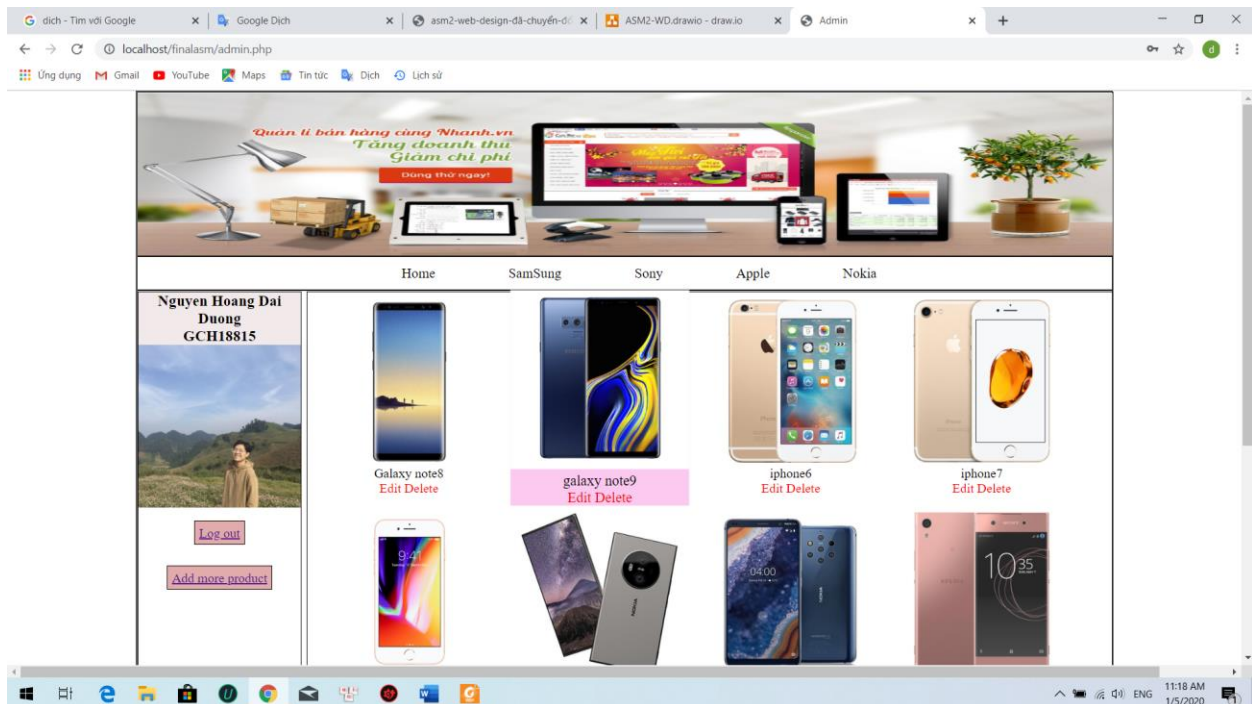
Figure 14: implementing Login



To access the Login form, users simply need to click on button Log in on the left of content. The window will display on the screen. If users enter the wrong user name and password, window will display a message notify to user. If users enter right username and password, it will direct to Admin Homepage.

4. Admin Homepage

Figure 15: Implementing Admin Homepage



The admin interface is similar to the client interface. Only a few different is button log out and add more product in the left content. In right content, there are 2 more functions: Edition product and deletion product.

5. Add product

Figure 16: Implementing Add Product

ADD PRODUCT

Id:
 Name:
 Image:
 Price:
 Ram:
 Internal memory:
 Sim:
 Inches:
 Cat:

ID	Name	Image	Price	CatId	Ram	Internal Memory	Sim	Inches
g1	Galaxy note8	images/galaxynote8.jpg	50.5	1	6 gb	64gb	13	6.3
g2	galaxy note9	images/galaxynote9.jpg	30.5	1	6 gb	128 gb	2	6.4
i1	iphone6	images/iphone6.jpg	700	3	1 gb	16 gb	1	4.7
i2	iphone7	images/iphone7.jpg	30.5	3	2 gb	128 gb	1	8
i3	iphone8	images/iphone8.jpg	2000	3	3 gb	64 gb	1	7.8

Figure 17: Implementing Add Product 2

ADD PRODUCT

Id:
 Name:
 Image:
 Price:
 Ram:
 Internal memory:
 Sim:
 Inches:
 Cat:

In the adding product interface, in the table above allows admin to add one by one product into the system. below table will display all the products that are already in the system.

6. Edit product

Figure 18: Implementing Edit Product

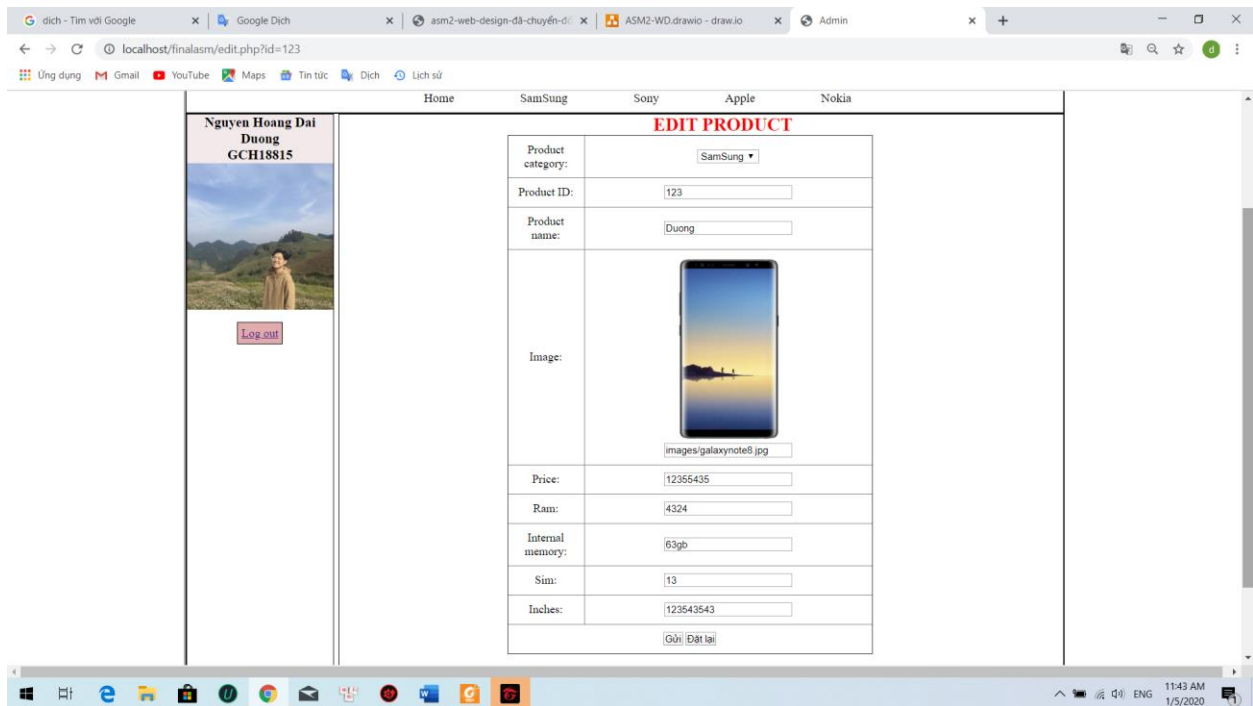
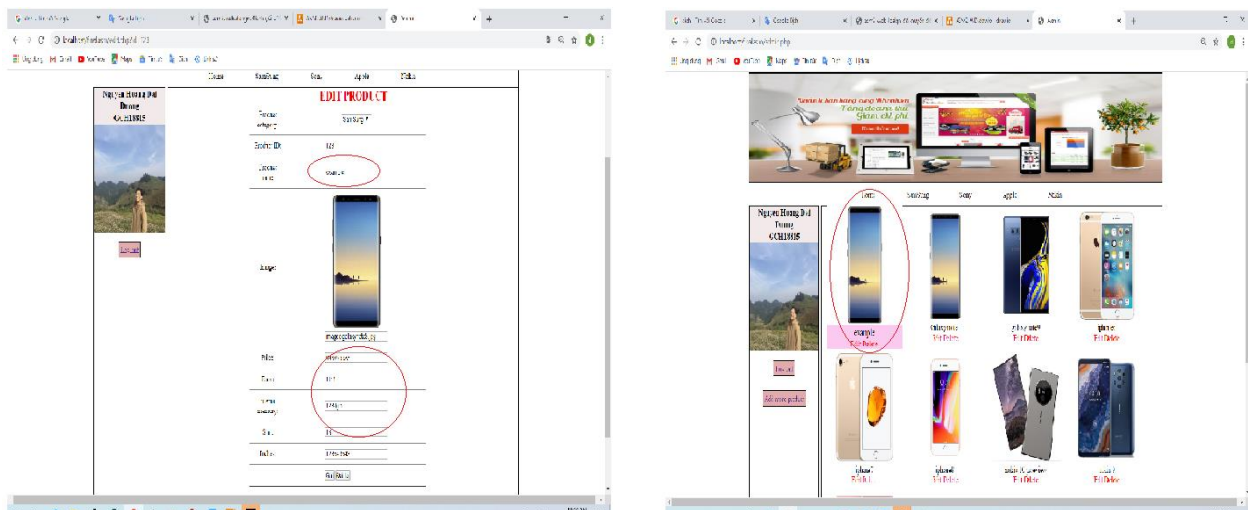


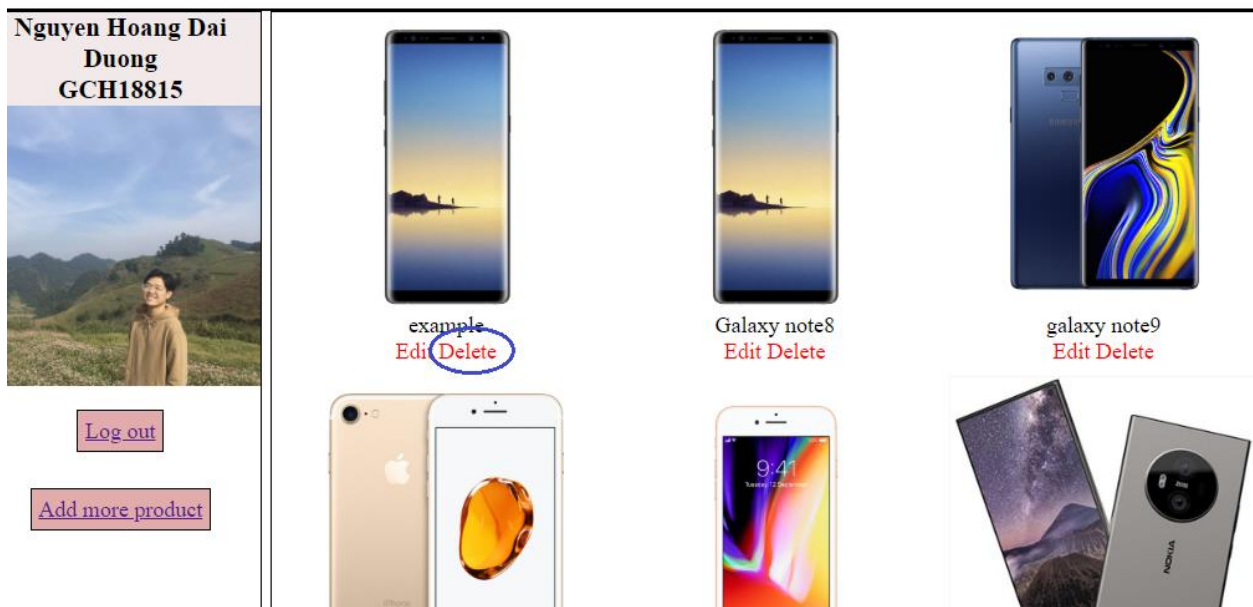
Figure 19: Implementing Edit Product 2



The edition function allows admin to change product specifications. After click add, the window will display a message “update successfully”. Then back to Admin homepage, the information of product already changes.

7. Delete product

Figure 20: Implementing Delete Product



Deletion is very simple, I put it into Admin Homepage. all admin need is a click on a button, product will be deleted.

IV. Test plan

Table 1: Test Plan

Stt	Function	Testing method	Example input	Expected result	Actual result	Evaluate
1		Normal data	User: admin Pass:123	Successfully	Successfully	Pass
2		Normal data	User: admin Pass:123xxx	Login not successfully and Display a message error	Login not successfully and Display a message error	Pass

3	Login	Extreme data input	User: Admin@xxx xxxxxxx.... Pass:cxzcxzc	Login not successfully and Display a message error	Login not successfully and Display a message error	Pass
4		Normal data	User: admin Pass: none	Login not successfully	Login not successfully	Pass
5		Normal data	User: none Pass: 123	Login not successfully	Login not successfully	Pass
6	Add product	Normal data	Enter information normally. Input a positive number	Add successfully	Add successfully	Pass
7		Invalid form	Price: dsadwadsa	Add fail	Add fail	Pass
8		Extreme input	Name: vdsandadsa .. (very long)	Add fail	Add fail	Pass
9		Invalid Form	Sim: Asdasdas	Add fail	Add fail	Pass
10		Invalid Form	Inches: Sadasda	Add fail	Add fail	Pass
11		Normal data	Enter information normally. Input a	Edit successfully	Edit successfully	Pass

	Edit product		positive number			
12		Invalid form	Price: dsadwadsa	Edit fail	Edit fail	Pass
13		Extreme input	Name: Dsadasnda (very long string)	Edit fail	Edit fail	Pass
14		Invalid form	Sim: Djsadas	Edit fail	Edit fail	Pass
15	Delete product	Click button	None	Delete successfully	Delete successfully	Pass
16	Log out	Click button	None	Click button log out to back index	Fail	Not Pass
17		Click button	None	click back to login instead of Admin Homepage	Successfully	Pass
18	Navigation bar	Mouse hover	None	Back ground of each button change color	Back ground of each button change color	Pass
19		Click button	None	Click on Home to show all products (admin side)	Successfully	Pass
20		Click button	None	Click on Home to show all products (client side)	Successfully	Pass
21		Click Samsung	None	Showing all products of Samsung (both side)	Successfully	Pass
22		Click Sony	None	Showing all products of Sony (both side)	Successfully	Pass
23		Click Apple	None	Showing all products of Apple (both side)	Successfully	Pass

24		Click Nokia	None	Showing all products of Nokia (both side)	Successfully	Pass
25	Transition	Mouse hover	None	Each image of product in Homepage will pop up	Successfully	Pass
26		Mouse Hover	None	Each image of product in Samsung will pop up	Successfully	Pass
27		Mouse hover	None	Each image of product in Sony will pop up	Successfully	Pass
28		Mouse hover	None	Each image of product in Apple will pop up	Successfully	Pass
29		Mouse hover	None	Each image of product in Nokia will pop up	Successfully	Pass
30	Button log in left content	Click button	None	Direct to login page	Successfully	Pass
Total failed result:						1/30

There are total 30 cases performed for website, only one of them was fail – log out. when admin click button log out to come back Homepage, the website direct to another page and said system error.

29/30 cases were approved normally. The site is based on basic functions for users and clients to use and operate.

In general, the website performed well and fully fulfill the requirements of the provided scenario.

V. Evaluation

1. Pros

The website has several advantages such as:

- The website performed fully requirement of scenario.
- Simple interface, meet some of the principles of good website content requirement.
- Validate login page, when admin click log out, it will delete the data on the server, prevent other from accessing illegally by URL.

2. Cons

- Still have error in the system.
- The website can't allow user add product into cart.
- Can't add more category in the system.
- In the real scenario, lack quite a lot of function.

3. Future improvement

- The website needs to add more functions such as: allow user register account, make order, delete order, change order... etc.
- Avoiding all error and update security.
- The website needs integration and convenience for user. This website also needs to be developed on devices such as smartphone, tablet...etc.

Conclusion

This report has shown the fully steps to build a shopping website, showing test stage of website. Complete basic functions like adding, deleting and editing. After going through this lesson, I learned the basic steps of building a website on both front-end and back-end.

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