



MAPÚA UNIVERSITY

Muralla St., Intramuros, Manila

School of Electrical, Electronics, and Computer Engineering

Hydro Molino 2.0™

Final Documentation

COE131L/E01_Group03

Group Members

Cedro, Nicol Andre T.

Logronio, April D.

Manao, Antoinette A.

Reyes, Rona Christine C.

Sardina, Kent Johnric M.

Submitted to:

Engr. Meo Vincent Caya

Date Submitted:

May 7, 2021

1. Introduction

The website **Hydro Molino 2.0™** version 1.0 is to be developed for water refilling station. Hydro Molino serves as a water refilling station and a water service provider, its specialty is to provide alkaline, purified, and mineral water. Through **Hydro Molino 2.0™**, customers interact with a user-friendly website design that easily manage the number of customers that can be accommodated every day.

1.1 Purpose

This SRS defines Performance, and Software System Attributes requirements of **Hydro Molino 2.0™**. This document is intended for the following group of people: -

- ✓ Developers for the purpose of maintenance and new releases of the software
- ✓ Management of the Water Refilling Station
- ✓ Documentation Writes
- ✓ Testers

1.2 Scopes

This document applies to Automated Scheduling Website Software **Hydro Molino 2.0™**. This website will perform transactions with the customers much more efficient and to be able to offer more services like online orders, online scheduling of deliveries, and for franchise online quotations and appointment; the software is cashless payments only.

The software takes as input login ID of the user to access the software, also the software takes input of the use's transactions like delivery schedules, orders, franchise quotations, and appointment. The outputs then comprise of interactive website UI display that lets the user select different functions that the user wants to perform.

The software is expected to complete in duration of 3 months.

1.3 Definitions, Acronyms, and Abbreviations.

HYDRO	A combining form meaning “water”.
Water Refilling Station	Stores that sell purified water and managed by private entrepreneurs offer a cheaper and more convenient solution to the public’s drinking water.
EDI	Electronic Data Interchange.
Website	A set of related web pages located under a single domain name.
Molino	Located in Bacoor, Cavite in the Philippines.
Internet	An interconnected system of networks that connects computers around the world.
MB	Mega Bytes.
Order	A request to be made.
Delivery	The action of delivery packages or ordered goods.
Schedule	A plan for carrying out a process or procedure.
Quotation	A formal statement setting out a service.
Appointment	An arrangement to meet someone at a particular time and place.
Payment	The action or process of paying someone.
Cashless	Exchange of funds via electronic methods like debit or credit card.

1.4 References

The references for the above software are as follows:

- i. Google.com
- ii. Wikipedia.com
- iii. Google Dictionary
- iv. Visualstudio.microsoft.com

1.5 Overview

Section 1.0 discusses the purpose and scope of the software.

Section 2.0 describes the overall functionalities and constraints of the software and user characteristics.

Section 3.0 details all the requirements needed to design the software.

2. The Overall Description

2.1 Product Perspective

- ✓ The software allows other functions that the website is offering to its users.
- ✓ The software only accepts cashless payments.
- ✓ The software communicates with the user's Bank, through the bank's online apps and the software accepts payments through PayPal and PayMaya.
- ✓ The user can edit its own scheduling delivery through the website.
- ✓ The software sends important updates to the manager of **Hydro Molino 2.0™**.

2.2 Product Functions

The major functions that **Hydro Molino 2.0™**. performs are describe as follows:

- ✓ Account Maintenance: - The various functions that a user can perform with his account are as follows: -
 - Amount – The amount to be paid by the user.
 - Delivery Schedule – The delivery schedules for the user and the manager.
- ✓ Billing: - All transactions is recorded in the form of receipt and sent to the users and manager email.
- ✓ Cancelling: - The user can cancel the pending transactions not the ongoing transactions.

2.3 User Characteristics

There are different kind of users that will be interacting with the system. The intended user of the software are as follows:

- ✓ User A: - This user has no or little experience on using the website and not a frequent user of the product.
- ✓ User B: - This user has experience on using the website.
- ✓ Maintenance Personnel: - A Hydro Molino employee and is familiar with all the work and functions of the store.

2.4 Constraints

The major constraints that the project has are as follows:

- ✓ No internet connection for the user. The website can only be accessed with use of Wi-Fi or mobile data.
- ✓ Not enough people/customer are willing to pay their bills online. Our website only accepts cashless payments, so even if they pay onsite but their order is online. It will not be processed since payment is needed to be settled before the order is finalized.
- ✓ There is no voice interaction, the user will only be filling up a set of questions from the website.
- ✓ The website can be accessed through Google Chrome, Microsoft Edge, Safari, Opera, and Mozilla Firefox browsers only.

2.5 Assumptions and Dependencies

The requirements stated in e SRS could be affected by the following factors:

- Users can create multiple accounts in case they forget they are login details, duplication of identities might be recorded in the database.
- The software may experience crashes when multiple users are using the website, this will only improve through time since the maintenance of the website will adjust based on the number of users of the website.

3. External Interface Requirements

3.1 User Interfaces

The following interface provided are user-friendly and just does not guarantee convenience but also a quality service.

1. The homepage shows a 'get quote' button that is accessible to users that does and does not have an account on the website.
2. After clicking 'get quote' the user will either make an account for the website or just write their email address or phone number for the quote be sent.
3. A page for browsing products is provided in which the user will be required to login when adding products to cart.
4. A login screen is provided upon doing activities on the website such as ordering, adding products to cart and scheduling deliveries.
5. After 3 unsuccessful logins of same information, the user will be recommended by the website to recover their account through phone number or email address.
6. After successful login, the user can now access and explore the features of the website. They can also edit the information of their account.
7. As for the administrator, a screen will be provided for them to edit information on the website such as disable service, add product, change product name and price. They can also do other task including rebooting and shutting down the system.
8. Before system reboot or shut down, the administrator will be asked for confirmation.

The following reports will be generated after the given following circumstances:

1. User login and logout time and date along with the account used.
2. System reboot from the administration.
3. Orders and preferred delivery schedule of the user.
4. Requested quote by any user of the website.

3.2 Hardware Interfaces Requirements

There are various hardware components:

- Processor: Processor Core Count: 4
- Memory: Memory Capacity: 4GB
- Storage: Disk Size: 100MB

3.3 Software Interfaces

- Operating System

Operating System Name: Windows 10

Architecture Type: 32-bit or above

Edition: Home

- Software Requirements

Software Application #1: <https://www.google.com/business/website-builder/>

3.4 Communication Protocols and Interfaces

The communication interface requirements must be secure, convenient, and extensible.

- Security requirements include the need to protect authorization information from unauthorized access.
- the maintenance of customer confidentiality and tracking of payments in progress.
- The problem of protecting of each party from fraud must also be addressed. The user interface should be efficient in both speed and use.

4. System Features

- **Login** - The website requires the user to login to their account to access the services of the business.
- **Product page** - This page displays the product offers of the business.
- **Schedule Page** - this page confirms the order of the user, and the E.T.A. of the product to be delivered.
- **Checkout** - This page views the total balance of the transaction of the user, this is also their option on what method to pay, I.e., Card, Gcash, COD.

5. Other Non-Functional Requirements

5.1 Performance Requirements

The Following list provides a summary of the performance requirements for the software:

5.1.1 Capacity

- The website will always be accessible, but the water station service will only be available at office hours.
- The website will only accept 150 to 200 as the maximum of deliverables within the store open hours.

5.1.2 Dynamic Requirement

- Web Server - A web server is computing system designed for exchanging information from server to browser or other client making http (the basic network protocol used to distribute information on the World Wide Web) request.
- Database- Database is designed to keep all relevant information and website content in different tables and with the help of database query language we can read, insert, or edit data very easily and efficiently.
- Content Management System- CMS is a set of software written in server-side scripting language like php, dotnet, asp, java etc. Its primary task is to make connection between web server, database, and client's browser and make dynamic html pages on given request by pulling data from database and file system.
- Files-to-Server using FTP- a software designed to transfer files back-and-forth between a computer and a server over the Internet. It needs to be installed on your computer and can only be used with a live connection to the Internet.

5.1.3 Quality

- Performance efficiency
- User-friendly

5.2 Software System Attributes

3.6.1 Reliability

- Maturity
- Availability

3.6.2 Portability

- Adaptability
- Replaceability
- Easy-to-install

3.6.3 Security

- Confidentiality
- authenticity
- Accountability

3.6.4 Maintainability

- Testability
- Modularity
- Modifiability

5.3 Business Rules

The business rules for the software are as follows:

- The website will not accept redundant usernames and will notify the customer that the username entered is already taken.
- The website will only accept password that includes at least one: uppercase character, lowercase character, number and special or non-alphanumeric character.
- The website's customer support will handle those users who lost their phone number/email address and immediately delete their previous account once reviewed to avoid multiple unused accounts.
- The website will only accept 150 to 200 as the maximum of deliverables within the store open hours.
- The website will show the pending orders, to-receive orders, and completed orders for the customer to track each item upon payment.
- The website will require the customer to make comments and rate the delivery and transaction from the scale of 5 stars, being the highest, to 1 star every time an order is received.
- The results of the previous business rule will be displayed to the website's main page every week, thus will make the advertisement looks more legit.

Entity Relationship Diagram

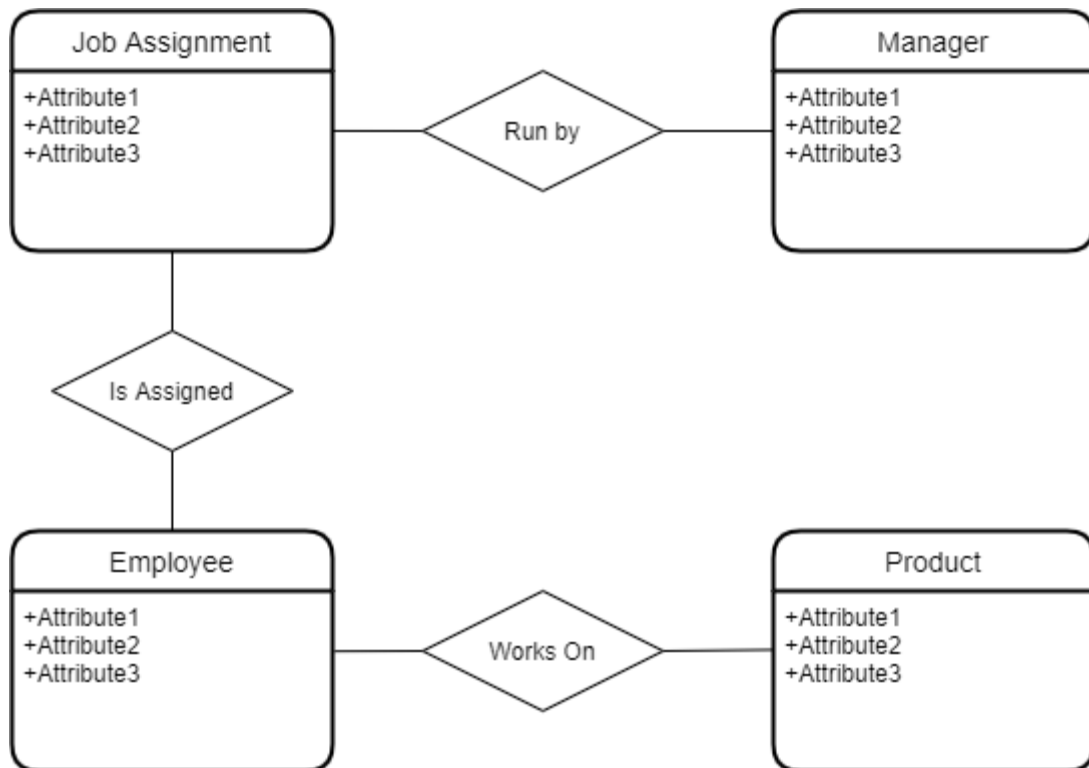
I. Entities

1. Manager
2. Employee
3. Product
4. Job Assignment

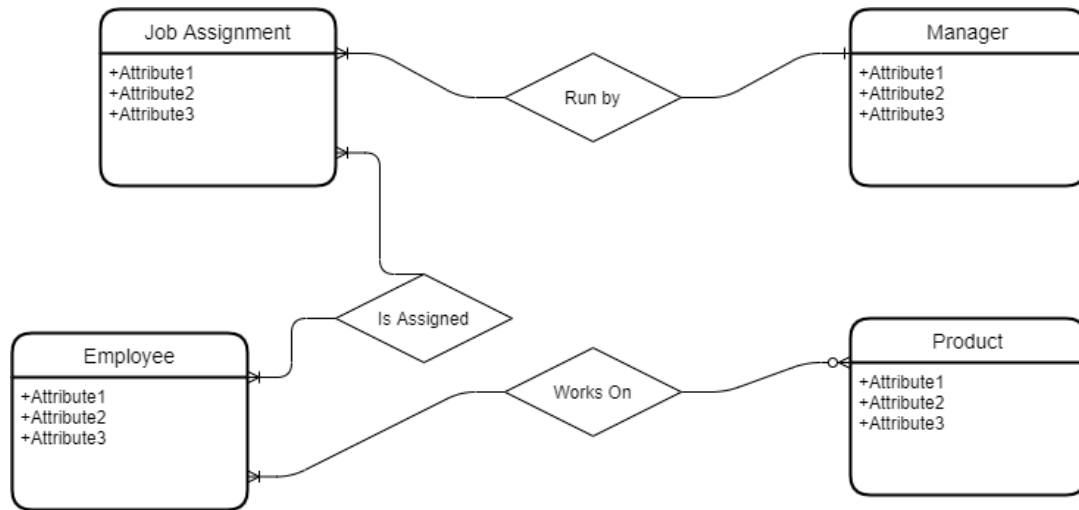
II. Entity Relationship Matrix

	Manager	Employee	Product	Job Assignment
Manager				Runs
Employee			Works on	Belongs to
Product		uses		
Job Assignment	Run by	Is assigned		

III. Rough ERD



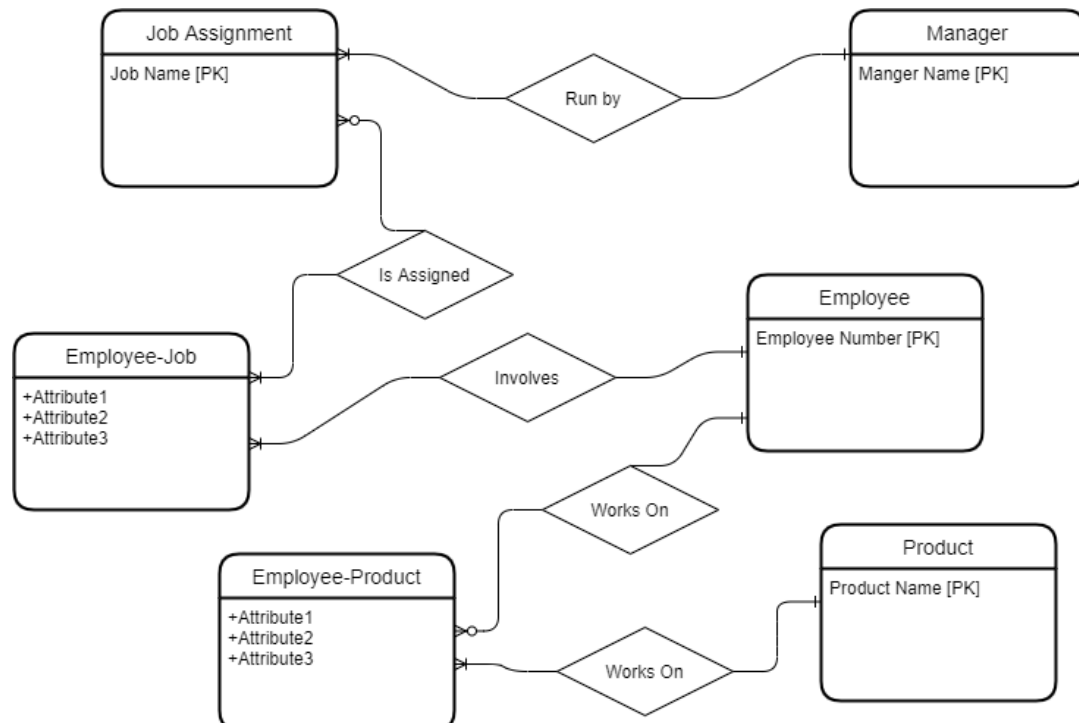
IV. ERD Cardinality



V. Primary Keys

1. Manger Name
2. Job Name
3. Employee Number
4. Project Name

VI. Key-Based ERD



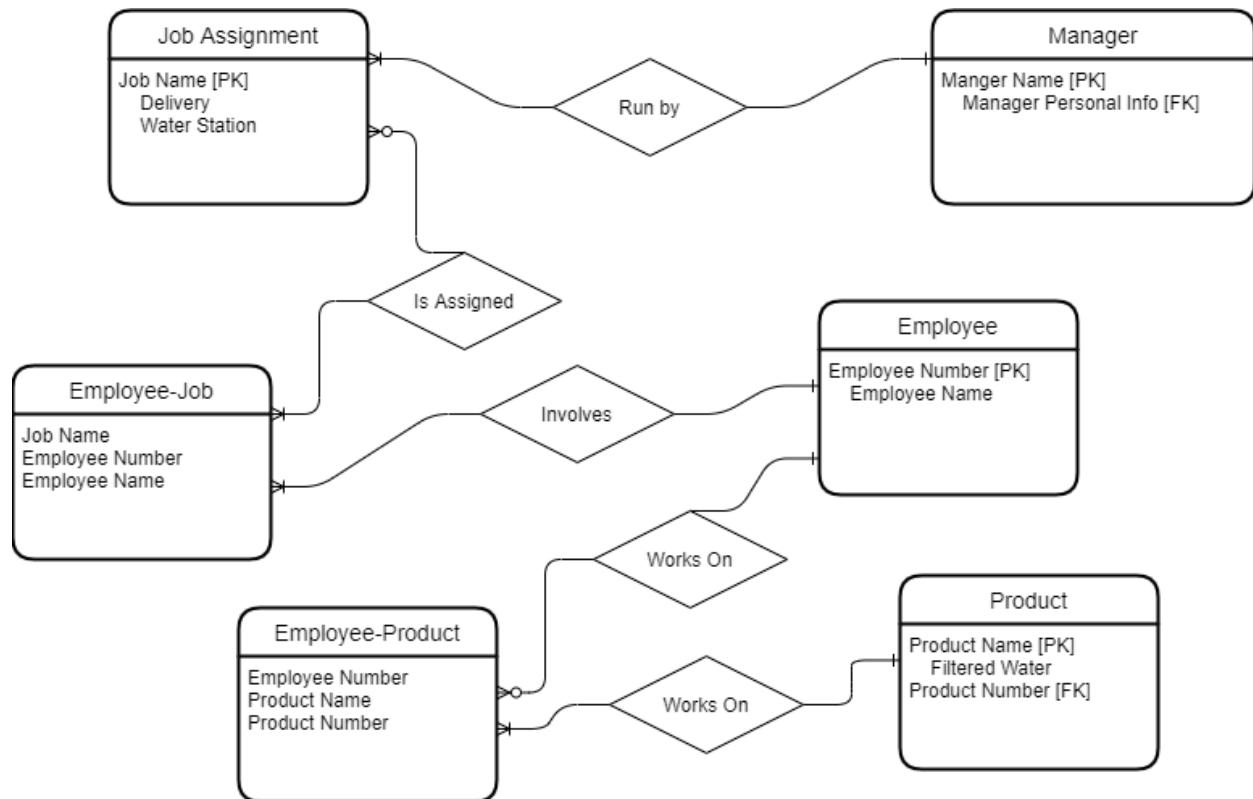
VII. Attributes

1. Manager Name
2. Job Name
3. Employee Number
4. Employee Name
5. Product Name
6. Product Number

VIII. Map Attributes

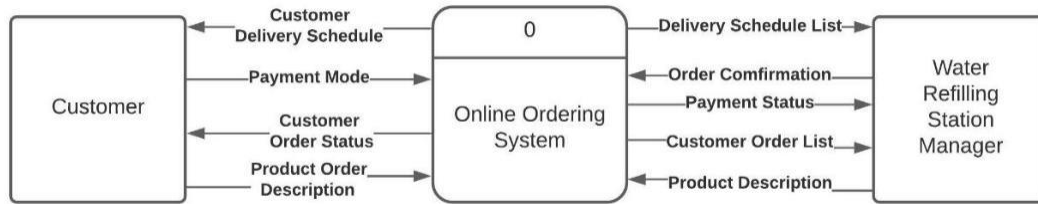
Attribute	Entity	Attribute	Entity
Manager Name	Manager	Product Name	Product
Job Name	Job Assignment	Product Number	Product
Employee Number	Employee		
Employee Name	Employee		

IX. Fully Attributed ERD

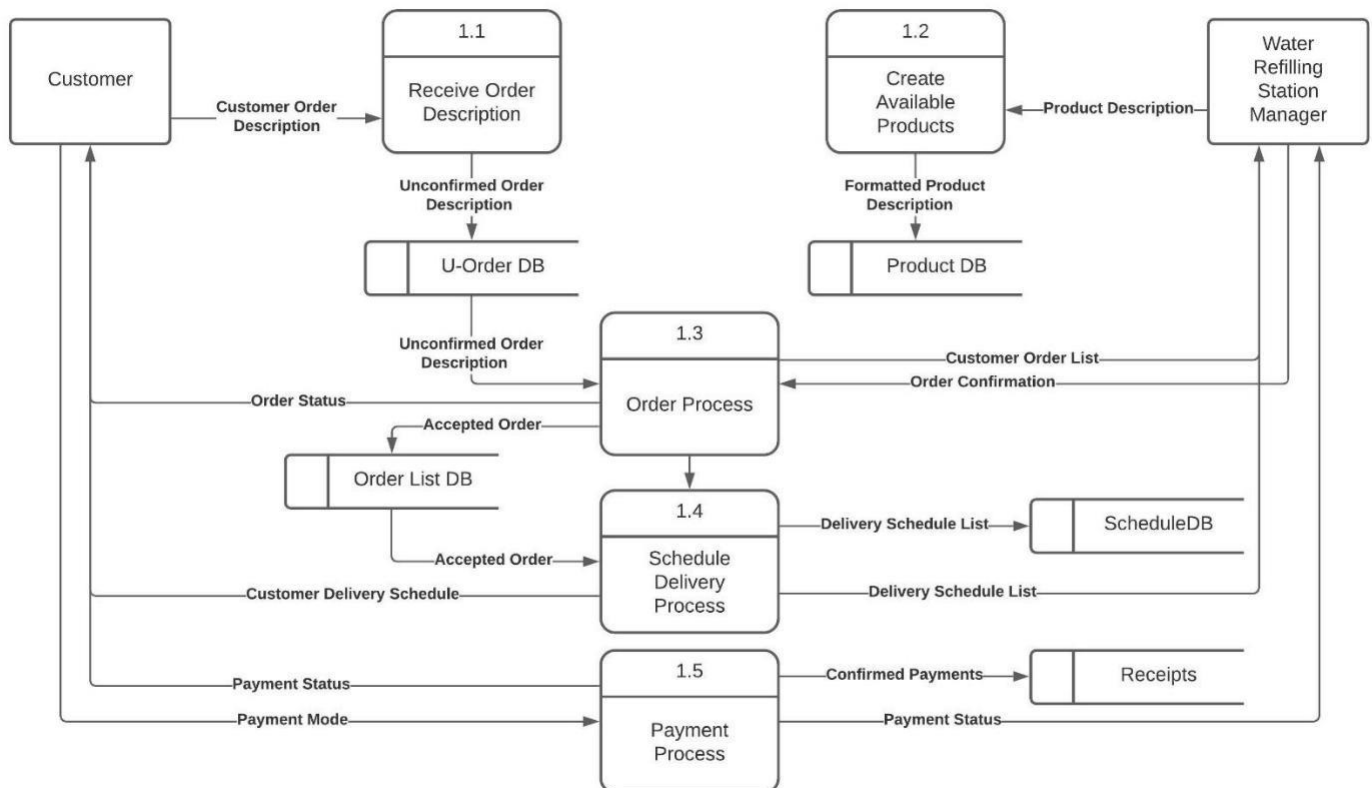


Data Flow Diagram

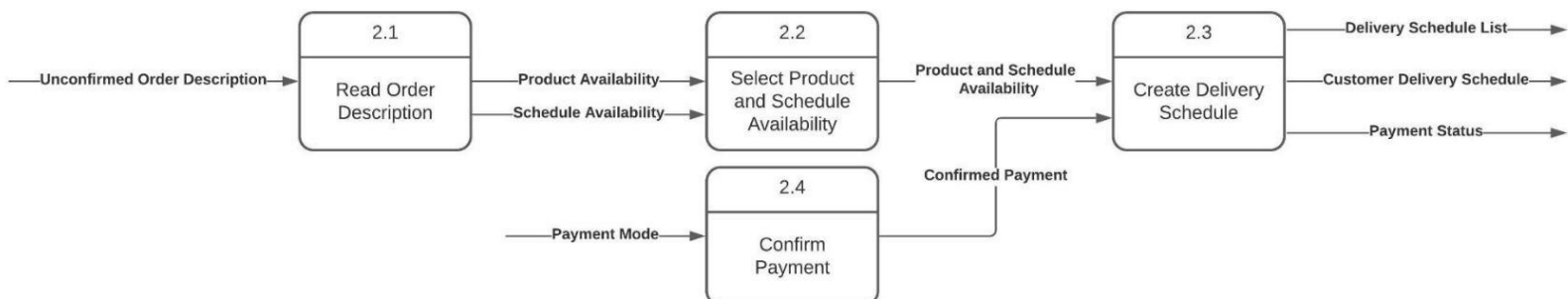
Context Diagram or Level 0 DFD



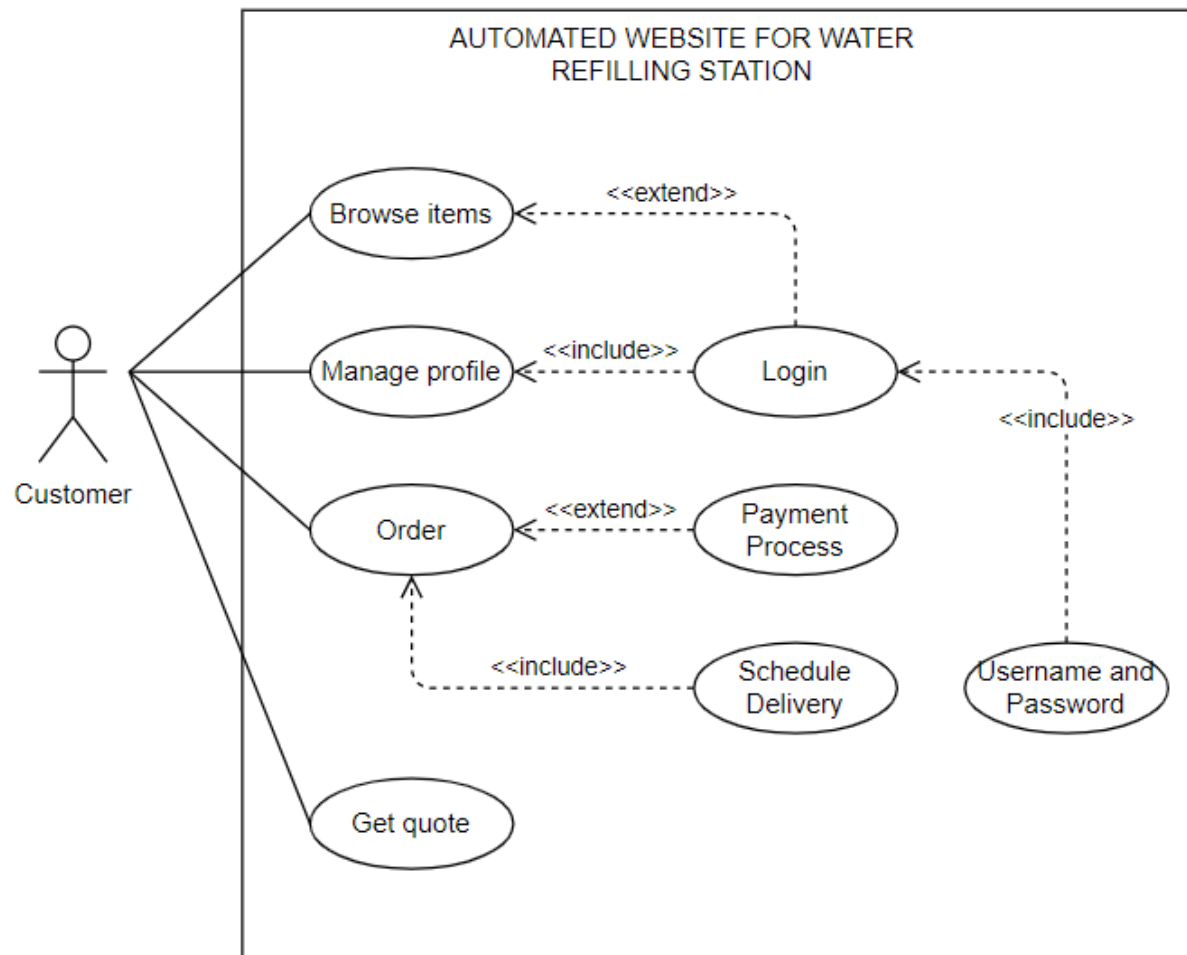
Level 1 DFD



Level 2 DFD



Use Case Diagram



Activity Diagram for an Automated Website for Water Refilling Station

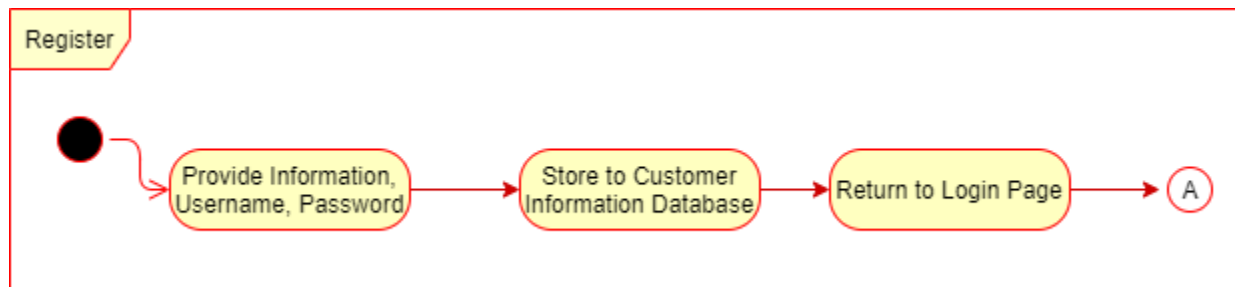


Figure 1. Register UML activity Diagram.

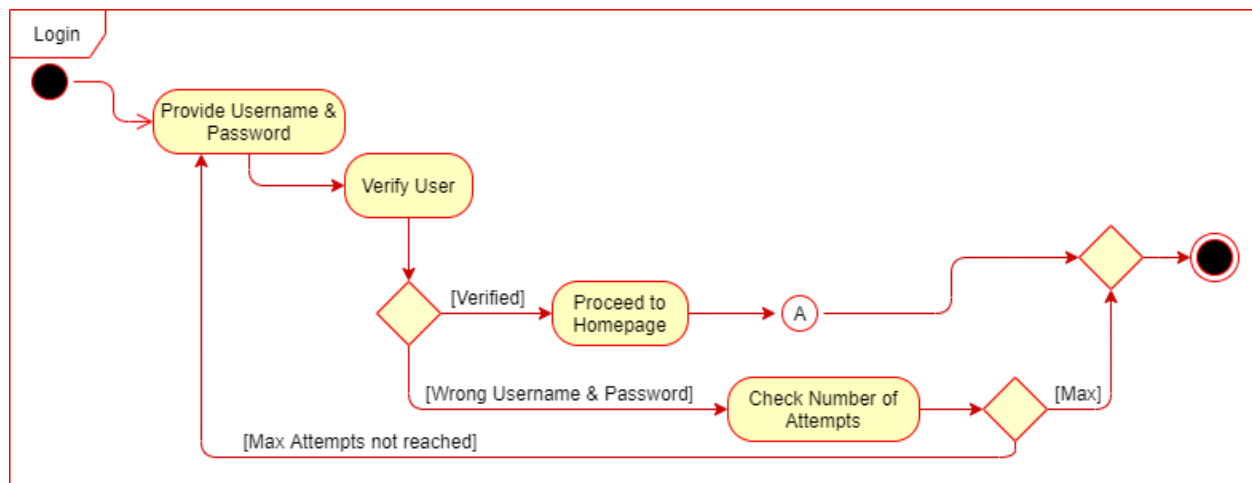


Figure 2. Login UML Activity Diagram

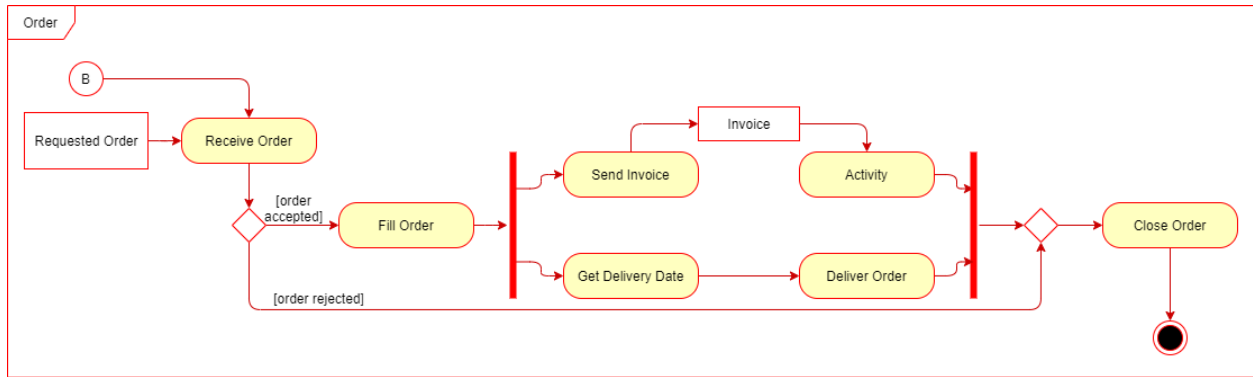


Figure 3. Order UML Activity Diagram

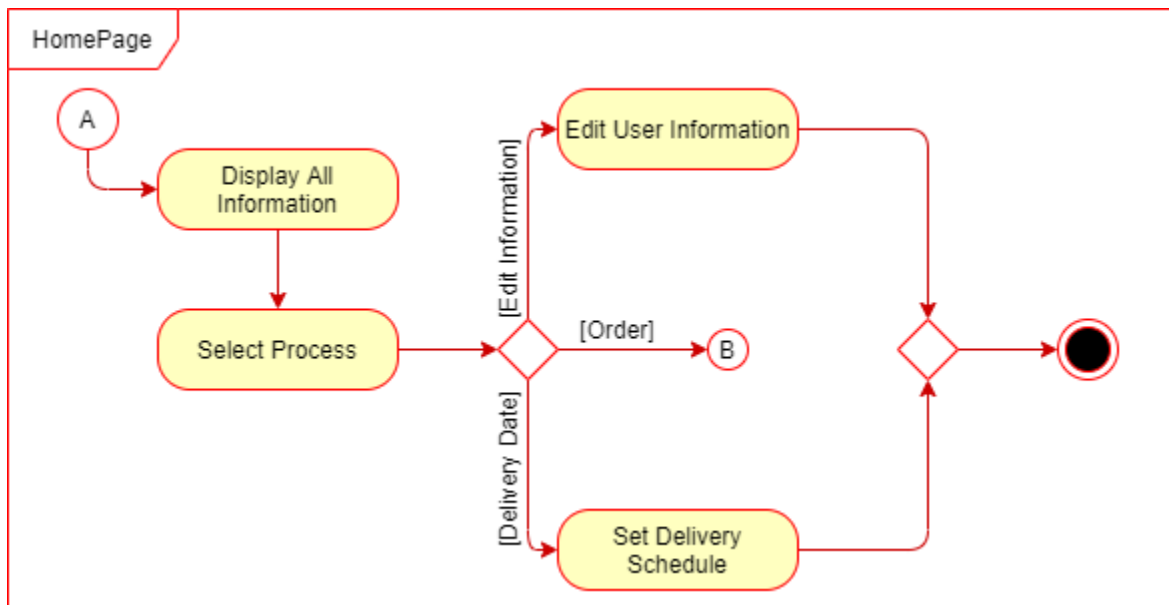


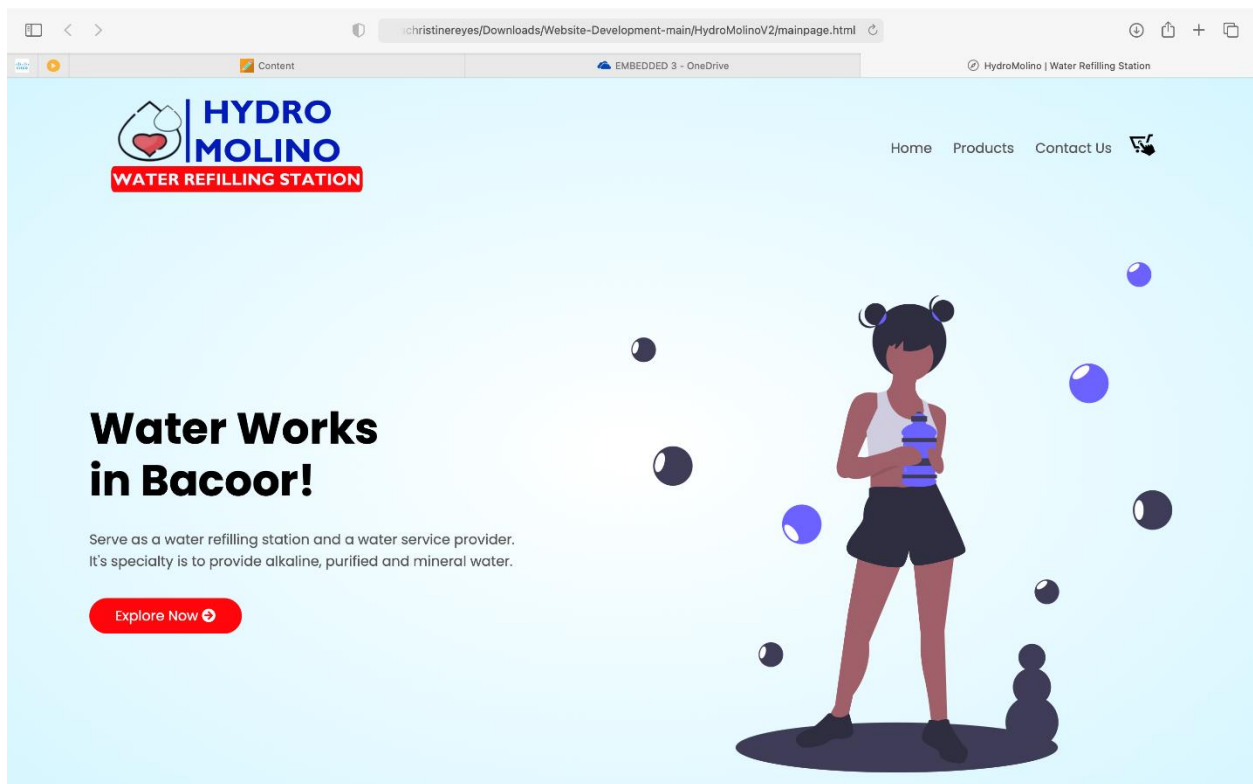
Figure 4. Home Page UML Activity Diagram

Video Link to Project Demonstration

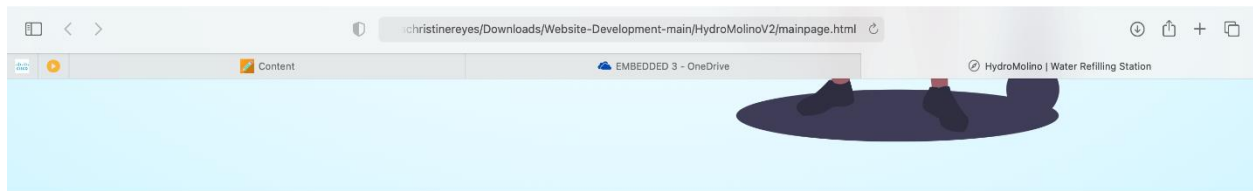
https://mymailmapuaedu-my.sharepoint.com/:f/g/personal/kjmsardina_mymail_mapua_edu_ph/En2rQUrA7dtNk6Xf22UHZiEBsS8bOcd-yeN2OzPsuVA4WQ?e=aYPQEf

Project Demonstration Screenshots

1. Hydro Molino Water Refilling Station Home Page



2. Home Page consist of the following:
(a) the business' Featured Products.



Featured Products



Gallon Rounded Type
Container
★★★★☆
₱150

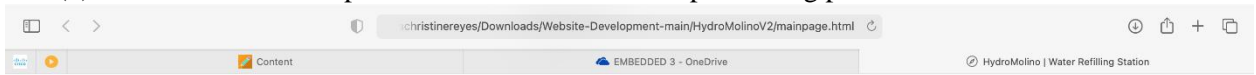



Gallon Sqaure Type
Container
★★★★☆
₱150



Bottled Water
★★★★★
₱10

- (b) The “Buy Now” button that will direct to all sorts of products that the business is selling.
- (c) The Customer’s Review.
- (d) And the lists of acceptable transaction allowed in purchasing products.





For first time buyers

Gallon Square and Rounded Type


Gallon Square type [No WATER] - 125php
Rounded type[No WATER]-130php
Gallon Square type [W/WATER] - 150PHP [ANY KIND OF WATER]
Gallon Rounded type[W/ WATER]-150PHP [any kind of water]

[Buy Now](#)

“

Clean water. stay dehydrated

★★★★★




-Neomi C

“

Clean water. stay dehydrated

★★★★☆



-Deejay J



3. Under the “Products” Tab are all the sorts of products that the business is selling, it can also be accessed by clicking the “Buy Now” button located in the Home Page.

istinereyes/Downloads/Website-Development-main/HydroMolinoV2/productPage.html

Content EMBEDDED 3 - OneDrive HydroMolino | Water Refilling Station

HYDRO MOLINO
WATER REFILLING STATION

Home Products Contact Us

Products

[REFILL] Mineral 1 Gallon Container [Square Type]
★★★★☆
₱20

[REFILL] Purified 1 Gallon Container [Square Type]
★★★★★
₱25

[REFILL] Alkaline 1 Gallon Container [Square Type]
★★★★★
₱30

Bottled Water
★★★★☆
₱10

[REFILL] Mineral 1 Gallon Container [Round Type]
★★★★☆
₱20

[REFILL] Purified 1 Gallon Container [Round Type]
★★★★☆
₱25

[REFILL] Alkaline 1 Gallon Container [Round Type]
★★★★☆
₱30

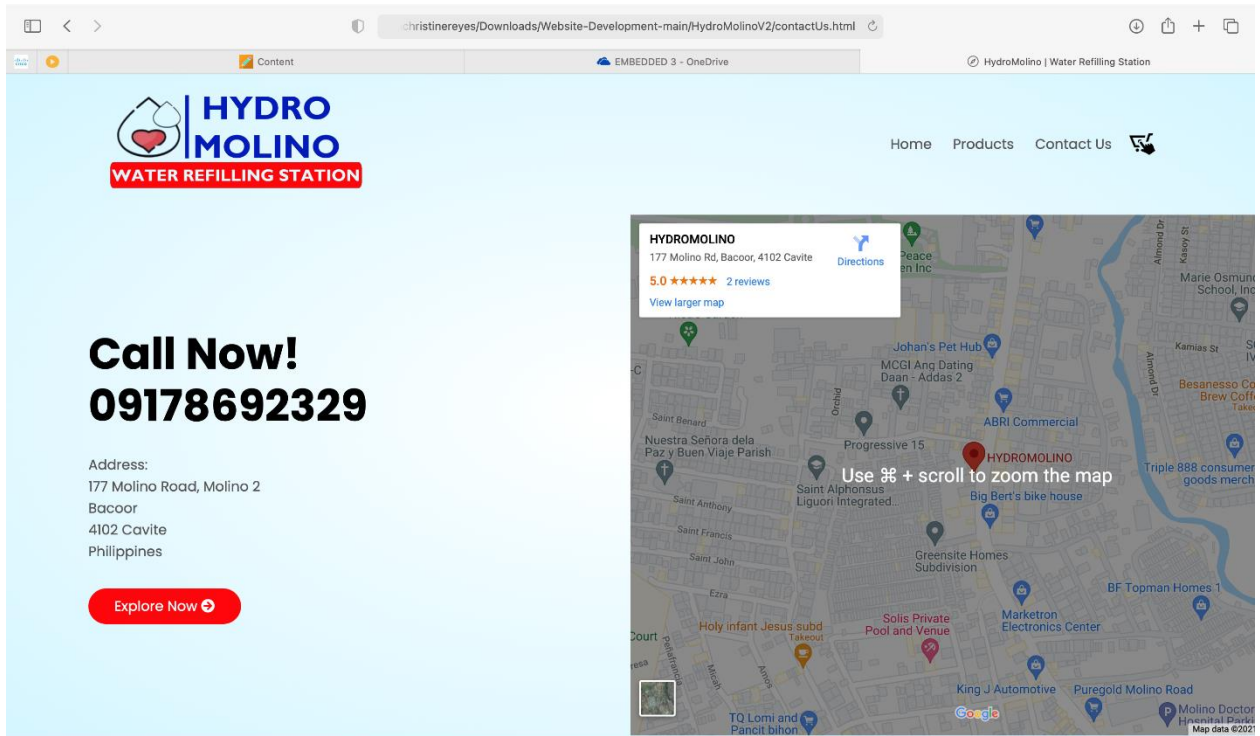
1 Gallon Blue Container [Square Type] [No Water]
★★★★☆
₱125

1 Gallon Blue Container [Round Type] [No Water]
★★★★☆
₱130

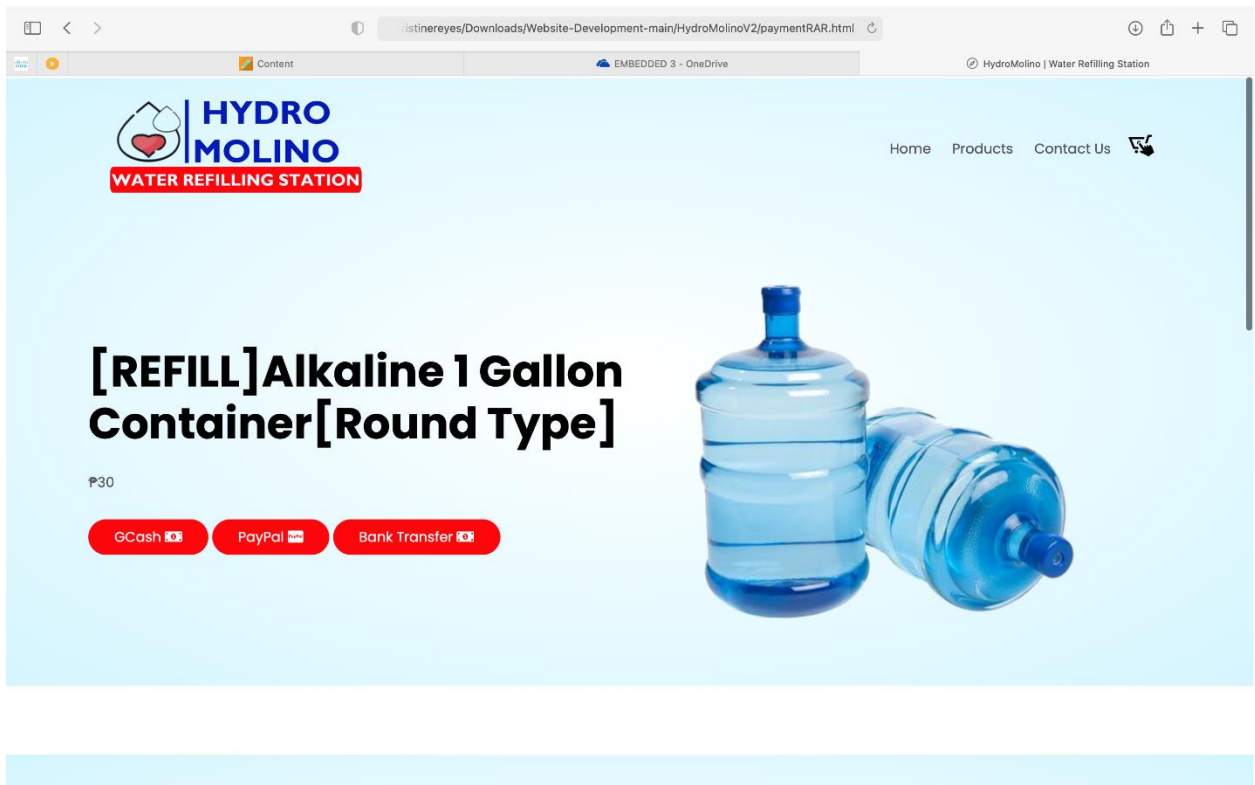
1 Gallon Blue Container [Square Type] [w/Water] [Any Type]
★★★★☆
₱150

1 Gallon Blue Container [Round Type] [w/Water] [Any Type]
★★★★☆
₱150

4. The “Contact Us” tab consists the contact information of the business as well as the google map location tracking of the site.



5. The last tab is the “Shopping Cart” to where the customer can see all the products, he/she added to cart and then check out by one of these given transactions provided.



6. This is the Sign-Up part to where the customer needs to fill before exploring what were discussed above and is consist of the following:
- Sign Up – only if the customer is new user.
 - Sign In – if the customer already has an account.
 - Social Media Platforms that directly send the user to his/her choice of the business' platforms to check.

