Bataan Clothing Management Portal

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In Partial Fulfillment
of the Course Requirements in
Bachelor of Science in Information Technology
Major in Network and Web Application

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DEDICATION

I would like to dedicate this work to my family and friends. I would like to thank my parents who encouraged me to work harder and supported me through the end. My friends who never left my side and encouraged me. I also want to thank our adviser, Ms. Cherry A. Collera who always guiding and making time to correct our mistakes and made this project possible. Lastly, to my group members with all their hard work to finish this project.

Justin Escultura

I would like to dedicate this to my friends who supported me from the beginning until the end. I really appreciate all the help and support they've given me. My group members who gave time and effort to make this project successful. Also, our thesis adviser, Ms. Cherry A. Collera for always helping us and giving us her time to answer all of our questions to complete this project.

Paulo Mark Layug

I would like to dedicate this work to my family and give them a special thanks for being supportive and always cheering me throughout the process. To my group members who worked hard to finish this project and to our adviser who guided us until the end. This would not be possible without all of your help.

Hermie Imperial

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Myckel Lozano

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They would like to thank all the teachers who shared their knowledge to teach us, especially Ms. Cherry Collera who gave time, patience, and encouraging us from the beginning until the end. They also want to thank the local clothing brand owner, Mr. Mark Nicholai Layug for allowing and giving us time to have an interview with him and helped them gather information that will improve their system. Thank you for all that they've done to us.

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ABSTRACT

The Bataan Clothing Management Portal is a web portal that will provide an easier transaction between the local clothing brand owner and the customers. The web portal was developed to help not only the local brand owner but also the customers. With this web portal, the local brand owner can promote and sell their products while the customer can view and buy products. Users can register to the web portal as a seller or customer. The customer will be notified when their order is accepted or out for delivery. The user can leave feedback to a product when the product is delivered. Lastly, the customer will have a transaction history where they can view all their ordered products. The web portal requires the internet and desktop to use the system. Bataan Clothing Management Portal was evaluated using ISO 25010 with its eight (8) main quality characteristics: functionality suitability, performance efficiency, compatibility, usability, reliability, security, maintainability, and portability. The target respondents are forty (40), with thirty-eight (38) customers and two (2) local brand owners. The researchers sent google forms to fill out by the respondents. After getting all the responses of 40 respondents, the overall mean of Project Evaluation is 3.6841 with descriptive interpretation as “Very Good”.

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Chapter 1

Background of the Study

When technology advances, an increasing number of people continue to make purchases online. Online shopping is undeniably a very easy way for shoppers since they do not need to be physically present in the mall to purchase what they want or need. According to the most recent figures, there is an increasing number of adolescents in the United States who prefer to buy online.

The advancement of electronics, computers, and telecommunications aids in the growth of internet technology. People no longer have trouble accessing any information to sustain their commercial interests thanks to the internet. However, since people can now access different types of information, information will be screened to obtain the correct and important information.

The use of the internet in the business sector has seen considerable growth, especially in large corporations. Since the invention of internet technology in the 1990s, its use has grown because it is seen to have tremendous advantages for the smooth operation of a company or business operations.

Nowadays, internet shopping has become the trend, and shoppers are flocking to it because it offers many benefits. From the viewpoint of the customer, internet shopping offers cheap and straightforward costs, a diverse selection of products and services, and a much more comfortable shopping option that has avoided such conventional shopping, inconveniences of squeezing through

crowds, stuck in a long line at the cashier's desk, competing for parking spaces in a crowded shopping.

Online shopping is easier than actually shopping face to face. Online shopping is a type of transaction that you can order using a web browser and even in mobile app. Online retailers typically allow customers to use "scan" features to locate individual products, labels, or objects.

Throughout the online retail value chain, technology plays an important role in fields such as recruiting, promotion, and advertisement, among many others. Technology now allows for improved browsing, customization, and personalization, which are quickly becoming "must-have" features for online shopping success.

Bataan Clothing Management Portal is an online shop that focuses on promoting and selling a local brand of clothes around the province and making a way to have a platform in which business owners will have the chance to keep their business especially in these times where covid and lockdowns are happening around the country. The main problem of the study is how to provide a web application that will help business owners to promote and sell local clothing brand in Bataan. The study sought answers on how the sellers and customers access the system, how the business owner can have a place to sell their products, how the customers can buy products, how the system update and track the customer’s ordered products, how the customer determines the quality of the products, how the customer submit complaints about the sellers, and how the customers monitor all of their transactions.

Objectives of the Study

The main objective of the study is to develop and implement a web application in Bataan with SMS Technology for monitoring and securing the portal transactions and ordering records.

Specifically, the study aims to:

- Design a web portal system that is capable of:
    A. Allowing the sellers and customers to create an account through registration module;
    B. Giving Business owners a place to sell their products;
    C. Providing an easy way for the customers to buy products;
    D. Notifying the customers about their ordered products details and location using SMS notification feature;
    E. Giving the customers a privilege to rate and write reviews of the products through feedback module;
    F. Allowing the customers to report the sellers through report module;
    G. Allowing the customers to monitor their transaction history through the transaction module.
- Create a system using Visual Studio Code, Internet Connection, Google Chrome as browser, and Windows OS 10 Pro as software requirements, and Computer, Laptop, and Mobile phone as hardware requirements.
- Test and improve the system in terms of functional suitability, usability, reliability, security.

- Evaluate the performance of the developed project based on functional, compatibility, security, portability, reliability, performance efficiency, maintainability, and usability.

Scope and Delimitations of the Study

The Bataan Clothing Management Portal is a website that allows customers to create an account and log in as a customer, seller, and admin through the system. The developed system can manage the owner information, ordering and managing of the products in the system. The system can also manage the seller information and orders. The web application is capable of notifying the customers about the ordered products' details and location through the use of SMS notification features. The customer can filter their feeds based on their preferred products. Customers are able to write feedback and give ratings to the sellers. The system allows the user to report a seller's account to improve the system environment and prevent scams and frauds.

The system's mode of payment is only cash-on-delivery. Sellers will have their own inventory to make the products be separated brand by brand to make it easier for customers to find the wanted products and for the sellers to have their own space in the system. The system will allow sellers to restock the products as well as managing their own products and communicating with their customers to have an easier transaction.

The developed system's software requirements are Visual Studio Code, PHP, Windows 10 as an operating system, Google Chrome as a browser. At the

same time, a computer and laptop with the required software requirements and a mobile phone as a hardware requirement.

The developed system has tested and improved with ISO 25010 in terms of functional, usability, security, and reliability and it will be evaluated with the eight characteristics of ISO 25010. The target respondents of this study are the local brand business owners and the customers.

Chapter 2

Conceptual Framework

This chapter contains material about the subject that will help the researchers to improve the thesis. The term "research" refers to all information gathered from electronic sources, as well as findings in theses and dissertations that provide enough background information about the study.

Review of Related Literature and Studies

Clothing Store Management System

Ros (2017) stated that the clothing store management system was created solely for the purpose of inserting clothing item information. The system clarifies the fundamental principle of storing and producing product details. Employees will sign up as an admin in this system, giving them complete control for keeping regular records.

In addition, Bowles (2021) said that clothing inventory management presents particular problems in the fashion business. Traditional inventory management standard procedures should, of course, be practiced. Store owners must, however, consider techniques specific to fashion inventory management. They'll have to rapidly discharge goods that have been losing favor, and they'll have to purchase easily next month.

Lastly, apparellmagic.com (2021) said that Inventory management is the method of monitoring, handling, and preserving an appropriate supply chain at the most fundamental stage. Clothing, footwear, accessories, cosmetics, and other related products are tracked as they travel among destinations using an inventory management system for the fashion industry. - of these measures used to be done manually, with data recorded in physical worksheets and records.

Overall, Clothing Store Management System will be used in this study as the reference of the system's flow and reference.

Clothing Management Portal

Ewen (2020) stated that shopping portals, at their most fundamental level, allow you to receive bonus points, rewards, or cash back at numerous online retailers by beginning your shopping experience at the portal and then clicking through the business's website rather than directly at the merchant.

In addition, campaignmonitor.com (2020) said that marketers may use an e-commerce platform to convert leads into sales. Your company's relationships with consumers and suppliers are managed by the network. Online sellers use e-commerce portals as a merchant platform. Platforms today offer a wide range of functionality and payment choices. The primary objective is to accept transactions in a safe and productive manner.

Lastly, sea.com (2020) said that Shopee is a website that allows you to shop online. Shopee is a Southeast Asian and Taiwanese e-commerce website that was introduced in seven countries in 2015. The company has over 11,000 sellers on its website in just two years. Shopee has been one of the most popular shopping portals, with more than 200 million installations in 2019.

To sum up, Clothing Management Portal have been part of the developed system to have a background about the transactions of products in online platforms.

Transaction Processing

techopedia.com (2017) said that transaction processing is the method of immediately or at runtime getting the job done and/or customer demand. It's a set of interconnected activities and procedures that all should work together to complete a process management transaction.

In addition, inc.com (2020) stated that the term "transaction process" relates to the procedure of inputting information at a terminal or workspace to insert, alter, delete, or look up the record in a data file or database. Most transaction processing systems often provide a way of making sure that almost all of the data entered as part of a transaction is saved at the same time.

ibm.com (2021) said that transaction processing is a type of processing that enables interactive applications and is normally done by large computer systems.

The task is divided into small, indivisible activities, which are referred to as transactions, in transaction processing.

In conclusion, Transaction Processing will be used in the developed system to monitor all the transactions and have a time-to-time record.

Database Management System

techopedia.com (2021) said that a database management system (DBMS) is a software application that is used to describe, manipulate, retrieve, and handle data in a database. A database management system (DBMS) is a program that tries to control data as well as field names, data type, file structure, and document structure. It also specifies the rules for validating and manipulating this data.

According to Raza (2018), the Database management system is any set of electronic documents that can be accessed to provide valuable information is referred to as a database. To perform various data-processing activities, the data can be read, updated, handled, monitored, and structured. The data is generally sorted using columns, rows, and tables, allowing for efficient task analysis and information querying.

Lastly, Mullins (2021) states that a database management system (DBMS) is system software that is used to create and maintain databases. End-users may use a DBMS to build, protect, read, edit, and erase data in a database. The data management system has a database management system that guarantees the organization of data and its accessibility.

Overall, a database management system will be used to collect all the data and store it in a database. The proponents need to acquire knowledge of the database management system to make the developed system's products organized.

Web programming

According to techopedia.com (2021), web programming is the editing, markup, and coding that goes into Web creation, including network security. HTML, XML, Perl 5, JavaScript, and PHP are the most widely used Web programming languages. Web programming is distinct from traditional programming in that it necessitates an interdisciplinary understanding of the application domain, client and server scripting, and database technologies.

Stevens (2020) said that the method of creating websites is known as web development. Web creation is not involved with a website's architecture; rather, it is involved with the coding and programming that drives the website's features.

Lastly, codeconquest.com (2020) stated that the design of interactive software applications is referred to as web programming, also known as web development. Web applications include social networking platforms like Facebook and e-commerce sites like Amazon.

Overall, the proponents will be using web programming to design and develop the system.

ISO 25010

According to blog.codacy.com (2021), data quality systems define and decompose code quality characteristics. One model stands out for Software development production: the ISO 25010, which have been released in 2011. Software quality has two dimensions in ISO 25010 which is the output quality and quality in operation.

Estdale and Georgiadou (2018) stated that the leading models for evaluating software products are given by SO/IEC 25010: 2011. This is a significant contribution to determining the efficiency of software processes and possible enhancements. In view of this general, lifetime service-oriented viewpoint, this study investigated the design and understanding of the ISO 25010 models, as well as many other important facets of product that affect software acquirers and for which quality specifications and quality assessment might be needed.

Lastly, Britton (2021) said that quality is, up to an extent, a subjective and indefinable concept. ISO 25010, thankfully, distinguishes between observed (subjective) quality and intrinsic (product) quality. ISO 25010 has two models such as quality model and software quality model.

To summarize, the proponents will evaluate the acceptability of the developed system using ISO 25010 characteristics such as security, functional, performance efficiency, usability, compatibility, reliability, portability, and maintainability.

An Integrated Management System for Online Shopping Portals

Zulaikha et al. (2019) stated that according to the researchers, customers can enjoy online shopping 24 hours a day, seven days a week. Customers can purchase any goods or projects at any time and from any place. Online shopping is more convenient than in-store shopping since shoppers can complete their requirements with the click of a mouse without leaving their home.

Both systems can process customer orders, includes a feedback function, and ensures home delivery.

In contrast, the existing system doesn't specify the payment method while in the developed system, the payment method will be cash on delivery (COD) basis. The existing system doesn't have a SMS Notification function while in the developed system, there is a SMS Notification function.

Online Shopping System

Sankhala et al. (2016) said that online shopping aims to increase access to care as well as service continuity and performance. Case managers are responsible for a range of activities, depending on the particular context and location, ranging from connecting customers to providers to directly delivering intensive shopping and distribution services themselves.

Both systems have three kinds of accounts which is customer, business owner or seller, and admin account. Both systems can accept orders from customers and has a home delivery policy.

For the differences, the existing system is capable of accepting online payment through a bank account. The developed system only manages offline payment methods or cash on delivery (COD).

Fashion Shop

Imran (2017) stated that the fashion shop project was built with HTML, PHP, CSS, JavaScript, and MySQL. An online retail store that will enable developing-country vendors, both formal and informal, to advertise and sell their products on the internet. This will enable rural communities to sell their wares to the rest of the world through the internet.

Both systems can accept orders from customers and has a home delivery policy.

The difference between the system and the developed system is the payment method. The system has a credit card payment and the developed system has a cash on delivery (COD) method. The other difference is that the developed system has a tracking, SMS notification, feedback, and report function.

Software Requirements

In developing the system, the proponents will use Microsoft Windows as an operating system, PHP as the programming language, MySQL as the database, and Visual Studio Code for developing the developed system.

Microsoft Windows OS

computerhope.com (2020) stated that Microsoft Windows (also known as Windows or Win) is a graphical operating system created and distributed by Microsoft. It lets you save files, run applications, play sports, watch videos, and link to the Internet. On November 10, 1983, Microsoft Windows version 1.0 was released. Following that, more than a dozen versions of Windows were announced, including the latest one, Windows 10.

Overall, the proponents will use Microsoft Windows 10 as their operating system.

PHP

Jackson (2021) said PHP is a server-side scripting language that is used to create static, dynamic, and web-based applications. PHP is an abbreviation for Hypertext Preprocessor, which was formerly known as Personal Home Pages. PHP scripts can only be run on servers that have PHP installed. Server computers that access the PHP scripts only need a web browser.

To put it another way, PHP is used for web creation. PHP will be used to create pages in the developed system like homepage, login and register page, product page, etc.

MySQL

Drake (2020) stated that MySQL is a free relational database framework and open source. MySQL, like most relational databases, stores data in tables composed of rows and columns. Structured Query Language, or SQL, allows users to describe, manipulate, manage, and query data. MySQL is a variation of the words "My," which is the name of MySQL founder Michael Widenius's daughter, and “SQL”.

MySQL will be used for adding or updating the tables in the developed system such as the local clothing brands, number of products, and other information.

Visual Studio Code

Mustafeez (2021) stated that Microsoft's Visual Studio Code (also known as VS Code) is a free open-source text editor. Windows, Linux, and macOS are all supported by VS Code. Although the editor is light, it contains some powerful features that have helped VS Code become one of the most common programming environment software in recent years.

Overall, Visual Studio Code is an open-source text editor that will be used in developing the developed system’s web portal and functionalities.

Hardware Requirements

The hardware requirements include computer unit, router, mobile phone.

Computer Unit

computerhope.com (2019) said that a computer is a programmable system for storing, retrieving, and processing data. People (human computers) who conducted numerical operations using mechanical calculators such as the abacus and slide rule were initially referred to as "computers." Later, when electronic devices started to replace human computers, the term was applied to them. Computers of today are electronic machines the receive data (input), process that data, generate information, and store (storage) the results.

The computer system will be used in developing the developed system as well as testing its functionalities. The computer will also be used for the documentation.

Router

According to computerhope.com (2019), a router is a piece of hardware that receives, analyzes, and forwards incoming packets to another network. It can also be used to redirect packets to another network interface, drop them, and perform other network-related tasks. A router has many more functions than most network devices that can only perform simple network operations, such as a hub or switch. For example, a hub can move data between computers or network devices, but it does not interpret or process the data.

To simplify, a router connects the computer to the internet using an internet cable. The internet will be used for collecting information that will be used for research purposes both in the system and documentation.

Mobile Phone

techopedia.com (2021) stated that a cell phone is a portable cellular system that helps people to send and answer phone calls. Mobile phones can accommodate web browsers, sports, cameras, video players, and navigation systems.

In general, a mobile phone will be used for the SMS Notification function that the developed system has.

Conceptual Model of the Study

airbrake.io (2017) stated that a conceptual model is a description of a structure that is made up of concepts and ideas. Conceptual Modelling is used in sciences, socioeconomics, and software development.

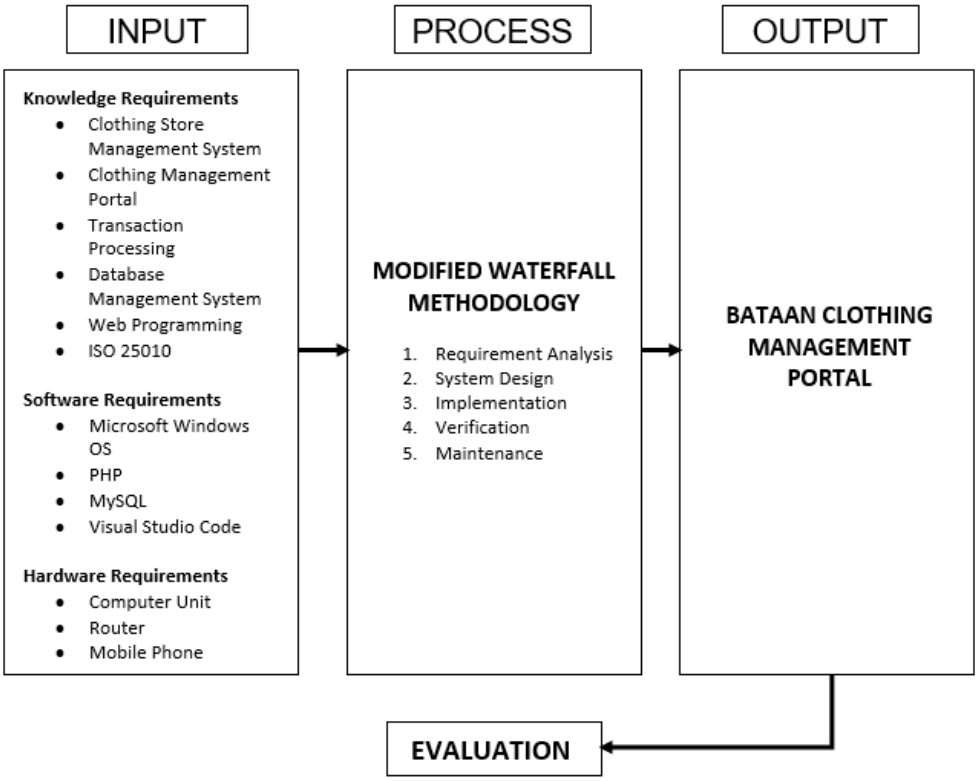

Figure 1 Conceptual Diagram

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Figure 1 shows the study's conceptual model, which contains four phases: input, process, output, and evaluation.

The input phase consists of knowledge requirements, software requirements, and hardware requirements. The knowledge requirements include Clothing Store Management System, Clothing Management Portal, Transaction Processing, Database Management System, Web Programming, and ISO 25010.

Microsoft Windows OS, PHP, MySQL, and Visual Studio Code are the software requirements. Lastly, the hardware requirements are Computer unit, Router, and Mobile Phone.

The process phase shows the Modified Waterfall Methodology, which will be used in the system development. The Modified Waterfall Method is divided into five phases: Requirement Analysis, System Design, Implementation, Verification, and Maintenance.

The outcome of the input and process phase is the Bataan Clothing Management Portal which can be seen in the output phase. And the final phase is the Evaluation.

Operational Definition of Terms

For a better understanding of the analysis, the following concepts are operationally defined:

Bataan Clothing Management Portal – is a web-based system that promotes and sells local clothes in Bataan.

Admin – refers to the person who manages the system.

Business Owner/ Sellers – refers to the owner of a local brand in the system.

Customer – refers to the person who buys products using the system.

Local Brands – refers to the clothing product that is made in Bataan.

CHAPTER 3

METHODOLOGY

This chapter presents the project design, database design, project development, operation, and testing procedures.

Project Design

The Bataan Clothing Management Portal is a web application that helps business owners and customers register an account to access it. This portal can also help business owners to promote their own clothing brands. And the web application provides an easier way to buy your favorite clothing brand. The business owners can manage their own product inventory. This portal can notify customers with SMS notification if their order is ready to be delivered. The customers can track their orders. Giving the customers to have user feedback and rating about the local brand. And the last is giving customers to have their own transaction history.

Use Case Diagram

creately.com (2020) stated that a use case diagram is a type of behavioral UML diagram that is often used to evaluate different processes. They allow you to imagine the various types of roles that exist in a system as well as how those roles communicate with it. This use case diagram guide will go into the following points which will assist you in creating better use cases.

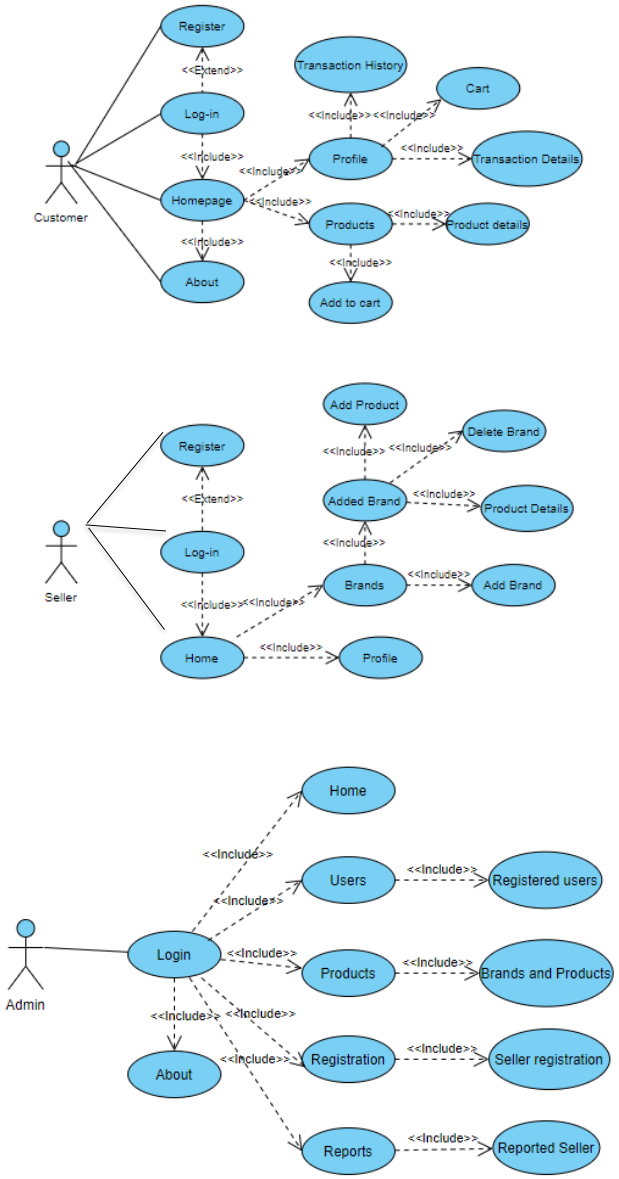


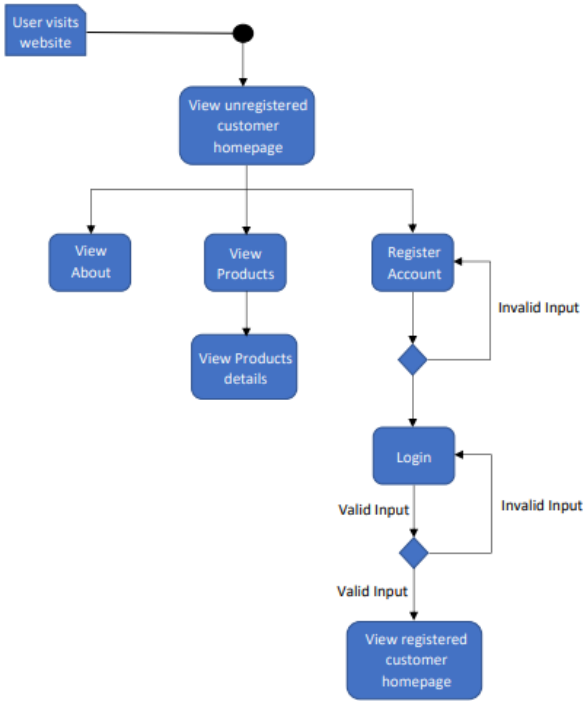
Figure 2 Use Case Diagram

Figure 2 displays the use of the use case diagram. On the customer's side, the customer can view the homepage, products, and about the website. The customer who doesn't have an account needs to register in order to unlock the other functions like buying a product and viewing the transaction history. A registered customer can have a transaction history that stores the products they bought.

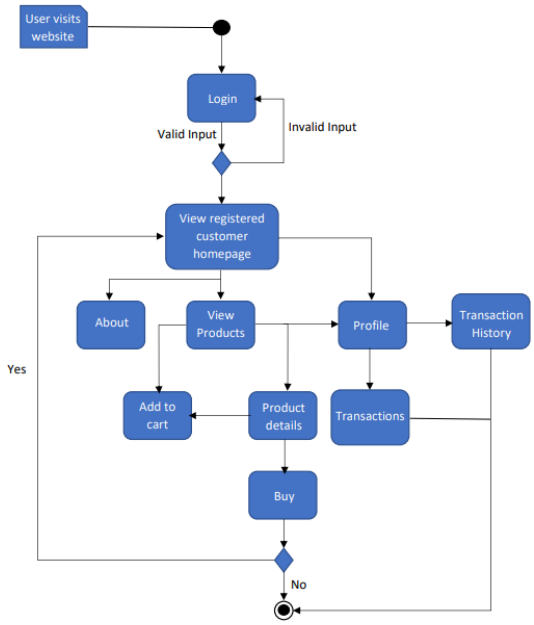
On the seller's side, the seller can view the unregistered customer side. The seller needs to request registration to unlock the seller functions of the system. The registered seller can view the homepage, about, products, and can add their own inventory and products.

Activity Diagram

Walker (2021) stated that the Activity Diagram is a flowchart that depicts the flow of information from one activity to the next. The activity can be defined as a machine process. The primary goal of operation diagrams is to depict the system's complex actions. An object-oriented flowchart is another name for it.



Unregistered User



Registered User

Figure 3 Activity Diagram (Customer Side)

Figure 3. The customers are redirected to the homepage. Unregistered customers can only view the homepage, about, and products. The customers need to register an account to access other functionalities. On the registration page, if the inputs are invalid, the system will show a message that there is something wrong with the information and it will repeat until all the inputs are correct. On the log-in page, it is the same as registration. If the inputs are invalid, the system will show a message saying that the email or password is wrong. Once the customer has logged in, he/she will be redirected to the registered customer homepage. The registered customer can now buy products and view the cart.

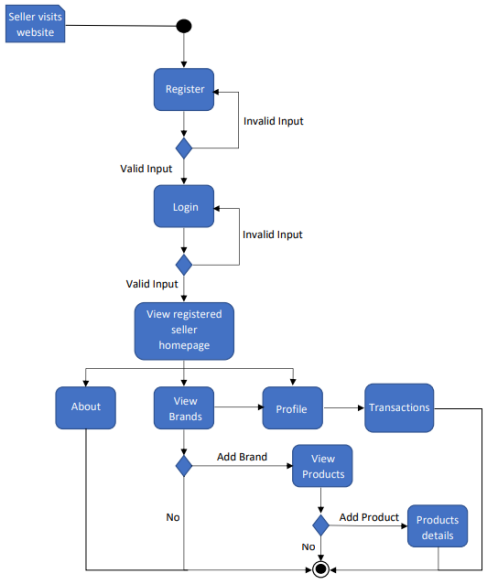


Figure 4 Activity Diagram (Seller Side)

Figure 4. The seller needs to request registration to the admin to become a seller to the system. The seller registration is the same as the customer registration in which the system will show a message if the inputs are wrong. If the admin accepted the request, the seller can now log in. Once the seller has logged in, he/she can now add his/her own inventory to manage. Inside the inventory, he/she can add products that the customers will see.

DATA DICTIONARY

Brandenburg (2016) said that a Data Dictionary, also called a Data Definition Matrix, provides detailed information about the business data, such as standard definitions of data elements, their meanings, and allowable values. While a logical or conceptual entity relationship diagram focuses on top-level business concepts, a data dictionary provides more details on each attribute of a business concept.

Table 1.0: users Table

Data Dictionary				
System Name: Bataan Clothing Management Portal				
Subject: users Table				
PK	FK	Field Name	Data Type	Description
Yes	Yes	id	number	Customer's identification number
	No	name	text	Customer's name
	No	email	text	Customer's email
	No	password	text	Customer's password
	No	address	text	Customer's address
	No	contact_number	number	Customer's phone number

The table 1.0 shows the customer table of the Bataan Clothing Management Portal. This table stores the information of the customer. This table's fields are: id, name, email, password, address and contact_number.

Table 2.0: Seller Table

Data Dictionary				
System Name: Bataan Clothing Management Portal				
Subject: Seller Table				
PK	FK	Field Name	Data Type	Description
Yes	Yes	id	number	Seller's identification table
	No	brand_name	text	Brand's name
	No	owner_name	text	Owner's name
	No	password	text	Password
	No	email	text	Email
	No	cnumber	number	Seller's phone number

The table 2.0 shows the seller table of the Bataan Clothing Management Portal. This table stores the information of the seller. This table's fields are: id, brand_name, owner_name, password, email and cnumber.

Table 3.0: admin Table

Data Dictionary				
System Name: Bataan Clothing Management Portal				
Subject: admin Table				
PK	FK	Field Name	Data Type	Description
Yes	Yes	id	number	Admin's ID number
	No	username	image	Admin's username
	No	password	text	Admin's password

The table 3.0 shows the admin table of the Bataan Clothing Management Portal. This table stores the information of the admin. This table's fields are: id, username, and password.

Table 4.0: brand_names Table

Data Dictionary				
System Name: Bataan Clothing Management Portal				
Subject: brand_names Table				
PK	FK	Field Name	Data Type	Description
Yes	Yes	brand_id	number	Brand's ID
	No	brand_name	text	Brand's name

	No	brand_logo	Image	Brand's Logo
	Yes	seller_name	text	Seller's name
	Yes	seller_id	number	Seller's ID

The table 4.0 shows the brand_names table of the Bataan Clothing Management Portal. This table stores the information of the brand. This table's fields are: brand_id, brand_name, brand_logo, seller_name, and seller_id.

Table 5.0: order_list Table

Data Dictionary				
System Name: Bataan Clothing Management Portal				
Subject: order_list Table				
PK	FK	Field Name	Data Type	Description
Yes	Yes	order_id	number	Order's ID
	Yes	seller_id	number	Seller's ID
	Yes	product_id	number	Product's ID
	Yes	user_id	number	User's ID
	No	status	number	Status of the product
	No	upd_date	date	Update date
	No	buy_date	date	Buy date
	No	accept_date	date	Accept date
	No	ship_date	date	Ship date
	No	packed_date	date	Packed date
	No	cancel_date	date	Cancel date

	No	receive_date	date	Receive date
	Yes	prod_size	date	Product size
	Yes	prod_quantity	number	Product quantity
	Yes	prod_price	number	Product price
	Yes	deliver_loc	text	Delivery location

The table 5.0 shows the order_list table of the Bataan Clothing Management Portal. This table stores the information of the ordered products. This table's fields are: order_id, seller_id, product_id, user_id, status, upd_date, buy_date, accept_date, ship_date, packed_date, cancel_date, receive_date, prod_size, prod_quantity, prod_price, and deliver_loc.

Table 6.0: product_cart Table

Data Dictionary				
System Name: Bataan Clothing Management Portal				
Subject: product_cart Table				
PK	FK	Field Name	Data Type	Description
Yes	Yes	cartID	number	Cart's ID
	Yes	product_id	number	Product's ID
	Yes	user_id	number	User's ID
	No	timestamp	date	Product added date

The table 6.0 shows the product_cart table of the Bataan Clothing Management Portal. This table stores the information of the cart. This table's fields are: cartID, product_id, user_id, and timestamp.

Table 7.0: product_desc Table

Data Dictionary				
System Name: Bataan Clothing Management Portal				
Subject: product_desc Table				
PK	FK	Field Name	Data Type	Description
Yes	Yes	product_id	number	Product's ID
	Yes	brand_id	number	Brand's ID
	Yes	brand_name	number	Brand name
	No	prod_name	text	Product name
	No	prod_img	image	Product image
	No	prod_color	text	Product color
	No	prod_gend	text	Product gender
	No	prod_type	text	Product type
	No	prod_desc	text	Product description

The table 7.0 shows the product_desc table of the Bataan Clothing Management Portal. This table stores the information of the product. This table's fields are: product_id, brand_id, brand_name, prod_name, prod_img, prod_gend, prod_type, and prod_desc.

Table 8.0: product_rate Table

Data Dictionary				
System Name: Bataan Clothing Management Portal				
Subject: product_rate Table				
PK	FK	Field Name	Data Type	Description
Yes	No	rate_id	number	Rate ID
	Yes	product_id	number	Product ID
	Yes	order_name	text	Order name
	Yes	rater_id	number	Customer ID
	Yes	rater_name	text	Customer name
	No	rate_value	number	Rate value
	No	rate_desc	text	Rate descripton
	No	rate_time	date	Rate date
	No	rateImg	image	Rate image

The table 8.0 shows the product_rate table of the Bataan Clothing Management Portal. This table stores the information of the ratings. This table's fields are: rate_id, product_id, order_name, rater_id, rater_name, rate_value, rate_desc, rate_time, and rateImg.

Table 9.0: product_value Table

Data Dictionary				
System Name: Bataan Clothing Management Portal				
Subject: product_value Table				
PK	FK	Field Name	Data Type	Description
Yes	Yes	product_id	number	Product's ID
	Yes	brand_name	number	Brand's name
	Yes	prod_name	text	Prod name
	No	small	text	Product size
	No	medium	text	Product size
	No	large	text	Product size
	No	x_large	text	Product size
	No	s_price	number	Product price
	No	m_price	number	Product price
		l_price	number	Product price
		xl_price	number	Product price

The table 9.0 shows the product_value table of the Bataan Clothing Management Portal. This table stores the information of the ratings. This table's fields are: product_id, brand_name, prod_name, small, medium, large, x_large, s_price, m_price, l_price, and xl_price.

Table 10.0: requestaccounts Table

Data Dictionary				
System Name: Bataan Clothing Management Portal				
Subject: requestaccounts Table				
PK	FK	Field Name	Data Type	Description
Yes	Yes	id	number	Seller's ID
	No	brandname	text	Brand's name
	No	ownername	text	Seller's name
	No	password	text	Seller's password
	No	email	text	Seller's email
	No	cnumber	number	Seller's number
	No	message	text	message
	No	permit	image	Seller's permit

The table 10.0 shows the requestaccounts table of the Bataan Clothing Management Portal. This table stores the information of the ratings. This table's fields are: id, brandname, ownername, password, email, cnumber, message, and permit.

Table 11.0: seller_report Table

Data Dictionary				
System Name: Bataan Clothing Management Portal				
Subject: seller_report Table				
PK	FK	Field Name	Data Type	Description
Yes	Yes	report_id	number	Report ID
	Yes	reporter_id	number	Customer's ID
	Yes	seller_id	number	Seller's ID
	No	report_title	text	Report title
	No	report_desc	text	Report description
	No	report_date	date	Report date
	No	report_file	image	Report image
	No	isValid	text	Valid

The table 11.0 shows the seller_report table of the Bataan Clothing Management Portal. This table stores the information of the ratings. This table's fields are: id, report_id, reporter_id, seller_id, report_title, report_desc, report_Date, report_file, and isValid.

Project Development

The methodology used in the study is the waterfall development methodology process to create the system. The waterfall methodology is a line project management that collects the requirements of stakeholders and customers at the beginning of the project and then creates a sequential project plan to make project requirements. The waterfall model name came from each phase of the project overlaps the next and constantly follows the bass like a waterfall.

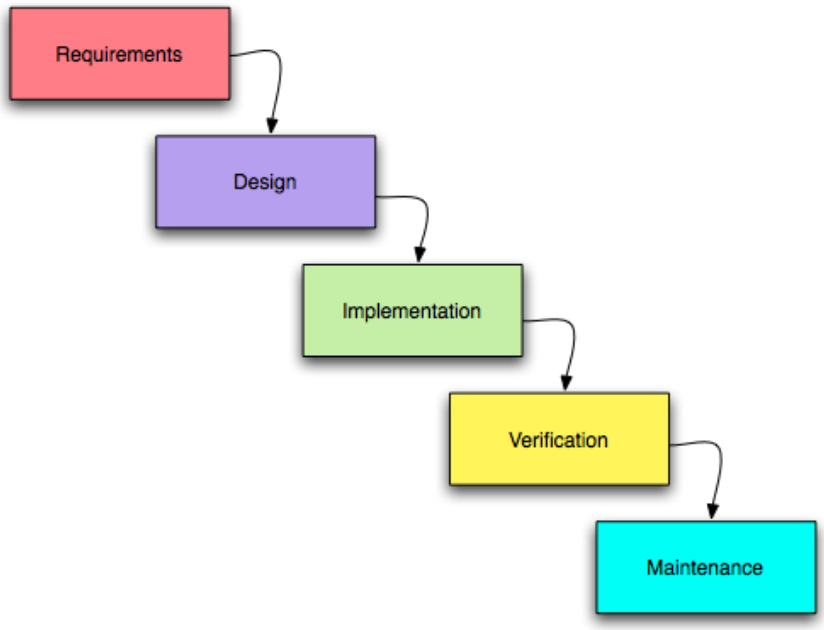


Figure 5 Modified Waterfall Model

Planning Phase

Mintzberg (1994) describes planning as the effort to formalize decision-making activities through decomposition, articulation, and rationalization. In construction, pre-project planning is defined as the phase after business planning, where a deal is initiated and prior to project execution (Gibson & Gebken, 2003). Another definition of planning is “what comes before action” (Shenhar, personal communication, 2011).

In this phase, the researcher begins the brainstorming of the title to be presented. After the Bataan Clothing Management Portal has been approved, the proponents will start developing and planning the system, and start documenting the content of the system output that users expect.

Requirements Analysis

visual-paradigm.com (2020) cited that Requirement Analysis, also known as Requirement Engineering, is the process of defining user expectations for a new software being built or modified. In software engineering, it is referred to as a requirement gathering. In requirements analysis, determining the requirements that must be met for a new or modified project, taking into account the conflicting requirements of various stakeholders, analysis, documentation, validation, and software management or software requirements is included.

In this phase, the researcher has gathered the necessary information for the development of the system and also the needs of the user. The researcher

gathered information about the process of relations of the Bataan Clothing. The researcher conducted interviews with the business owner and other staff of the Bataan Clothing Management Portal as well as with their user. The researcher asked questions about the problem of their manual system. After gathering information, the researcher analyzed the problem of the company and how to develop the website.

Design

wrike.com (2006) defined design as an early phase of the project where a project's key features, structure, criteria for success, and major deliverables are all planned out. The goal is to create designs that will be used to complete application's capabilities. Stakeholders will choose the appropriate design that will be used to create the system. The design phase of a project can make a lot of different outputs, including flowchart, sketch, site tree, HTML screen design, prototype, photo show, and more.

In this phase, the researcher will establish a system design to meet the user needs. The user-friendliness of the developed system will also be considered at this stage.

Implementation

sswm.info (2020) defined that the Project implementation (or project execution) is the phase where visions and plans become reality. This is the logical

conclusion, after evaluating, deciding, visioning, planning, applying for funds, and finding the financial resources of a project.

In this phase, the proponents will start to develop the system. Also, in this phase, they implement the iteration where while they are developing the system, they will test each module at the same time to determine if it is already satisfying the capabilities.

Testing

taskmanagementguide.com (2004-2021) defined that the testing phase was to evaluate and test declared requirements, features, and expectations regarding the project prior to its delivery in order to ensure the project matches the initial requirements stated in specification documents.

In this phase, proponents will establish activities to study and audit the progress of a particular project in order to provide interested parties with information on the actual level of performance and quality of the project. It is an attempt to obtain a different view of the project to allow those involved to assess and understand the potential risks of project failure or mismatch.

Deployment

Once the functional and non-functional testing is done, the product is deployed in the customer environment or released into the market.

In this phase, this study used to deploy a system that is ready to release, and all features of the system are already implemented.

Operation and Testing Procedure

In this section, the operation procedure and testing procedure will be discussed. The various test procedures, such as unit test, integration test, system test, and acceptance test.

Operation Procedure

The customer needs to fill out all the information in the registration form to create their account. Once the registration is finished, the customer can now log in. If the customer already has an account, he can just log in

On the customer homepage, the customer can see the about that contains the information of the system and the products that were added by sellers. If the customer wants to see all the local clothing brands in the system, he needs to click the products button. After he chose the brand, he will see the product inside that brand. If the customer liked a product, he can click it to see more information about that product like the price, and sizes. If the customer clicks the add to cart button, he needs to go to his cart to confirm that he wants to buy that product.

The seller also needs to fill up the registration form to request a seller account to the admin. Once the admin accepted the request, the seller can now log in.

On the seller homepage, the seller can view about, and products. The seller can now add his/her own inventory to the system. If the seller wants to add an inventory, he/she needs to click the add inventory button in the products page. If the seller successfully added an inventory to the system, the seller can now add products inside his/her own inventory.

Testing Procedure

The testing procedure shows how the proponents will perform testing using acceptance testing, system testing, acceptance testing, unit testing, and integration testing.

Unit Testing

testingxperts.com (2020) defined that Unit Testing is the software testing technique where a group of software program components or modules are tested individually. This method effectively helps to check the accuracy of a code section by taking into mock objects, considering stubs, drivers, and unit test frames.

The proponents will test the system to ensure that all the bugs are fixed, unit testing saves time and money, and helps developers write better code, more efficiently.

Integration Testing

Hamilton (2021) defined Integration Testing as a type of testing where software modules are integrated logically and tested as a group. A typical software

project consists of several software modules that have been coded by different programmers. The purpose of this level of testing is to discover errors in the interaction between these software modules, if they are integrated.

In this testing unit, the flow of the system will be checked in all of the units. The proponents will test all processes if they are functioning well without errors and if every module will meet the requirements.

System Testing

javapoint.com (2018) System Testing includes testing of a fully integrated software system. Generally, a computer system is made with the integration of software (any software is only a single element of a computer system). The application is developed and then combined with other software and hardware to form software. Basically, a computer system is a group of software to perform specific tasks, but only the software cannot perform the task; To make it possible, compatibility of the hardware is needed by the software. There are different kinds of tests that will lead to practicing and examining the required functionality of a software which is called a system test.

In this testing, the proponents will act as a user to check if the end-to-end flow of the application is working.

Acceptance Testing

tutorialspoint.com (2021) defined Acceptance testing, a testing technique performed to determine whether or not the software system has met the required

specifications. The primary objective of this test is to assess the system's compliance with business requirements and verify that it meets the criteria required for delivery to end-users.

In this testing, the proponent will test the system if the requirements will be accepted. These testing procedures will utilize the below test script form.

Table 12.0 Test Script Form

Date			
Tested By			
Test Case Number			
Test Case Name			
Test Case Description			
Item(s) to be tested			
Procedural Steps			
Specifications			
Input	**Expected Output/Result**	**Pass Y/N**	**Actual Output/Result**

Evaluation Procedure

These are the following activities that the researchers had performed during the evaluation.

1.The researchers have explained the concept of the system and its operation to the respondents.

2.The researchers have tested the system.

3.The respondents have tested the system.

4.The proponents have tested the system based on the criteria under ISO 25010.

5.The proponents have distributed the survey form to the respondents.

6.The researchers have collected the survey form after the respondents have completed it and analyze the data.

7.The proponents have computed the data using the weighted formula.

8.The overall rating has been interpreted using the numerical range and equivalent descriptive interpretation using Likert's scale.

Table 13.0 Likert's Scale

Rank	Numerical Scale	Interpretation
5	4.51 – 5.00	Excellent
4	3.51 – 4.50	Very Good
3	2.51 – 3.50	Good
2	1.51 – 2.50	Fair
1	1.00 – 1.50	Poor

Chapter 4

RESULTS AND DISCUSSION

This chapter covers the discussion of the project description, including the structure of the project, capabilities, and limitations. This part also discusses the test results and the evaluation result of the project.

Project Description

Bataan Clothing Management Portal is an online shop that focuses on promoting and selling a local brand of clothes around the province and making a way to have a platform in which business owners will have the chance to keep their business going. The main problem of the study is how to develop and implement a web portal that will help business owners to promote and sell local clothing brands in Bataan.

The target respondents of this study are the 2 local brand business owners and 48 customers.

The Bataan Clothing Management Portal is a website that allows customers to create an account and log in as a customer, seller, and admin through the system. The developed system can manage the owner information, ordering and managing of the products in the system. The system can also manage the seller information and orders. The web application is capable of notifying the customers about the ordered products' details and location through the use of SMS notification features.

The customer can filter their feeds based on their preferred products. Customers are able to write feedback and give ratings to the sellers. The system allows the user to report a seller's account to improve the system environment and prevent scams and frauds.

The system’s mode of payment is only cash-on-delivery. Sellers will have their own inventory to make the products be separated brand by brand to make it easier for customers to find the wanted products and for the sellers to have their own space in the system. The system will allow sellers to restock the products as well as managing their own products and communicating with their customers to have an easier transaction.

Project Structure

This part shows the major forms of the system. The main capabilities include Allowing the sellers and customers to create an account through registration module, giving Business owners a place to sell their products, providing an easy way for the customers to buy products, notifying the customers about their ordered products details and location using SMS notification feature, giving the customers a privilege to rate and write reviews of the products through feedback module, allowing the customers to report the sellers through report module, allowing the customers to monitor their transaction history through the transaction module.

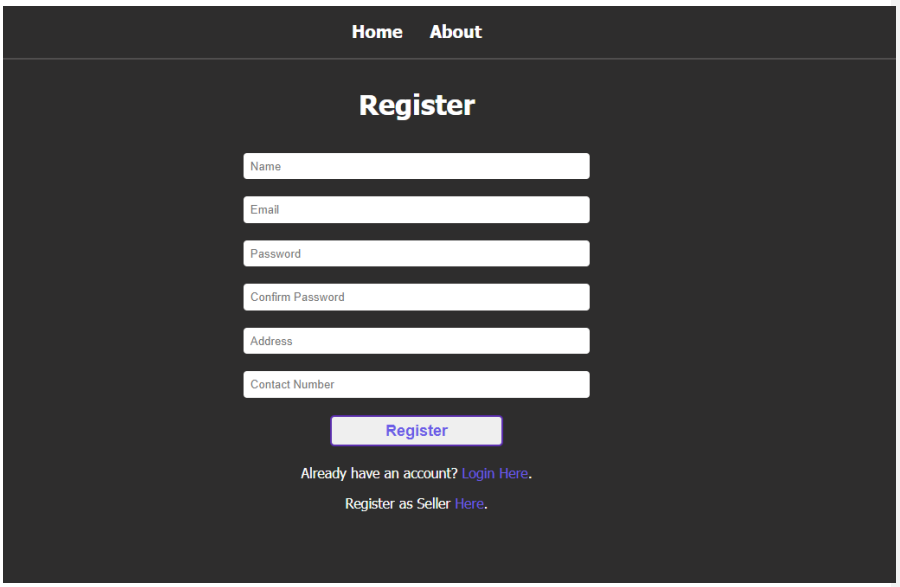


Figure 6. Registration Module

Figure 6 shows the registration page where customers and seller can create accounts and access the system through the log in page.

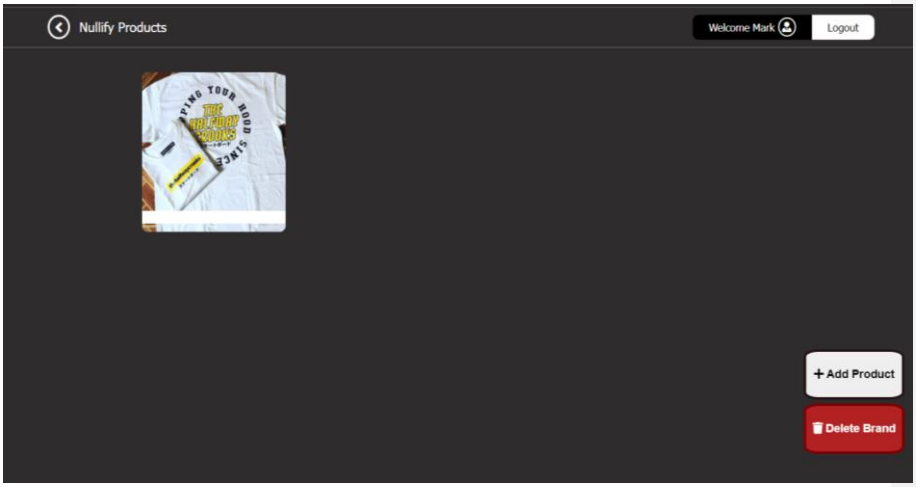


Figure 7. Business Owners Inventory Module

Figure 7 shows the inventory of the seller where they can add, delete, or edit their products.

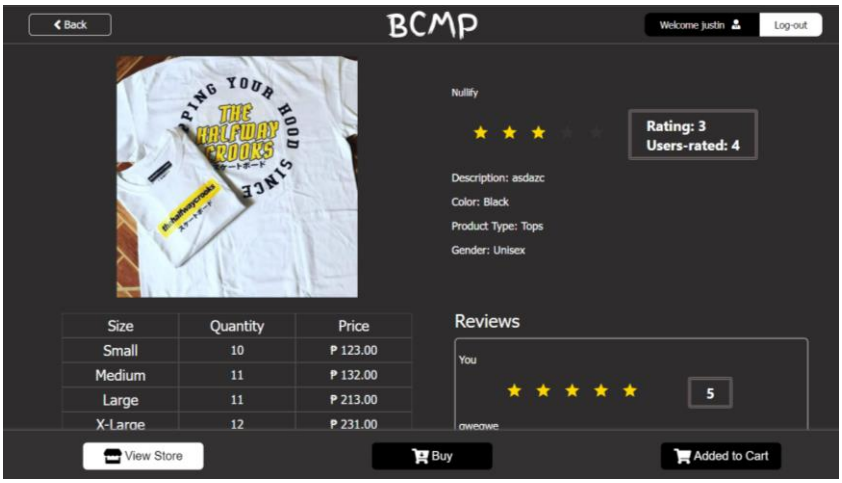


Figure 8. Customer's Buying Product Module

Figure 8 shows how the customers can view and buy products.

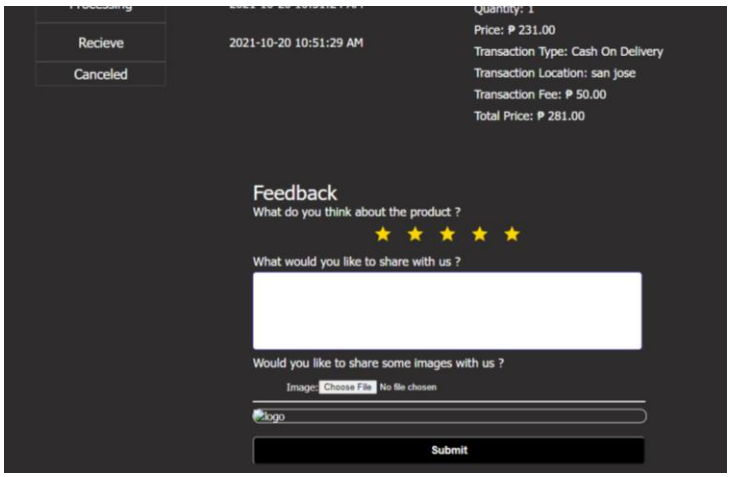


Figure 9. Feedback Module

Figure 9 shows the feedback module where the customers can leave feedbacks to their purchased products.

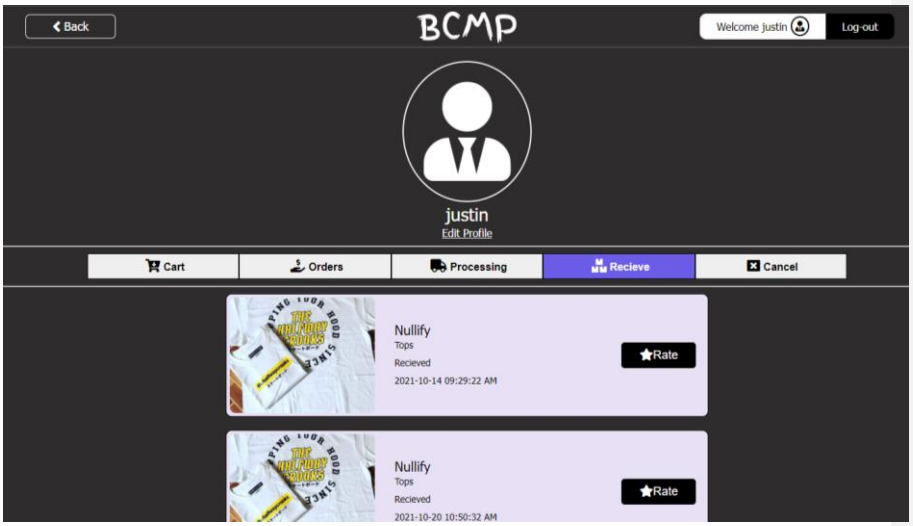


Figure 10. Transaction Module

Figure 10 shows the transaction module where the customers can view their purchase history.

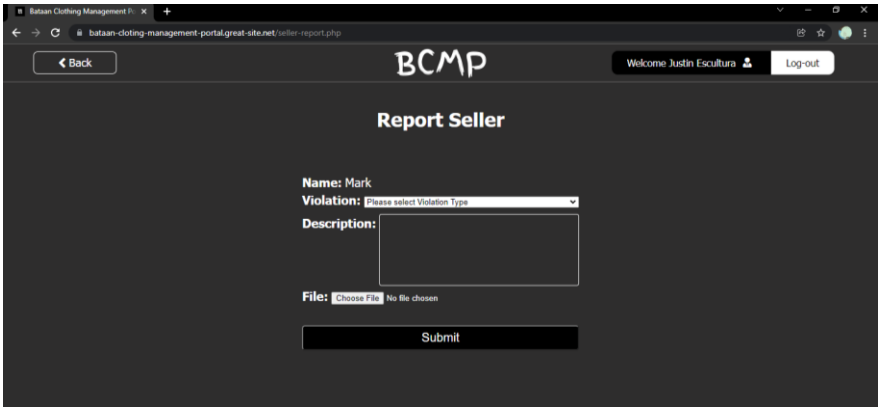


Figure 11. Transaction Module

Figure 11 shows the report module where the customer can report a seller.

Project Capabilities and Limitations

The following are the capabilities of the developed Bataan Clothing Management Portal:

A. Allowing the sellers and customers to create an account through registration module.
B. Giving Business owners a place to sell their products.
C. Providing an easy way for the customers to buy products.
D. Notifying the customers about their ordered products details and location using SMS notification feature.

E. Giving the customers a privilege to rate and write reviews of the products through feedback module.
F. Allowing the customers to report the sellers through report module.
G. Allowing the customers to monitor their transaction history through the transaction module.

The following are the limitations of the developed system:

1. The system only accepts cash on delivery (COD) payment.
2. The system only accepts orders from Bataan area.
3. Only registered customer accounts can buy products

Test Results

The test result shows the result of testing procedures. It also displays the different procedure so that the user can deal with the study. The developers have checked the performance of the system. The item to be tested within the software is shown, it also displays the output that will give by the system, and with this test, it will also check the functionality of the system.

Table 14. Creating account test script

Date	November 14, 2021
Tested By	Justin Escultura
Test Case Number	001
Test Case Name	Creating Customer Account
Test Case Description	This will allow the users to create accounts as customer.

Item(s) to be tested			
1	Register Button		
Procedural Steps			
1	Click the Register Here link		
2	Input the needed information		
3	Click the Register button		
Specifications			
Input	Expected Output/Result	Pass Y/N	Actual Result/Output
Register Button	If the Register button is clicked, the user will create an account.	Y	User has successfully created a customer account.

Table 14 shows the creating account test script. The user can create customer account.

Project Evaluation

Table 15. Evaluation of Software Quality: Functional Suitability

Functionality Suitability	Average Mean	Descriptive Interpretation
A. Completeness	3.75	Very Good
B. Correctness	3.65	Very Good
C. Appropriateness	3.8	Very Good
MEAN	3.7333	Very Good

Table 15 shows the evaluation of software quality in terms of Functional Suitability characteristics, it is composed of Sub-characteristic like Functional Completeness, Functional Correctness and Functional Appropriateness, and all of these tallied an average mean having a descriptive rating equivalent to “Very Good”, Having a criterion mean of 3.7333, meaning the system ability to be completeness, correctness, and appropriateness and satisfied the respondents.

Table 16. Evaluation of Software Quality: Performance Efficiency

Performance Efficiency	Average Mean	Descriptive Interpretation
A. Time Behavior	3.8	Very Good
B. Resource Utilization	3.65	Very Good
C. Capacity	3.675	Very Good
MEAN	3.7038	Very Good

Table 16 shows the evaluation of software quality in terms of Performance Efficiency characteristics, it is composed of Sub-characteristic like time behavior, resource utilization and capacity, and all of these tallied an average mean having a descriptive rating equivalent to “Very Good”, Having a criterion mean of 3.7038, meaning the system ability to be time behavior, resource utilization and capacity and satisfied the respondents.

Table 17. Evaluation of Software Quality: Compatibility

Compatibility	Average Mean	Descriptive Interpretation
A. Co-Existence	3.625	Very Good
B. Interoperability	3.5	Very Good
MEAN	3.5625	Very Good

Table 17 shows the evaluation of software quality in terms of Compatibility characteristics, it is composed of Sub-characteristic like co-existence and interoperability, and all of these tallied an average mean having a descriptive rating equivalent to “Very Good”, Having a criterion mean of 3.5625, meaning the system ability to be co-existence and interoperability. The respondents also are satisfied to use the system**.**

Table 18. Evaluation of Software Quality: Usability

Usability	Average Mean	Descriptive Interpretation
A. Appropriateness Recognizability	3.7	Very Good
B. Learnability	3.875	Very Good
C. Operability	3.625	Very Good
D. User Error Protection	3.6	Very Good
E. User Interface Aesthetics	3.6	Very Good
F. Accessibility	3.625	Very Good
MEAN	3.6708	Very Good

Table 18 shows the evaluation of software quality in terms of Usability characteristics, it is composed of Sub-characteristic like appropriateness recognizability, learnability, operability, use error protection, user interface aesthetics and accessibility and all of these tallied an average mean having a descriptive rating equivalent to “Very Good”, Having a criterion mean of 3.6708, meaning the system ability to be appropriateness, learned, operable, user error protection, user interface aesthetics, and accessibility and satisfied the respondents.

Table 19. Evaluation of Software Quality: Reliability

Reliability	Average Mean	Descriptive Interpretation
A. Maturity	3.725	Very Good
B. Availability	3.8	Very Good
C. Fault Tolerance	3.7	Very Good
D. Recoverability	3.6	Very Good
MEAN	3.7063	Very Good

Table 19 shows the evaluation of software quality in terms of Reliability characteristics, it is composed of Sub-characteristic like maturity, availability, fault tolerance and recoverability, and all of these tallied an average mean having a descriptive rating equivalent to “Very Good”, Having a criterion mean of 3.7063, meaning the system ability to be matured, available, tolerance, and recovery.

Table 20. Evaluation of Software Quality: Security

Security	Average Mean	Descriptive Interpretation
A. confidentiality	3.775	Very Good
B. Integrity	3.825	Very Good
C. Non-Repudiation	3.725	Very Good
D. Accountability	3.775	Very Good
E. Authenticity	3.7	Very Good
MEAN	3.76	Very Good

Table 20 shows the evaluation of software quality in terms of Security characteristics, it is composed of Sub-characteristic like confidentiality, integrity, non-repudiation, accountability and authenticity and all of these tallied an average mean having a descriptive rating equivalent to “Very Good”, Having a criterion mean of 3.76. The system ensures that only those who have been allowed to access the data have access to it.

Table 21. Evaluation of Software Quality: Maintainability

Maintainability	Average Mean	Descriptive Interpretation
A. Modularity	3.55	Very Good
B. Reusability	3.65	Very Good
C. Analyzability	3.8	Very Good
D. Modifiability	3.775	Very Good

E. Testability	3.7	Very Good
MEAN	3.695	Very Good

Table 21 shows that the maintainability of evaluation of software quality for Bataan Clothing Management Portal has a mean of 3.695 which is equivalent to "Very Good" descriptive statistics.

Table 22. Evaluation of Software Quality: Portability

Portability	Average Mean	Descriptive Interpretation
A. Adaptability	3.825	Very Good
B. Installability	3.625	Very Good
C. Replaceable	3.7	Very Good
MEAN	3.7167	Very Good

Table 22 shows the evaluation of software quality in terms of Portability characteristics, it is composed of Sub-characteristic like adaptability, installability and replaceability with an average mean 3.7167 which is equivalent in descriptive interpretation as "Very Good".

Table 23. Summary of Project Evaluation

Software Quality Factor	Average Mean	Descriptive Interpretation
A. Functional Suitability	3.7333	Very Good
B. Performance Efficiency	3.7083	Very Good
C. Compatibility	3.5625	Very Good
D. Usability	3.6708	Very Good

E. Reliability	3.7063	Very Good
F. Security	3.76	Very Good
G. Maintainability	3.695	Very Good
H. Portability	3.7167	Very Good
MEAN	3.6841	Very Good

Table 23 shows that the Bataan Clothing Management Portal overall evaluation reached an average mean of 3.6841 with descriptive evaluation of Very Good. The evaluation results show that the newly developed system can help the business owners and customer to have an easier transaction through this web application.

Chapter 5

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This chapter includes the discussion of summary of findings, conclusions and recommendations.

Summary of Findings

Based on the analysis of data, the findings are as follow:

1. On the result of the evaluation of the Bataan Clothing Management Portal.

1.1 The functional suitability characteristic got a mean rating of 3.7333 with descriptive interpretation of Very Good. The result implied that majority of the respondents showed interest in system's capabilities such as managing products, viewing products, and buying products. As well as the SMS notification that displays accurate product details.

1.2 The Performance Efficiency characteristic got a mean rating of 3.7083 with descriptive interpretation of Very Good. The results showed that the system responds immediately to the ordering process.

1.3 The Compatibility characteristic got a mean rating of 3.5625 with descriptive interpretation of Very Good. The evaluation shows that business owners and customers are satisfied with Bataan Clothing Management Portal since it can be accessed using any type of web browser.

1.4 The Usability characteristic got a mean rating of 3.6708 with descriptive interpretation of Very Good. The evaluation shows that the respondents said that the system is user friendly and easy to use.

1.5 The Reliability characteristic got a mean rating of 3.7063 with descriptive interpretation of Very Good. The results show that the respondents are grateful with the accuracy of the system in ordering and transaction of products.

1.6 The Security characteristic got a mean rating of 3.76 with descriptive interpretation of Very Good. The survey proved that the majority of the respondents showed interest in using the system registration feature because the system let user to verify their email address.

1.7 The maintainability characteristic got a mean rating of 3.695 with descriptive interpretation of Very Good. The result shows that the system data can easily be modified by users and recognized error. The admin can accept or decline the seller's registration.

1.8 The portability characteristic got a mean rating of 3.7167 with descriptive interpretation of Very Good. The respondents showed interest in using the system features because the system can be easily accessed since it is a web portal.

Conclusions

The following conclusions are gathered based from the evaluation:

1. Bataan Clothing Management Portal was developed to have an easier way to buy local clothing brands by online transactions as well as having a place for the sellers or brand owners to sell their products by posting and managing their own inventory. The system provides an easier transaction between the customer and seller and view their transaction history. The seller or business owner can view, update, and delete their brand or products.
2. The system was developed using Hypertext Preprocessor (PHP), MySQL, Visual Studio Code, and Windows OS as a software requirements and computer system, mobile phone, and router for the hardware requirements.
3. Bataan Clothing Management Portal was tested and come up with expected results. The test scripts results were based on ISO 25010 criteria: functional suitability, reliability, usability and portability;
4. Bataan Clothing Management Portal has been rated Very Good with an overall mean of 3.6941 because the system met the specified requirements of the target respondents. In addition, the system passed the evaluation's criteria: functional suitability, performance efficiency, compatibility, usability, reliability, security, maintainability and portability.

Recommendations

Based on the foregoing conclusions, the following are recommended for the further improvement of the project:

- To implement cash transaction through PayPal or Gcash.
- To develop a version of the system that supports mobile phones.
- To create a chat box that will allow the customer and the seller to communicate.
- To have a return function.

Bibliography

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Blog Post

Britton, J. (2021). What is ISO 25010. Retrieved from https://www.perforce.com/blog/qac/what-is-iso-25010

Hamilton, T. (2021). Integration Testing: What is, Types, Top Down & Bottom Up Example. Retrieved from https://www.guru99.com/integration-testing.html

Stevens, S. (2021). How to Become a Web Developer in 2021 – Everything You Need to Know. Retrieved from https://careerfoundry.com/en/blog/web-development/what-does-it-take-to-become-a-web-developer-everything-you-need-to-know-before-getting-started/

Walker, A. (2021). Activity Diagram in UML: Symbol, Components & Example. Retrieved from https://www.guru99.com/uml-activity-diagram.html

Raza, M. (2018). DBMS: An Intro to Database Management Systems. Retrieved from https://www.bmc.com/blogs/dbms-database-management-systems/

Jackson, P. (2021). What is PHP? Write your first PHP Program. Retrieved from https://www.guru99.com/what-is-php-first-php-program.html

Page from a website

Mustafeez, A. Z. (2021). What is Visual Studio Code. Retrieved from https://www.educative.io/edpresso/what-is-visual-studio-code

Ros, F. (2017). Clothing Store Management System. Retrieved from https://code-projects.org/clothing-store-management-system-c-programming-source-code/

Mullins, C. (2021). database management system (DBMS). Retrieved from https://searchsqlserver.techtarget.com/definition/database-management-system

Ewen, N. (2020). Your guide to maximizing shopping portals for your online purchases.
Retrieved from https://thepointsguy.com/guide/maximizing-online-shopping-portals/

Drake, M. (2020). What is MySQL. Retrieved from
https://www.digitalocean.com/community/tutorials/what-is-mysql

WWW Document

Zulaikha, E., Laxmi Lydia, K., Shankar. Gunardi. Apri Wahyudi. (2019). An Integrated
Management System for Online Shopping Portals. Retrieved from
http://www.jcreview.com/fulltext/197-1577778345.pdf

WWW Document - no Author

Clothing Inventory Management: The ApparelMagic Guide.
(2021). Retrieved from https://apparelmagic.com/clothing-inventory-management-guide/

Conceptual Model of the Study. (2017). Retrieved from
https://airbrake.io/blog/sdlc/conceptual-model

Introduction to Web Development. (2020). Introduction to Web Development. Retrieved from
https://www.codeconquest.com/what-is-coding/web-programming/

ISO/IEC 25010 Software Quality Model. (2021). Retrieved from
https://blog.codacy.com/iso-25010-software-quality-model/

Project Implementation. (2020). Retrieved from https://sswm.info/humanitarian-crises/urban-settings/planning-process-tools/implementation-tools/project-implementation

Router. (2019). Retrieved from https://www.computerhope.com/jargon/r/router.htm

Shopee: Shop online anytime, anywhere. (n.d). Retrieved from https://www.sea.com/products/shopee

System Testing. (2018). Retrieved from https://www.javatpoint.com/system-testing

System unit. (2018). Retrieved from https://www.computerhope.com/jargon/s/system-unit.htm

Transaction Processing. (2021) Retrieved from https://www.ibm.com/docs/en/cics-ts/5.4?topic=overview-transaction-processing

Transaction Processing. (2021). Retrieved from https://www.inc.com/encyclopedia/transaction-processing.html

Transaction Processing: What does transaction processing mean. (2017). Retrieved from https://www.techopedia.com/definition/464/transaction-processing

Unit Testing – What is Its Importance in Software Testing. (2020). Retrieved from https://www.testingxperts.com/blog/unit-testing

Use Case Diagram Tutorial (Guide with Examples). (2021). Retrieved from https://creately.com/blog/diagrams/use-case-diagram-tutorial/

What Does Database Management System (DBMS) Mean. (2020). Retrieved from https://www.techopedia.com/definition/24361/database-management-systems-dbms

What Does Mobile Phone Mean. (2020). Retrieved from https://www.techopedia.com/definition/2955/mobile-phone

What Does Web Programming Mean. (2020). Retrieve From https://www.techopedia.com/definition/23898/web-programming

What is Acceptance Testing. (2021). Retrieved from

https://www.tutorialspoint.com/software_testing_dictionary/acceptance_testing.htm

What is Project Design in Project Management. (2006). Retrieved from https://www.wrike.com/project-management-guide/faq/what-is-project-design-in-project-management/

What is Project Design in Project Management. (2006). Retrieved from https://www.wrike.com/project-management-guide/faq/what-is-project-design-in-project-management/

What is Project Testing Phase. (2021). Retrieved from http://www.taskmanagementguide.com/glossary/what-is-project-testing-phase-.php

Windows: Windows may refer to any of the following. (2021). Retrieve from https://www.computerhope.com/jargon/w/windows.htm

Requirement Analysis Techniques. (2020). Retrieved from https://www.visual-paradigm.com/guide/requirements-gathering/requirement-analysis-techniques/#what-is-requirement

Appendices

The following are the contents of the appendices

APPENDIX A
TITLE PROPOSAL

TITLE PROPOSAL

Project Title: Bataan Clothing Management Portal

Summary

The local brands like Nullify and The Halfway Crooks are clothing brands that is selling clothing products. They are currently using online platform like Facebook to sell their products.

The proposed system for the local clothing brands is a website that will focus on account registration, login, posting brand and products, buying products, SMS notification, product feedback, reporting of seller, and customer's transaction history. One of the main features of the proposed system is the SMS notification that will notify the customer when their ordered product is accepted by the seller or the products is out for delivery. The added feature of the system is the Email notification that contains the information about the ordered product.

Project Background

Nullify is a local brand in Bataan which was established in 2019. At that time, the brand name was ProjectNik which was suddenly changed to Nullify after two weeks. The Halfway Crooks was established in 2013. The original name of this brand is El Pirata and changed in 2017 to The Halfway Crooks. The two brands use online platforms to promote and sell their products. The proposed system will help the local brands to manage their products as well as selling the products and it will help the customers to have an easier transaction.

Current State of Technology

Currently, Nullify and The Halfway Crooks does not have a physical store and only using online platforms. They are using Facebook to post their products to promote and sell. The mode of payment is through cash on delivery or meeting up with the customer. Nullify and The Halfway Crooks uses email or text to communicate with the customers and to notify the customers about their ordered product.

Project Problem Statement

Nullify and The Halfway Crooks is using Facebook to promote and sell their products. They do not have a physical store that will increase their sales or another website where they can sell and manage their products. The owner or representative of both brands said that they need another platform that will help them to promote, sell, and manage their products.

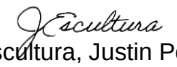
Project Assumption

Nullify and The Halfway Crooks consume more time by managing their products and the transactions between the seller and the customer. The proposed system has features such as register/login, posting brands and managing products, buying products, SMS notification, customer feedback, seller reporting, and the customer's transaction history. The proposed system will help them to manage those tasks efficiently

The following are the benefits that will be gained from the proposed system:

- The local brand owners will have a place to sell their products.
- The brand owners can manage the quantity of their products.
- The seller can promote the local brand clothing by selling their products.
- The seller will have an easier way to sell their products.
- The customer can easily buy products.
- The customer will be able to give rating to a product.
- The customer will be able to report the seller.
- A SMS notification will be sent to the customer to notify them about their ordered product and remind them when it is out for delivery.

Proponents Name:



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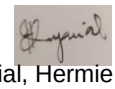
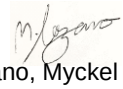


Imperial, Hermie Casalhay

Layug, Mark Paulo Cruz



Lozano, Myckel Canillas

Approved by:

Cherry A. Collera, PhD.

APPENDIX B

Adviser's Commitment

STUDENTS' AND ADVISER THESIS COMMITMENT and AGREEMENT

This agreement is binding the student/s and their thesis adviser for the duration and completion of their research project. As an agreement, the following will be expected from both parties.

- Student/s is/are expected to put /their work into their thesis.
- Faculty advisers are expected to guide students to produce their best work.
- Both jobs are time-consuming and must be carried out by students and faculty members working together in a disciplined way over a sustained period.
- Both parties are responsible for seeing that the necessary work is completed on time. A clear schedule should be made and agreed upon by both parties for their meetings to supervise the progressive elaboration of the research project.

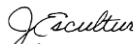
Whereas the thesis adviser is expected to perform the following duties:

- The thesis adviser is expected to mentor the students throughout the project development by guiding the preparation and completion of the project.
- Periodic meetings and performance reviews are expected to be given out by the thesis adviser to their adviser/s to monitor the status of the research project.
- The thesis adviser shall be the source of encouragement and support for the students to ensure that the system's objectives will be achieved.

The signature below indicates that both parties agree to the duties and responsibilities set forth as stipulated in the Thesis/Research Methodology Manual.

Title: *A Proposed Bataan Clothing Management Portal*

Course/Section: BS Information Technology – NW4C

Advisee's Full Name Signature/s/Date	Adviser's Full Name
Signature/Date	
	
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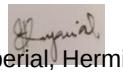	
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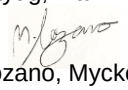
Layug, Mark Paulo C.	
	
Lozano, Myckel C.	

APPENDIX C

Milestone Contract and Checklist

This contract is authorized in Regulations for four-year BS Information Technology, Bs Computer Science, and BS Entertainment and Multimedia Computing. The student shall submit the contract for approval of the college responsible for the thesis in accordance with the deadlines stipulated. Any changes to the contract during its duration (e.g., syllabus, adviser, leave of absence/extension, etc.) should be processed by the college.

1. **STUDENTS DETAILS** (Last Name, First Name, Middle Initial)
   Member 1:
   Escultura, Justin P.
   Member 2:
   Imperial, Hermie C.
   Member 3:
   Layug, Mark Paulo C.
   Member 4:
   Lozano, Myckel C.

2. ADVISER(S)

State the name of the principal adviser and any co-adviser(s) or external adviser(s). The principal adviser has the overall responsibility for following up the contract on behalf of the college and ensuring the student receives academic supervision for the entire duration of the contract. The student has the right to receive academic supervision during the period he/she shall work on their undergraduate thesis (in accordance with the program description). If the adviser plans to have a sabbatical during the duration of the contract, the student should be informed of this at the time of entering into the contract.

Principal adviser:	**Office address/Phone/E-mail:**
Cherry A. Collera	**237-2010**

Co-/external adviser: _____

3. THESIS PROJECT

a. Working Title: Bataan Clothing Management Portal

The copy of the approved Title Proposal should be attached. It should include

- Research Problems
- Methodology
- Objectives
- Schedule/timetable
  Technical/Scientific partners (if any)

b. Implementation of Thesis Project:

Each group members takes responsibility for the project's objectives. All students are entitled to implement their theses on a group basis which will consist of 2-4 members. However, 5 members will be permitted if the class population exceeded the grouping requirements.

Group project with 4 members

c. Timetable for thesis project

- **Date of Approval – Title Defense** **March 11, 2021**
- **Date of Approval – Proposal Defense** **May 19, 2021**
- **Date of Approval – Final Defense** **January 12, 2022**

- **Date of Book Submission** _____

d. Planned Progress:

For part-time students, the academic progress must constitute a minimum__%. Undergraduate theses of 30 credits should normally be implemented on a full-time basis. Students who have engagements as part-time lab assistants and equivalent may apply for the length of study to be adjusted.

- Full time student (100%)
- Part-time student____ %

4. REQUIREMENTS FOR EQUIPMENT/RESOURCES

In the event that resources at an external institution shall be used, this must be specified in point 6 b)

a. The student's place of work (office/lab):

b. Requirements for equipment/resources:

Will, there be a requirement for (any of) the following resources during the thesis project:

Access to/purchase of equipment or software **PLEASE SPECIFY**
Access to systems **PLEASE SPECIFY**
Access to background information and data(set) **PLEASE SPECIFY**
Expenses (if any):
Approved by the person responsible for resources at the college:
Approved by the person responsible for resources at the external institution:

5 NOTES

6. SIGNATURES

The student, principal adviser, other advisers, and college dean have reached agreements concerning all points covered in the contract.

Student/Date: **Principal Adviser/Date:**

Co-/External Adviser/Date: **Co-/External Adviser/Date:**

College Dean:

APPENDIX D
LETTER OF INTENT

April 20, 2021

Mr. Mark Nicholai Layug
Business Owner, Region III
Nullify
#98 Maria Remedios Subdivision,
Orion, Bataan

Dear Sir:

Good day!

We, the 3rd year students of Bachelor of Science in Information Technology major in Network and Web Application, are currently enrolled in ICTC2023 (Capstone Project I) course. The final requirement of this course is to create a Bataan Clothing Management Portal.

At this moment, we are looking for a company, an agency or an organization which will help us to explore our study and to start with the development of the system.

In this regard, we humbly ask your good office to allow us to conduct a **Virtual Interview** during your available time this week. A *Virtual Invitation to Interview link* will be sent to your email once you have agreed to our request.

You can rest assured that any information you share with us will be treated confidentially. We are looking forward that we can be partners in this endeavor. Thank you very much and more power!

Very truly yours,

Escultura, Justin P.

Imperial, Hermie C.

Layug, Mark Paulo C.

Lozano, Myckel C.

Endorsed by:

Cherry A. Collera
ICTC2023 Instructor

Noted by:

Cristina G. Rivera, MSCS
Dean, CICT

Approved by:

Mr. Mark Nicholai Layug
Local Brand Owner

APPENDIX E
PRE-SURVEY RESULT / TRANSCRIPT OF INTERVIEW

Title of the study: Bataan Clothing Management Portal

Date and time: December 10, 2021 1:00 PM

Venue: Orion, Bataan

Proponent: Do you have a physical store or only selling you products online?

Interviewee: We don't have a physical store. We only use Facebook to sell our products.

Proponent: Can you tell us the history of your clothing brand?

Interviewee: We established our brand name Nullify in 2019. At that time, the brand name was originally called Project Nik but we changed it to Nullify after two weeks.

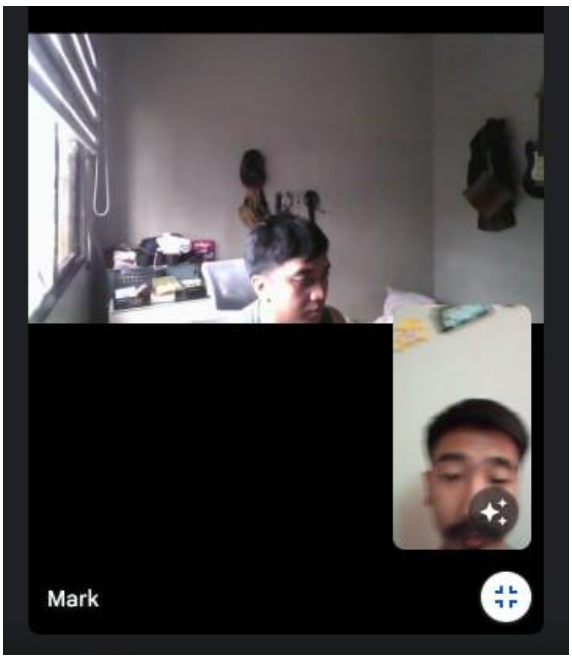
Proponent: What mode of payment do you use?

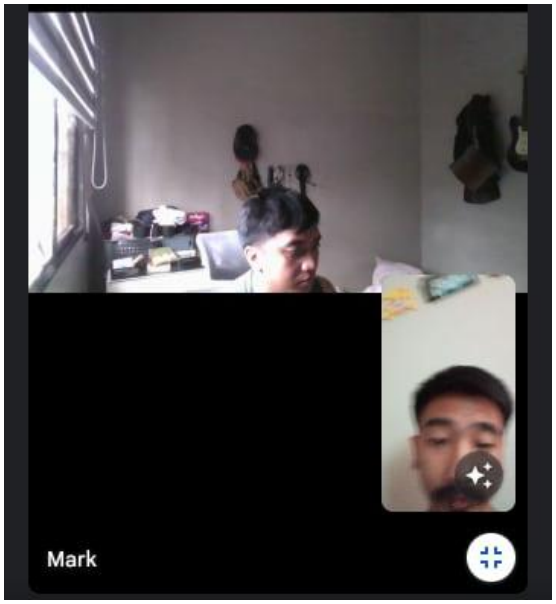
Interviewee: We use cash-on-delivery (cod) or meeting up with the customer to receive the payment.

Proponent: Last question, do you think that our proposed system will able to help you?

Interviewee: Yes, because for someone like us who just started with our business and only use Facebook, we need another place where we can promote and sell our products.

Proponent: Thank you, Mr. Mark Nicholai Layug.


Mark


Mark

APPENDIX F

TOPICAL OUTLINE

Topical Outline

Bataan Clothing Management Portal

1. INTRODUCTION

1.1 Clothing Store Management System

1.2 Clothing Management Portal

1.3 Transaction Processing

1.4 Clothing Management Portal

2. **BASIC CONCEPTS**

2.1 Database Management System

2.2 Web Programming

3. EVALUATION SCHEME

3.1 ISO 25010

3.1.1 Functional Suitability

3.1.1.1 Functional completeness - Degree to which the set of functions covers all the specified tasks and user objectives.

3.1.1.2 Functional correctness - Degree to which a product or system provides the correct results with the needed degree of precision.

3.1.1.3 Functional appropriateness - Degree to which the functions facilitate the accomplishment of specified tasks and objectives.

3.1.2 Performance Efficiency

3.1.2.1 Time behavior - Degree to which the response and processing times and throughput rates of a product or system, when performing its functions, meet requirements.

3.1.2.2 Resource utilization - Degree to which the amounts and types of resources used by a product or system, when performing its functions, meet requirements

3.1.2.3 Capacity - Degree to which the maximum limits of a product or system parameter meet requirements.

3.1.3 Compatibility

3.1.3.1 Co-existence - Degree to which a product can perform its required functions efficiently while sharing a common environment and resources with other products, without detrimental impact on any other product

3.1.3.2 Interoperability - Degree to which two or more systems, products or components can exchange information and use the information that has been exchanged.

3.1.4 Usability

3.1.4.1 Appropriateness recognizability - Degree to which users can recognize whether a product or system is appropriate for their needs.

3.1.4.2 Learnability - Degree to which a product or system can be used by specified users to achieve specific goals of learning to use the product or system with effectiveness, efficiency, freedom from risk and satisfaction in a specified context of use.

3.1.4.3 Operability - Degree to which a product or system has attributes that make it easy to operate and control.

3.1.4.4 User error protection. Degree to which a system protects users against making errors.

3.1.4.5 User interface aesthetics - Degree to which a user interface enables pleasing and satisfying interaction for the user.

3.1.4.6 Accessibility - Degree to which a product or system can be used by people with the widest range of characteristics and capabilities to achieve a specified goal in a specified context of use.3.1.5 Reliability

3.1.4.7 Functional completeness - Degree to which the set of functions covers all the specified tasks and user objectives.

3.1.4.8 Functional correctness - Degree to which a product or system provides the correct results with the needed degree of precision.

3.1.4.9 Functional appropriateness - Degree to which the functions facilitate the accomplishment of specified tasks and objectives.

3.1.5 Reliability

3.1.5.1 Maturity - Degree to which a system, product or component meets needs for reliability under normal operation.

3.1.5.2 Availability - Degree to which a system, product or component is operational and accessible when required for use.

3.1.5.3 Fault tolerance - Degree to which a system, product or component operates as intended despite the presence of hardware or software faults.

3.1.5.4 Recoverability - Degree to which, in the event of an interruption or a failure, a product or system can recover the data directly affected and re-establish the desired state of the system.

3.1.6 Security

3.1.6.1 Confidentiality - Degree to which a product or system ensures that data are accessible only to those authorized to have access.

3.1.6.2 Integrity - Degree to which a system, product or component prevents unauthorized access to, or modification of, computer programs or data.

3.1.6.3 Non-repudiation - Degree to which actions or events can be proven to have taken place so that the events or actions cannot be repudiated later.

3.1.6.4 Accountability - Degree to which the actions of an entity can be traced uniquely to the entity.

3.1.6.5 Authenticity - Degree to which the identity of a subject or resource can be proved to be the one claimed.

3.1.7 Maintainability

3.1.7.1 Modularity - Degree to which a system or computer program is composed of discrete components such that a change to one component has minimal impact on other components.

3.1.7.2 Reusability - Degree to which an asset can be used in more than one system, or in building other assets.

3.1.7.3 Analyzability - Degree of effectiveness and efficiency with which it is possible to assess the impact on a product or system of an intended change to one or more of its parts, or to diagnose a product for deficiencies or causes of failures, or to identify parts to be modified.

3.1.7.4 Modifiability - Degree to which a product or system can be effectively and efficiently modified without introducing defects or degrading existing product quality.

3.1.7.5 Testability - Degree of effectiveness and efficiency with which test criteria can be established for a system, product or component and tests can be performed to determine whether those criteria have been met.

3.1.8 Portability

3.1.8.1 Adaptability - Degree to which a product or system can effectively and efficiently be adapted for different or evolving hardware, software or other operational or usage environments.

3.1.8.2 Installability - Degree of effectiveness and efficiency with which a product or system can be successfully installed and/or uninstalled in a specified environment.

3.1.8.3 Replaceability - Degree to which a product can replace another specified software product for the same purpose in the same environment.

4. SIMILAR MACHINES / APPLICATIONS

4.1 An Integrated Management System for Online Shopping Portals

Zulaikha et al. (2019) stated that according to the researchers, customers can enjoy online shopping 24 hours a day, seven days a

week. Customers can purchase any goods or projects at any time and from any place. Online shopping is more convenient than in-store shopping since shoppers can complete their requirements with the click of a mouse without leaving their home.

Features:

1. Process customer orders

2. Feedback function

3. Registration/Login

4.2 Online Shopping System

Sankhala et al. (2016) said that online shopping aims to increase access to care as well as service continuity and performance. Case managers are responsible for a range of activities, depending on the particular context and location, ranging from connecting customers to providers to directly delivering intensive shopping and distribution services themselves.

Features:

1. Registration/Login

2. Process orders

4.3 Fashion Shop

Imran (2017) stated that the fashion shop project was built with HTML, PHP, CSS, JavaScript, and MySQL. An online retail store that will enable developing-country vendors, both formal and informal, to advertise and sell their products on the internet. This will enable rural communities to sell their wares to the rest of the world through the internet.

Features:

1. Registration/Login

2. Process orders

5. DESIGN CONSIDERATIONS / CRITERIA IN TERMS OF RELIABILITY

5.1 Software Requirements

5.1.1 Microsoft Windows OS

5.1.2 PHP

5.1.3 MySQL

5.1.4 Visual Studio Code

5.2 Hardware Requirements

5.2.1 Computer unit

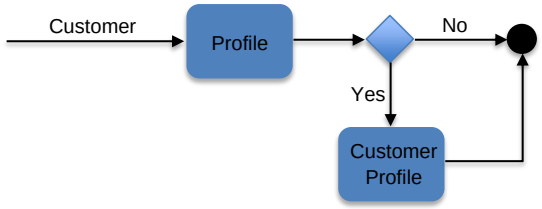
5.2.2 Router

5.2.3 Mobile Phone

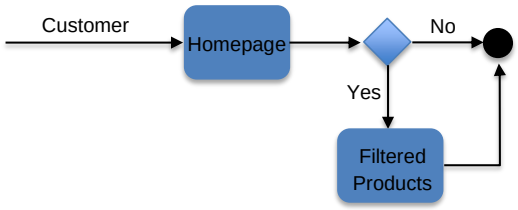
APPENDIX G

CHILD DIAGRAMS

Editing Profile



Searching Products



APPENDIX H
DATA DICTIONARY

DATA DICTIONARY

Data Dictionary				
System Name: Bataan Clothing Management Portal				
Subject: users Table				
PK	FK	Field Name	Data Type	Description
Yes	Yes	id	number	Customer's identification number
	No	name	text	Customer's name
	No	email	text	Customer's email
	No	password	text	Customer's password
	No	address	text	Customer's address
	No	contact_number	number	Customer's phone number

Data Dictionary				
System Name: Bataan Clothing Management Portal				
Subject: Seller Table				
PK	FK	Field Name	Data Type	Description
Yes	Yes	id	number	Seller's identification table
	No	brand_name	text	Brand's name
	No	owner_name	text	Owner's name
	No	password	text	Password
	No	email	text	Email
	No	cnumber	number	Seller's phone number

Data Dictionary				
System Name: Bataan Clothing Management Portal				
Subject: admin Table				
PK	FK	Field Name	Data Type	Description
Yes	Yes	id	number	Admin’s ID number
	No	username	image	Admin’s username
	No	password	text	Admin’s password

Data Dictionary				
System Name: Bataan Clothing Management Portal				
Subject: brand_names Table				
PK	FK	Field Name	Data Type	Description
Yes	Yes	brand_id	number	Brand’s ID
	No	brand_name	text	Brand’s name
	No	brand_logo	Image	Brand’s Logo
	Yes	seller_name	text	Seller’s name
	Yes	seller_id	number	Seller’s ID

Data Dictionary				
System Name: Bataan Clothing Management Portal				
Subject: order_list Table				
PK	FK	Field Name	Data Type	Description
Yes	Yes	order_id	number	Order’s ID

	Yes	seller_id	number	Seller's ID
	Yes	product_id	number	Product's ID
	Yes	user_id	number	User's ID
	No	status	number	Status of the product
	No	upd_date	date	Update date
	No	buy_date	date	Buy date
	No	accept_date	date	Accept date
	No	ship_date	date	Ship date
	No	packed_date	date	Packed date
	No	cancel_date	date	Cancel date
	No	receive_date	date	Receive date
	Yes	prod_size	date	Product size
	Yes	prod_quantity	number	Product quantity
	Yes	prod_price	number	Product price
	Yes	deliver_loc	text	Delivery location

Data Dictionary				
System Name: Bataan Clothing Management Portal				
Subject: product_cart Table				
PK	FK	Field Name	Data Type	Description
Yes	Yes	cartID	number	Cart's ID
	Yes	product_id	number	Product's ID
	Yes	user_id	number	User's ID
	No	timestamp	date	Product added date

Data Dictionary				
System Name: Bataan Clothing Management Portal				
Subject: product_desc Table				
PK	FK	Field Name	Data Type	Description
Yes	Yes	product_id	number	Product's ID
	Yes	brand_id	number	Brand's ID
	Yes	brand_name	number	Brand name
	No	prod_name	text	Product name
	No	prod_img	image	Product image
	No	prod_color	text	Product color
	No	prod_gend	text	Product gender
	No	prod_type	text	Product type
	No	prod_desc	text	Product description

Data Dictionary				
System Name: Bataan Clothing Management Portal				
Subject: product_rate Table				
PK	FK	Field Name	Data Type	Description
Yes	No	rate_id	number	Rate ID
	Yes	product_id	number	Product ID
	Yes	order_name	text	Order name
	Yes	rater_id	number	Customer ID
	Yes	rater_name	text	Customer name
	No	rate_value	number	Rate value

	No	rate_desc	text	Rate descripton
	No	rate_time	date	Rate date
	No	rateImg	image	Rate image

Data Dictionary				
System Name: Bataan Clothing Management Portal				
Subject: product_value Table				
PK	FK	Field Name	Data Type	Description
Yes	Yes	product_id	number	Product's ID
	Yes	brand_name	number	Brand's name
	Yes	prod_name	text	Prod name
	No	small	text	Product size
	No	medium	text	Product size
	No	large	text	Product size
	No	x_large	text	Product size
	No	s_price	number	Product price
	No	m_price	number	Product price
		l_price	number	Product price
		xl_price	number	Product price

Data Dictionary				
System Name: Bataan Clothing Management Portal				
Subject: requestaccounts Table				
PK	FK	Field Name	Data Type	Description

Yes	Yes	id	number	Seller's ID
	No	brandname	text	Brand's name
	No	ownername	text	Seller's name
	No	password	text	Seller's password
	No	email	text	Seller's email
	No	cnumber	number	Seller's number
	No	message	text	message
	No	permit	image	Seller's permit

Data Dictionary				
System Name: Bataan Clothing Management Portal				
Subject: seller_report Table				
PK	FK	Field Name	Data Type	Description
Yes	Yes	report_id	number	Report ID
	Yes	reporter_id	number	Customer's ID
	Yes	seller_id	number	Seller's ID
	No	report_title	text	Report title
	No	report_desc	text	Report description
	No	report_date	date	Report date
	No	report_file	image	Report image
	No	isValid	text	Valid

APPENDIX I
EVALUATION INSTRUMENT

Good day!

We are currently developing our project entitled *Bataan Clothing Management Portal*. Please evaluate our system based on the criteria below. Thank you.

NAME: _____ AGE: _____

COMPANY/SCHOOL: _____ COURSE/POSITION: _____

INSTRUCTION: Read each question carefully and check (*I*) the corresponding number of choices.

5 – EXCELLENT 4 – VERY GOOD 3 – GOOD 2 – FAIR 1 – POOR

* Please use appropriate ratings for acceptance testing

FUNCTIONAL SUITABILITY	5	4	3	2	1
The system covers all the specified tasks and user objectives.					
The system provides the correct results with the needed degree of precision					
The system facilitates the accomplishment of specified tasks and objectives.					
PERFORMANCE EFFICIENCY					
The response and processing times of the system meet the requirements.					
The amounts and types of resources used by the system meet requirements					
The maximum limits of the system meet requirements.					
COMPATIBILITY					
The system can perform its required functions efficiently while sharing a common environment and resources with other systems.					
The system or system components can exchange information to other systems.					
USABILITY					
The system is appropriate to the needs of the user.					
The system can be used by specified users with effectiveness, efficiency, freedom from risk and satisfaction.					
The system has attributes that make it easy to operate and control.					
The system protects users from making errors.					
The user interface enables pleasing and satisfying interaction for the user.					
The system can be used by people with the widest range of characteristics and capabilities.					
RELIABILITY					
The system meets needs for reliability under normal operation.					

The system is operational and accessible when required for use.					
The system operates as intended despite the presence of hardware or software faults.					
The system can recover affected data and re-establish the desired state.					
SECURITY					
The system ensures that data are accessible only to those authorized to have access.					
The system prevents unauthorized access to, or modification of, computer programs or data.					
The actions or events can be proven to have taken place and cannot be rejected later.					
The actions of users can be traced.					
The identity of a user can be authenticated and proved to be the one claimed.					
MAINTAINABILITY					
The system is composed of modules such that a change to one component has minimal impact on other components.					
A system component can be used in more than one system, or in building other components.					
The system can be assessed and diagnosed for deficiencies or errors.					
The system can be effectively and efficiently modified without introducing defects or degrading quality.					
The system can be tested to determine whether test criteria have been met.					
PORTABILITY					
The system can effectively and efficiently be adapted for different or evolving hardware or software environments.					
The system can be successfully installed and/or uninstalled in a specified environment.					
The system can replace another specified software product for the same purpose in the same environment.					

Are you in favor of implementing the *Bataan Clothing Management Portal?*
_____YES _____NO

Comments and Suggestions:_____
_____
_____

Proponents:

Escultura, Justin P.

Layug, Mark Paulo C.
Imperial, Hermie C.
Lozano, Myckel C.

BSIT NW4C

APPENDIX J
Summary of Evaluation Results

SOFTWARE QUALITY FACTOR	AVERAGE MEAN	DESCRIPTIVE INTERPRETATION
A. Functional Suitability	3.73	Very Good
B. Performance Efficiency	3.70	Very Good
C. Compatibility	3.56	Very Good
D. Usability	3.67	Very Good
E. Reliability	3.70	Very Good
F. Security	3.76	Very Good
G. Maintainability	3.69	Very Good
H. Portability	3.71	Very Good
OVERALL MEAN:	3.69	Very Good

APPENDIX K
WEEKLY PROGRESS REPORT

Weekly Progress Report

DATE: 23/03/21

FROM: **Group 6**
NW3C
Bataan Clothing Management Portal
RE : **PROGRESS STATUS REPORT**

SOFTWARE: (#%)

Date: 22/03/21
Finished Activity: Design of the system
Description: We did the design of the of the possible page that we will put in our system.

Date: 25/03/21
Next Activity: Implementing the design
Description: The programmer will implement the design in our system.

HARDWARE: (#%)

Date: 23/03/21
Finished Activity: Topical Outline, Transcript of Interview, Weekly Progress Report
Description: We finished the weekly activity.

Date:
Next Activity:
Description: .

DOCUMENTATION: (#%)

Date: 23/03/21
Finished Activity: Documentation of Topical Outline
Description: Documented the activity this week.

Weekly Progress Report

DATE: 31/03/21

FROM: **Group 6**
NW3C
Bataan Clothing Management Portal
RE : **PROGRESS STATUS REPORT**

SOFTWARE: (#%)

Date: 26/03/21

Finished Activity: Design of the system

Description: We did the design of the of the possible page that we will put in our system.

Date: 03/04/21

Next Activity: Register and Log-in

Description: We will put a admin, seller, customer register and log in function.

HARDWARE: (#%)

Date: 31/03/21

Finished Activity: Topical Outline, Transcript of Interview, Weekly Progress Report.

Description: We finished the draft of chapter 1.

Date:

Next Activity:

Description: .

DOCUMENTATION: (#%)

Date: 31/03/21

Finished Activity: Documentation of the creation of chapter 1.

Description: Documented the activity this week.

Weekly Progress Report

DATE: 04/20/21

FROM: **Group 6**
NW3C
Bataan Clothing Management Portal
RE : **PROGRESS STATUS REPORT**

SOFTWARE: (#%)

Date: 04/20/21

Finished Activity: Draft Chapter 2, and Wireframes

Description: We finished the draft copy of chapter 2 and the wireframe of the proposed system.

Date: 04/27/21

Next Activity: Revised copy of chapter 2

Description: After checking the draft copy, we will revise the chapter 2.

HARDWARE: (#%)

Date: 31/03/21

Finished Activity: Topical Outline, Transcript of Interview, Weekly Progress Report.

Description: We finished the draft of chapter 1.

Date:

Next Activity:

Description: .

DOCUMENTATION: (#%)

Date: 04/20/21

Finished Activity: Documention of chapter 2.

Description: Documented the creation of chapter 2.

Weekly Progress Report

DATE: 08/12/21

FROM: **Group 6**
NW4C
Bataan Clothing Management Portal
RE : **PROGRESS STATUS REPORT**

SOFTWARE: (#%)

Date: 8/12/21
Finished Activity: Improved the capabilities.
Description: We improved the system capabilities.
Date: 10/12/21
Next Activity: We will keep improving the capabilities
Description: After presenting our system, we will keep improving our system.

DOCUMENTATION: (33%)

Date: 08/12/21
Finished Activity: Documention of updating the survey
Description: Documented the updating the survey questions.
Date:
Next Activity:
Description:

Weekly Progress Report

DATE: 09/27/21

FROM: **Group 6**
NW4C
Bataan Clothing Management Portal
RE : **PROGRESS STATUS REPORT**

SOFTWARE: (#%)

Date: 09/23/21

Finished Activity: Updated the design of the system.

Description: We updated the design of the system to make it easier to use.

Date: 09/28/21

Next Activity: We will improve the capabilities based on the prof's recommendation.

Description: After presenting our system, we will update the capabilities and use the prof's recommendation.

DOCUMENTATION: (33%)

Date: 09/23/21

Finished Activity: Documention of revising chapter 1.

Description: Documented the revising of chapter 1.

Date: 9/28/21

Next Activity: Revision of chapter 1-3.

Description: Changes of chapter 1-3.

Weekly Progress Report

DATE: 10/6/21

FROM: **Group 6**
NW4C
Bataan Clothing Management Portal
RE : **PROGRESS STATUS REPORT**

SOFTWARE: (#%)

Date: 10/5/21
Finished Activity: Improved the system's capabilities
Description: We improve the system's capability based on recommendation
Date: 10/9/21
Next Activity: We will add the next capability
Description: After presenting our system, we will add the next capability

DOCUMENTATION: (33%)

Date: 10/6/21
Finished Activity: Documentation of preliminary pages.
Description: Documented the creation of preliminary pages.
Date:
Next Activity:
Description:

Weekly Progress Report

DATE: 10/17/21

FROM: **Group 6**
NW4C
Bataan Clothing Management Portal
RE : **PROGRESS STATUS REPORT**

SOFTWARE: (#%)

Date: 10/13/21

Finished Activity: Improved the system's capabilities

Description: We improve the system's capability based on recommendation

Date: 10/17/21

Next Activity: We will keep improving the capabilities

Description: After presenting our system, we will be improving the existing capabilities

DOCUMENTATION: (33%)

Date: 10/16/21

Finished Activity: Documentation of bibliography.

Description: Documented the creation of bibliography.

Date:

Next Activity:

Description:

Weekly Progress Report

DATE: 10/20/21

FROM: **Group 6**
NW4C
Bataan Clothing Management Portal
RE : **PROGRESS STATUS REPORT**

SOFTWARE: (#%)

Date: 10/18/21

Finished Activity: Improved the system's capabilities

Description: We improved the system's capability based on recommendation

Date: 10/24/21

Next Activity: We will add the next capability

Description: After presenting our system, we will add the next capability

DOCUMENTATION: (33%)

Date: 10/19/21

Finished Activity: Documentation of draft copy of chapter 4

Description: Documented the creation of draft copy of chapter 4

Date:

Next Activity:

Description:

Weekly Progress Report

DATE: 11/2/21

FROM: **Group 6**
NW4C
Bataan Clothing Management Portal
RE : **PROGRESS STATUS REPORT**

SOFTWARE: (#%)

Date: 10/30/21

Finished Activity: Improved the system's capabilities

Description: We improve the system's capability based on recommendation

Date: 11/2/21

Next Activity: We will add the next capability

Description: After presenting our system, we will add the next capability

DOCUMENTATION: (33%)

Date: 10/30/21

Finished Activity: Documentation of questionnaire.

Description: Documented the creation of questionnaire.

Date:

Next Activity:

Description:

Weekly Progress Report

DATE: 13/11/21

FROM: **Group 6**
NW4C
Bataan Clothing Management Portal
RE : **PROGRESS STATUS REPORT**

SOFTWARE: (68.57%)

Date: 10/11/21
Finished Activity: Uploaded the System
Description: We Uploaded the system to check the capabilities
Date: 4/11/21
Next Activity: We will add the next capability
Description: After presenting our system, we will add the next capability

DOCUMENTATION: (33%)

Date: 12/11/21
Finished Activity: Documentation of survey questions
Description: Documented the updating of survey questions
Date:
Next Activity:
Description:

Weekly Progress Report

DATE: 18/11/21

FROM: **Group 6**
NW4C
Bataan Clothing Management Portal
RE : **PROGRESS STATUS REPORT**

SOFTWARE: (68.57%)

Date: 16/11/21

Finished Activity: Added the SMS notification.

Description: We added the sms notification.

Date: 18/11/21

Next Activity: We will keep improving the capabilities

Description: After presenting our system, we will keep improving our system.

DOCUMENTATION: (33%)

Date: 18/6/21

Finished Activity: Documentation of updating the survey

Description: Documented the updating the survey questions.

Date:

Next Activity:

Description:

Weekly Progress Report

DATE: 02/12/21

FROM: **Group 6**
NW4C
Bataan Clothing Management Portal
RE : **PROGRESS STATUS REPORT**

SOFTWARE: (68.57%)

Date: 30/11/21
Finished Activity: Improved the SMS notification.
Description: We improved the SMS notification.
Date: 03/12/21
Next Activity: We plan to keep improving the other capabilities
Description: We will keep improving the system.

DOCUMENTATION: (33%)

Date: 30/11/21
Finished Activity: Improving SMS notification.
Description: Documented the improving of SMS notification.
Date:
Next Activity:
Description:

Weekly Progress Report

DATE: 8/12/21

FROM: **Group 6**
NW4C
Bataan Clothing Management Portal
RE : **PROGRESS STATUS REPORT**

SOFTWARE: (68.57%)

Date: 08/12/21
Finished Activity: Improved the capabilities
Description: We improved the system capabilities.
Date: 10/12/21
Next Activity: We will keep improving the capabilities
Description: After presenting our system, we will keep improving our system.

DOCUMENTATION: (33%)

Date: 08/12/21
Finished Activity: Documentation of updating the survey
Description: Documented the updating the survey questions.
Date:
Next Activity:
Description:

APPENDIX L
COMPLETION CHECKLIST

MAIN CAMPUS
College of Information and Communications Technology
City of Balanga, 2100 Bataan
(047) 237-2010 | www.bpsu.edu.ph | bpsu.cict2016@gmail.com

COMPLETION CLEARANCE FOR THESIS OR CAPSTONE

STUDENT INFORMATION

NAME: Justin P. Escultura					
YEAR LEVEL:	3rd	**PROGRAM:**	BSIT	**MAJOR:**	NW
SEMESTER:		2nd	**ACADEMIC YEAR:**		2021

COURSE TO COMPLETE

COURSE CODE: ICTC2023

COURSE TITLE: Capstone Project 1

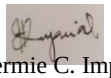
RESEARCH TITLE: Bataan Clothing Management Portal

PANELISTS NAME	SIGNATURE and DATE
PANEL A	
PANEL B	
PANEL C	
NOTED BY: Cherry A. Collera Signature over Printed name of Adviser	J. Escultura Justin P. Escultura Signature over Printed name of Student

MAIN CAMPUS
College of Information and Communications Technology
City of Balanga, 2100 Bataan
(047) 237-2010 | www.bpsu.edu.ph | bpsu.cict2016@gmail.com

COMPLETION CLEARANCE FOR THESIS OR CAPSTONE

STUDENT INFORMATION					
NAME: Hermie C. Imperial					
YEAR LEVEL:	3rd	**PROGRAM:**	BSIT	**MAJOR:**	NW
SEMESTER:	2nd		**ACADEMIC YEAR:**		2021
COURSE TO COMPLETE					
COURSE CODE: ICTC2023					
COURSE TITLE: Capstone Project 1					
RESEARCH TITLE: Bataan Clothing Management Portal					

PANELISTS NAME	**SIGNATURE and DATE**
PANEL A	
PANEL B	
PANEL C	
NOTED BY: Cherry A. Collera Signature over Printed name of Adviser	 Hermie C. Imperial Signature over Printed name of Student

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City of Balanga, 2100 Bataan
(047) 237-2010 | www.bpsu.edu.ph | bpsu.cict2016@gmail.com

COMPLETION CLEARANCE FOR THESIS OR CAPSTONE

STUDENT INFORMATION					
NAME: Mark Paulo C. Layug					
YEAR LEVEL:	3rd	**PROGRAM:**	BSIT	**MAJOR:**	NW
SEMESTER:	2nd		**ACADEMIC YEAR:**		2021
COURSE TO COMPLETE					
COURSE CODE: ICTC2023					
COURSE TITLE: Capstone Project 1					
RESEARCH TITLE: Bataan Clothing Management Portal					

PANELISTS NAME	**SIGNATURE and DATE**
PANEL A	
PANEL B	
PANEL C	
NOTED BY: Cherry A. Collera Signature over Printed name of Adviser	Mark Paulo C. Layug Signature over Printed name of Student

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City of Balanga, 2100 Bataan
(047) 237-2010 | www.bpsu.edu.ph | bpsu.cict2016@gmail.com

COMPLETION CLEARANCE FOR THESIS OR CAPSTONE

STUDENT INFORMATION					
NAME: Myckel C. Lozano					
YEAR LEVEL:	3rd	**PROGRAM:**	BSIT	**MAJOR:**	NW
SEMESTER:	2nd		**ACADEMIC YEAR:**		2021
COURSE TO COMPLETE					
COURSE CODE: ICTC2023					
COURSE TITLE: Capstone Project 1					
RESEARCH TITLE: Bataan Clothing Management Portal					

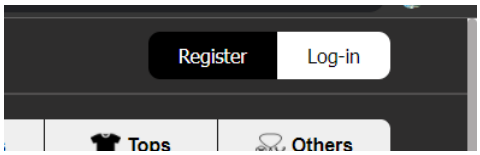
PANELISTS NAME	**SIGNATURE and DATE**
PANEL A	
PANEL B	
PANEL C	
NOTED BY: Cherry A. Collera Signature over Printed name of Adviser	 Myckel Lozano Signature over Printed name of Student

APPENDIX M
USER MANUAL

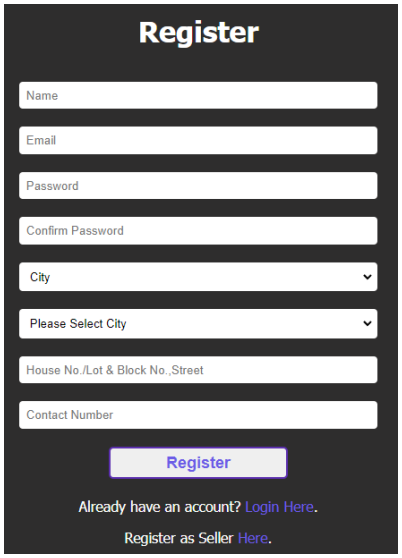
How to use Bataan Clothing Management Portal

When you open the web app, it will lead you to the homepage where you can see the posted products and about us. You can also see the register and log in feature in the top right of the page.

1. If you already have a customer account, you can just go to the login page and put email and password to login.
2. If you are a new user (Customer):
   A. Click the register button

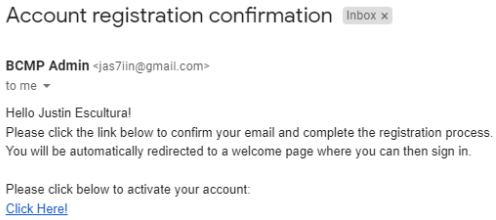


   B. Fill up the information needed to register.



C. After you fill up the needed information, you can now click register.

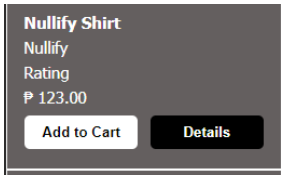
D. You will need to verify your email address to complete your registration.



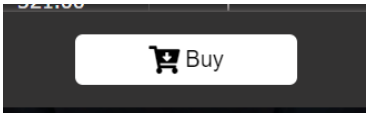
E. After you verify your email address, you will be directed to the login page.

3. If you want to buy products:

A. At any product, just click the details button.



B. After you click the details button, click the buy button and now you can select the size, quantity, and address.



C. After you bought a product, click your profile to see your cart and ordered products.

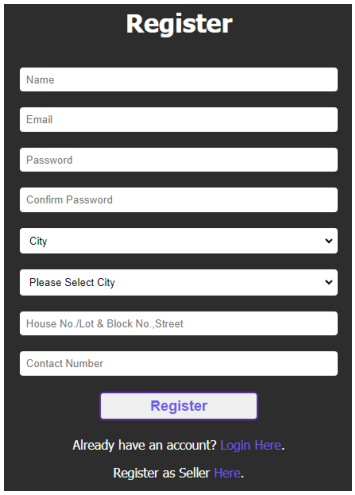
4. If you want to edit your information

A. To edit your profile, go to your profile and click edit profile button

B. After you click the edit profile, you can now change your name, password, address, and mobile number.

5. If you already have a seller account, you can just go to the seller login page
6. If you are a new user (Seller):

A. Click register and click the register as seller button.



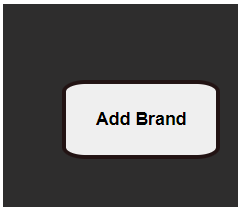
B. After you click the register as seller, fill up the needed information to register and click register.

C. After you click the register button, you will need to wait for the admin to accept you registration request as a seller.

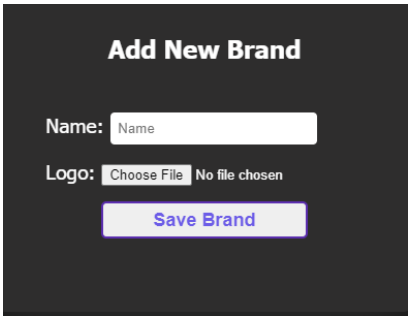
D. If the admin accepts your request, you can now login.

7. If you want to add your brand:

   A. Click brand and click the add brand button.



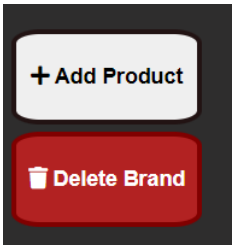
   B. After you click the add brand button, you can now enter you brand name and logo



   C. After you enter your brand name and logo, just click save brand.

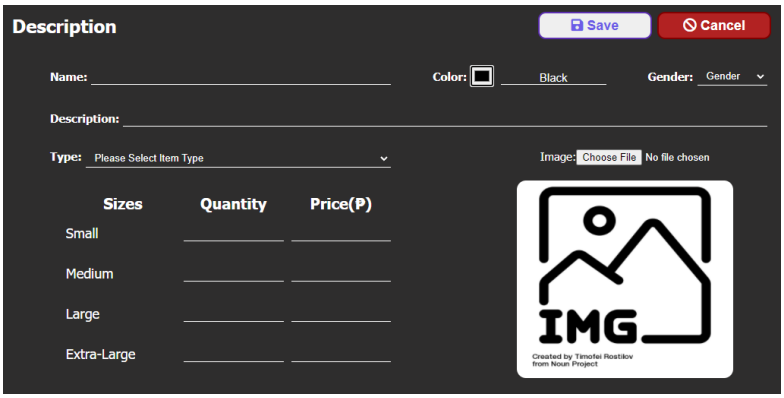
8. If you want to add product:

   A. Click your added brand and click the add product button.



   B. After you click the add product button, you will need to enter the

product's information.



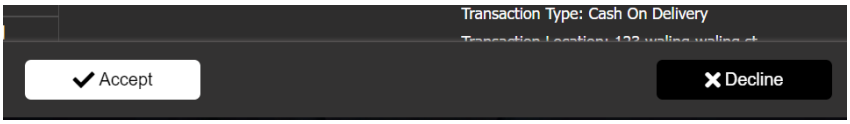
C. After you enter the product's information, just click the save button.

9. If you want to accept an order:

A. Click you profile

B. After you click your profile, you will see the orders, to pack, to ship, shipped, complete, and the canceled products. You can click the details of the ordered product.

C. After you click the details of the ordered product, you can now accept or decline the ordered product.



RESEARCHER'S PROFILE

Contact

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Personal Information

Civil Status	:	Single
Sex	:	Male
Date of birth	:	March 08,1999
Place of birth	:	Balanga, Bataan
Religion	:	Catholic
Height	:	156 cm
Weight	:	60 kg

I hereby certify that the above-stated information is true and correct to the best of my knowledge and belief.

EDUCATIONAL BACKGROUND

TERTIARY : Bataan Peninsula State University
Bachelor of Science in Information Technology
Major in Network and Web Application
2018-present

SECONDARY: Bataan National Highschool
2011-2018

Primary : Cataning Elementary School
2005-2011

COMPUTER SKILLS

- Proficient in Microsoft Office (Word, Excel, PowerPoint, Access)
- Proficient in Adobe (Photoshop)
- Knowledgeable in Web App Development (HTML, CSS, PHP, MySQL)
- Basic Knowledge in App Development (Java)

SEMINARS/TRAININGS ATTENDED

TRAINEE (OJT)
ALMARK Balanga
January 2018

Civic Welfare Training Service
Bataan Peninsula State University
April 2019

PSITE RAITE
Bataan Peninsula State University
November 2021

CHARACTER REFERENCES

Crisanto Tuazon
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Ronaldo Sangalang
Kapitan
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09377225323

Contact

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hermsimperial25@gmail.com

Personal Information

Civil Status : Single

Sex : Female

Date of birth : November 25,1999

Place of birth : Limay, Bataan

Religion : Catholic

Height : 159 cm

Weight : 58 kg

I hereby certify that the above-stated information is true and correct to the best of my knowledge and belief.

EDUCATIONAL BACKGROUND

TERTIARY: Bataan Peninsula State University
Bachelor of Science in Information Technology
Major in Network and Web Application
2018-present

SECONDARY: Limay National High School
Limay Senior High School STEM

Primary: Limay Elementary School
2006-2012

COMPUTER SKILLS

- Proficient in Microsoft Office (Word, Excel, Powerpoint, Access)
- Proficient in Adobe (Photoshop)
- Knowledgeable in Web Design (HTML, CSS)
- Knowledgeable in Scripting Language (PHP, JavaScript)

SEMINARS/TRAININGS ATTENDED

TRAINEE (OJT)
Philippine Red Cross Bataan Chapter
November 2018

BASIC RESERVE OFFICER TRAINING CORPS
Bataan Peninsula State University
April 2019

PSITE RAITE
Bataan Peninsula State University
November 2021

AWARDS/RECOGNITION

- Remote Work and Virtual Collaboration
  March 2021
- Cyber Security Foundation Professional Certificate
  March 2021

CHARACTER REFERENCES

Noime E. Ramos
Senior High School Teacher
09985738321

Alina P. Lacson
Elementary Teacher
09484737219

Contact

Mark Paulo Layug

#98. Maria Remedios Subdivision

Orion, Bataan

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paulodgrv@gmail.com

Personal Information

Civil Status	:	Single
Sex	:	Male
Date of birth	:	January 7,2000
Place of birth	:	Balanga, Bataan
Religion	:	Catholic
Height	:	159 cm
Weight	:	50 kg

I hereby certify that the above-stated information is true and correct to the best of my knowledge and belief.

EDUCATIONAL BACKGROUND

TERTIARY: Bataan Peninsula State University
Bachelor of Science in Information Technology
Major in Network and Web Application
2018-present

SECONDARY: Jose Rizal Institute,Orion
Jose Rizal Institute - Senior High

Primary: Calungusan Elementary School Orion, Bataan.

COMPUTER SKILLS

- Proficient in Microsoft Office (Word, Excel, Powerpoint, Access)
- Proficient in Adobe (Photoshop)
- Knowledgeable in Web Design (HTML, CSS)
- Knowledgeable in Scripting Language (PHP, JavaScript)

SEMINARS/TRAININGS ATTENDED

Civic Welfare Training Service
Bataan Peninsula State University
April 2019

PSITE RAITE
Bataan Peninsula State University
November 2021

AWARDS/RECOGNITION

- Remote Work and Virtual Collaboration
  March 2021
- Cyber Security Foundation Professional Certificate
  March 2021

CHARACTER REFERENCES

Priciscilla Buenaventura	Chris Velasco
Highschool Adviser	Kapitan
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Contact

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Balanga Bataan

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myckellozano17@gmail.com

Personal Information

Civil Status	:	Single
Sex	:	Male
Date of birth	:	October 3,2000
Place of birth	:	Sta. Ana, Pampanga
Religion	:	Catholic
Height	:	163 cm
Weight	:	50 kg

I hereby certify that the above-stated information is true and correct to the best of my knowledge and belief.

EDUCATIONAL BACKGROUND

TERTIARY: Bataan Peninsula State University
Bachelor of Science in Information Technology
Major in Network and Web Application
2018-present

SECONDARY: City of Balanga National Highschool Eastwoods Academy

Primary: Cupang Elementary School

COMPUTER SKILLS

- Microsoft OFFICE (Word, Excel, PowerPoint)
- Knowledgeable in Web Design (HTML, CSS)
- Graphics Editing (Photoshop)

WORK EXPERIENCE

- Philhealth - Balanga Branch
  Office Staff Trainee (OJT)
  December 2017
- Flipp Burger and Wings
  Kitchen Crew
  April – September 2018

AWARDS/RECOGNITION

- Cyber Security Foundation Professional Certificate
  March 2021

CHARACTER REFERENCES

Eric Almoguerra
College & Senior High Teacher
EAST Academy
Ibayo Balanga City, Bataan

Jennice Anne Marie Tolentino
Senior High School Adviser
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