

Point of Sale System

By:

Dela Rosa, Aderieyan Timothy, G.

A Practicum Report Submitted to the School of Information Technology

In Partial Fulfillment of the Requirements for the Degree Program

Bachelor of Science in Computer Science

Mapua University

Date submitted

APPROVAL SHEET

Mapua Institute of Technology School of Information Technology

This is to certify that I/we have supervised the preparation of and read the practicum report prepared by Aderieyan Timothy G. Dela Rosa and that the said practicum has been submitted for final examination by the Oral Examination Committee.

James T. Linga

Technical Adviser/OJT Supervisor

As members of the Oral Examination Committee, we certify that we have examined this practicum report, presented before the committee on _____, and hereby recommended that it be accepted as fulfillment of the practicum requirement for the degree in Program Bachelor of Science in Computer Science.

Panel Member

Panel Member

This practicum report is hereby approved and accepted by the School of Information Technology as fulfillment of the practicum requirement for the degree in Program Bachelor of Science in Information Technology

Ariel Kelly Balan
Dean, School of IT

ACKNOWLEDGEMENTS

I would like to thank the Human Resources Department of VST-ECS, especially Ma'am Grace Rivera, the 3rd VP, Human Resources and Administration and Ma'am Michelle Octaviano-Fernandez, the Human Resources Supervisor for accommodating and guiding me throughout my practicum in the company.

I would also like to thank Sir Chris Aquino, the Assistant Manager of the IT group, Sir James Linga, my OJT Supervisor, Sir Edmar, Sir Reus, and Sir Aldrin who served as partners for their guidance and knowledge during my practicum and the entire IT group.

ABSTRACT

This report presents the on-the-job training experience of a trainee at VST ECS Phils., Inc., a leading ICT distributor in the Philippines. The trainee was assigned to the MIS&IT Department, where they were tasked with developing a web-based Point-of-Sale (POS) System to enhance the company's POS hardware presentation. The training period emphasized the importance of teamwork, communication, and workload distribution in a professional setting. The trainee also gained technical skills in web development using PHP and Laravel, working with POS hardware, and using Microsoft DevOps for task management. The project was carried out using the Agile methodology, which involved iterative development and regular feedback. The training experience reinforced the trainee's interest in web development and provided valuable insights into the ICT industry.

TABLE OF CONTENTS

Title Page	1
Approval Sheet	2
Acknowledgements	3
Abstract	4
Table of Contents	5
Certificate of OJT Completion	6
 Chapter 1	
Company Profile	
Company History	7
Vision/Mission	7
 Chapter 2	
Trainee	
Specific Department Where the Trainee Assigned	8
Duties and Responsibilities	8
Training with Your Company	8
Training with Your Company	8
Learnings Acquired from the Training	8-9
Corporate Learning	9
Technical Learning	9
Assessment and Evaluation on the Company	9
Career Path Assessment	9
 Chapter 3	
Project	
Project Overview/Description	10
Problem/Opportunities Statement	10
Objectives Statement	10
Significance	10
Scope and Limitations	10
Brief Methodology	10
 Proof of Output	
Screen Shots	11-19
 Appendices	
Resume	20-22
Project Approval Form	23
Accomplishment Reports	24-25

Certificate of OJT Completion



Great Products. Great Services. Great People.

www.vstecs.com.ph

CERTIFICATE OF COMPLETION

This is to certify that **Mr. ADERIEYAN TIMOTHY G. DELA ROSA** has completed *303 hours* of On-The-Job Training at VSTECs Phils. Inc. from August 22, 2022 to November 8, 2022. He was assigned at the MIS Department under the supervision of Mr. James Linga.

This certification is being issued upon the request of Mr. Dela Rosa, in fulfillment of one of his academic requirements.

Issued this November 9, 2022 at San Miguel, Pasig City.

Ms. Grace C. Rivera

Third VP & Manager – Human Resources and Administration

Head Office : MSI-ECS Complex, M. Eusebio Ave., San Miguel, Pasig City, Metro Manila, Philippines 1600 • Tel: (+632) 8830 9999
Cebu Office : #17-19 Cebu WGA Compound, Balaya St. Brgy. San Roque, Talisay City 6115 Cebu • Tel No: (+6352) 545 9441
Davao Office : SRC Bldg. Arroyo Corner R. Castillo St., Agdao, Davao City 8000 • Tel: (+6382) 282 - 8835 to 38

Chapter 1 Company Profile

Company History

Formed in 1998, VST ECS Phils., Inc. started as a small organization that helps organizations and individuals benefit from advances in information and communications technology through availability of products, solutions, and services. It became an ICT distribution powerhouse representing some of the biggest and most trusted brands in the ICT industry. From the simple ICT requirement of an individual to the most sophisticated and advanced requirement of a large-scale enterprise, VST ECS Phils., Inc. have what it takes to be competitive and digitally empowered. VST ECS Phils., Inc. is one of the leading ICT distributors in the country. VST ECS Phils., Inc. is a member of the VST ECS Group, a regional distribution network.

Vision

To be the BEST and Most Admired Technology Partner in the Philippines.

Mission

To ENABLE Every Partner and DELIVER TECHNOLOGY to help Organizations Transform their business.

Chapter 2 Trainee

Specific Department Where the Trainee Assigned

The trainee was assigned to the MIS&IT Department, where tasks related to web development and maintenance of web applications were carried out.

Duties and Responsibilities

The duties and responsibilities entailed to the trainees were to create a software that would help the company. Specifically, to create a software that would allow the company to showcase its POS hardware as well as to sell the software as a package along with the POS hardware to the customer.

Training with Your Company

During the first week of the practicum, the trainees were given an orientation and a tour of the company where the different departments were shown. The trainees were also introduced to some employees of the companies such as managers and soon to be coworkers. During the majority of the practicum, the trainees were tasked to develop a software that would enhance the company's POS hardware presentation.

Learnings Acquired from the Training

During the training period, the trainee gained a wealth of knowledge and skills, both technical and non-technical.

Technical Skills:

Web Development: The trainee learned how to develop a web-based Point-of-Sale (POS) System using PHP and Laravel. This included designing the system architecture, coding the system functionalities, and testing the system to ensure it worked as expected.

Working with POS Hardware: The trainee gained hands-on experience with the POS hardware units sold by VST ECS Phils., Inc. This included understanding their capabilities and how to integrate them with the web-based POS system.

Using Microsoft DevOps: The trainee learned how to use Microsoft DevOps for managing tasks during web development. This tool was instrumental in keeping the project organized and on track.

Non-Technical Skills:

Teamwork: The trainee learned the importance of teamwork in a professional setting. This included understanding how to distribute workload among team members and how to communicate effectively to overcome challenges.

Professional Communication: The trainee improved their professional communication skills, learning how to effectively convey ideas and feedback, and how to listen and understand instructions and feedback from others.

Understanding the ICT Industry: The trainee gained a deeper understanding of the ICT distribution industry, including the processes involved in selling POS hardware units and the importance of providing additional value to customers through offerings like the POS system.

Overall, the training period at VST ECS Phils., Inc. was a valuable learning experience that equipped the trainee with the necessary skills and knowledge for a successful career in web development and the ICT industry.

Corporate Learning

During the practicum, the trainee learned the importance of teamwork and communication when working on a task as well as the importance of workload distribution. Unlike in school where one can work on an entire project alone when some members do not contribute, the same cannot be applied in the workplace setting, every member must have their part on the project. Communication is vital as this can pull one out from difficult roadblocks, other members can lend a hand or give tips when one does not know what to do or when the task is challenging.

Technical Learning

During the practicum, the trainees were given the option to which framework to be used in web development which are .NET or PHP along with Laravel. The trainee personally used PHP as this was the most commonly used language in school. The trainees were taught to use Laravel as this is the necessary framework used by the company when using PHP for web development. The trainees were given an introduction to Laravel during the first two weeks and a hands-on to get used to the framework. The trainee was also taught on how to use Microsoft DevOps which is a very useful application to manage tasks during web development.

Assessment and Evaluation on the Company

The company provided a conducive environment for learning and growth. The training period was well-structured, and the tasks assigned were challenging yet achievable. The company's culture promoted teamwork and communication, which are vital in any professional setting.

Career Path Assessment

The training experience at VST ECS Phils., Inc. has reinforced the trainee's interest in web development. The exposure to real-world projects and the opportunity to work with experienced professionals has provided valuable insights into the field.

Chapter 3 Project

Project Overview/Description

The project involved the development of a web-based Point-of-Sale (POS) System. This system was primarily designed to demonstrate the capabilities of the POS hardware units sold by VST ECS Phils., Inc. If a customer is satisfied with the hardware, the company would offer the POS system as a package with the hardware.

Problem/Opportunities Statement

The company VST ECS Phils., Inc., being the country's leading ICT distributor, sells various products such as software and hardware, one of which are POS hardware units. However, the POS hardware units do not come with the POS system which are being sold separately. It was decided that a company made POS system will be created where it serves as a means to demonstrate the capabilities of the POS hardware units. If the customers are satisfied with the POS hardware unit, the POS system can also be bought as a package along with the POS hardware unit.

Objectives Statement

The objective is to create a web-based POS application that serves as a means in which the capabilities of the POS hardware unit can be demonstrated and be an actual product in case the customer is satisfied with the web-based POS application where both the software and hardware can be bought as a package.

Significance

The in-house POS system could be a cost-effective solution for the company, eliminating the need to purchase POS systems from other companies. It could also serve as an additional product offering, providing customers with the option to purchase the POS system if they are satisfied with the hardware unit.

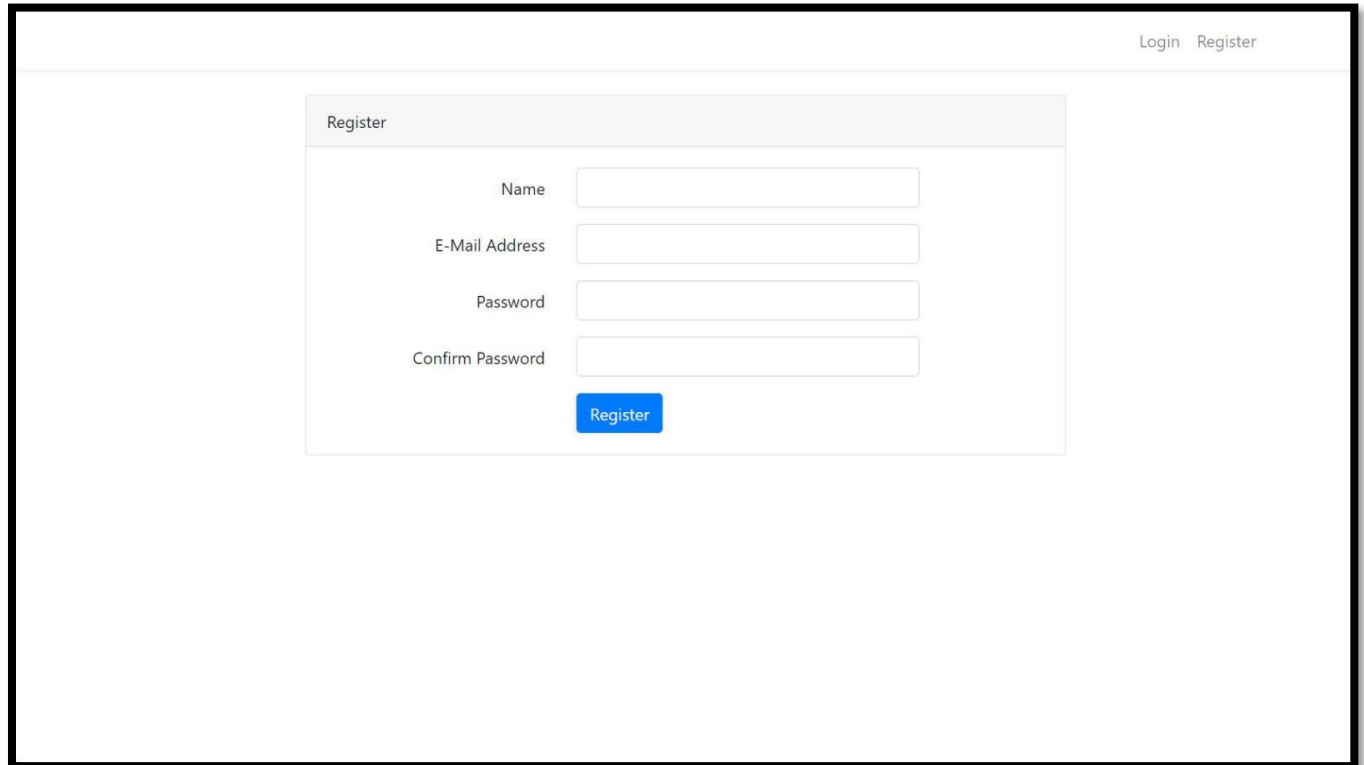
Scope and Limitations

The project was limited to the development of a web-based POS system compatible with the POS hardware units sold by the company. The system was designed to handle basic POS functions such as sales transactions, inventory management, and customer management. Advanced features such as integration with other business systems were outside the scope of this project.

Brief Methodology

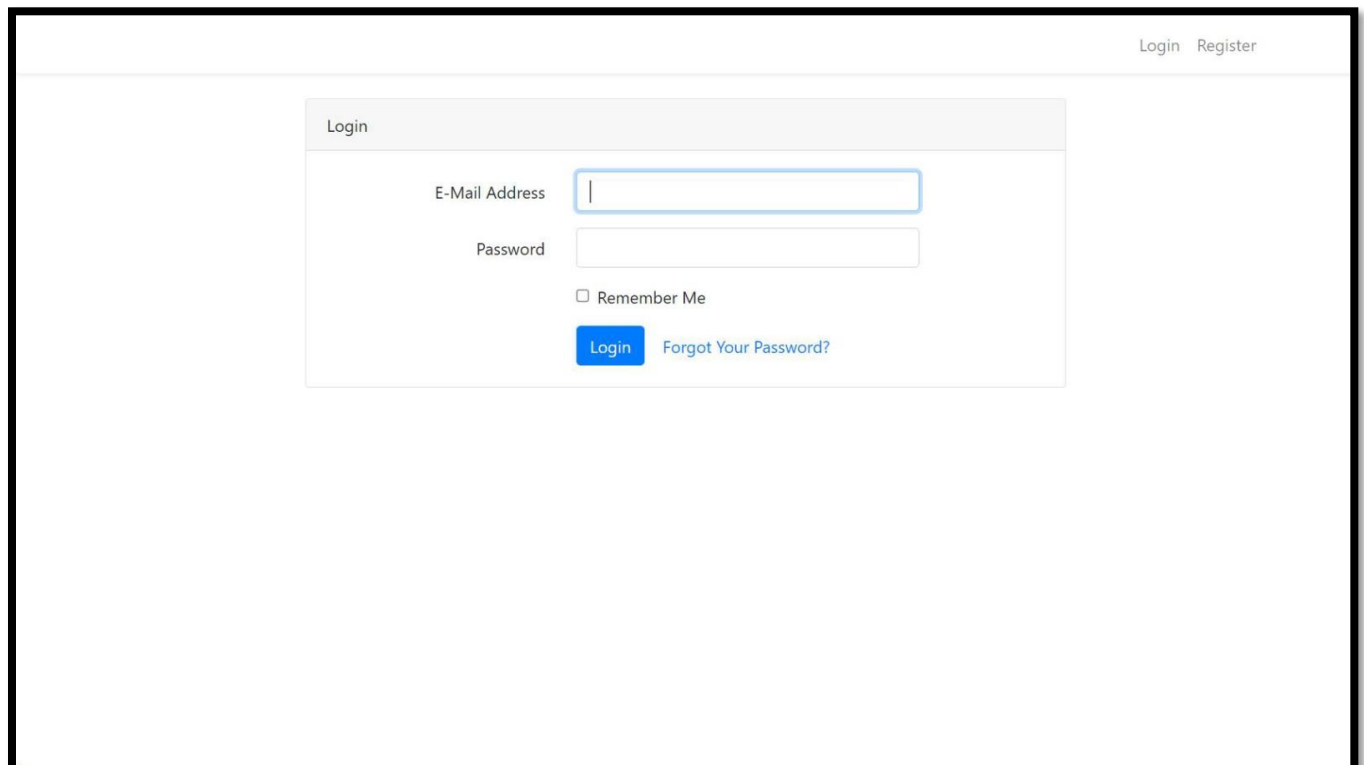
The project was carried out using the Agile methodology, which involved iterative development and regular feedback. The trainee began by understanding the requirements and designing the system architecture. The development phase involved coding the system functionalities, followed by testing to ensure the system worked as expected. The trainee also documented the development process and created a user manual for the system.

Proof of Output Screen Shots



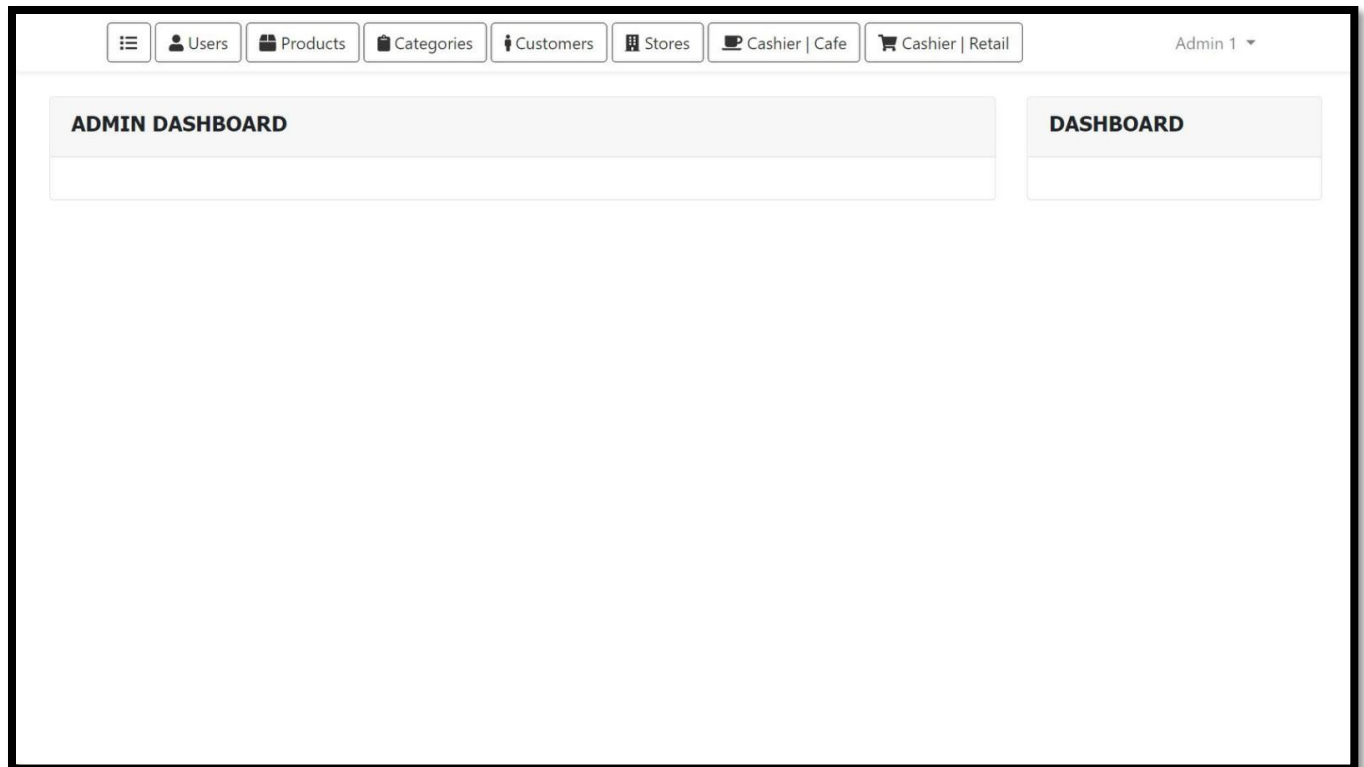
A screenshot of a web application's registration page. The page has a white background with a light gray header bar containing the links "Login" and "Register". Below the header, there is a white box with a light gray border and a light gray header labeled "Register". Inside this box, there are four input fields stacked vertically, each with a label to its left: "Name", "E-Mail Address", "Password", and "Confirm Password". Below these fields is a blue button with the text "Register".

Register Page

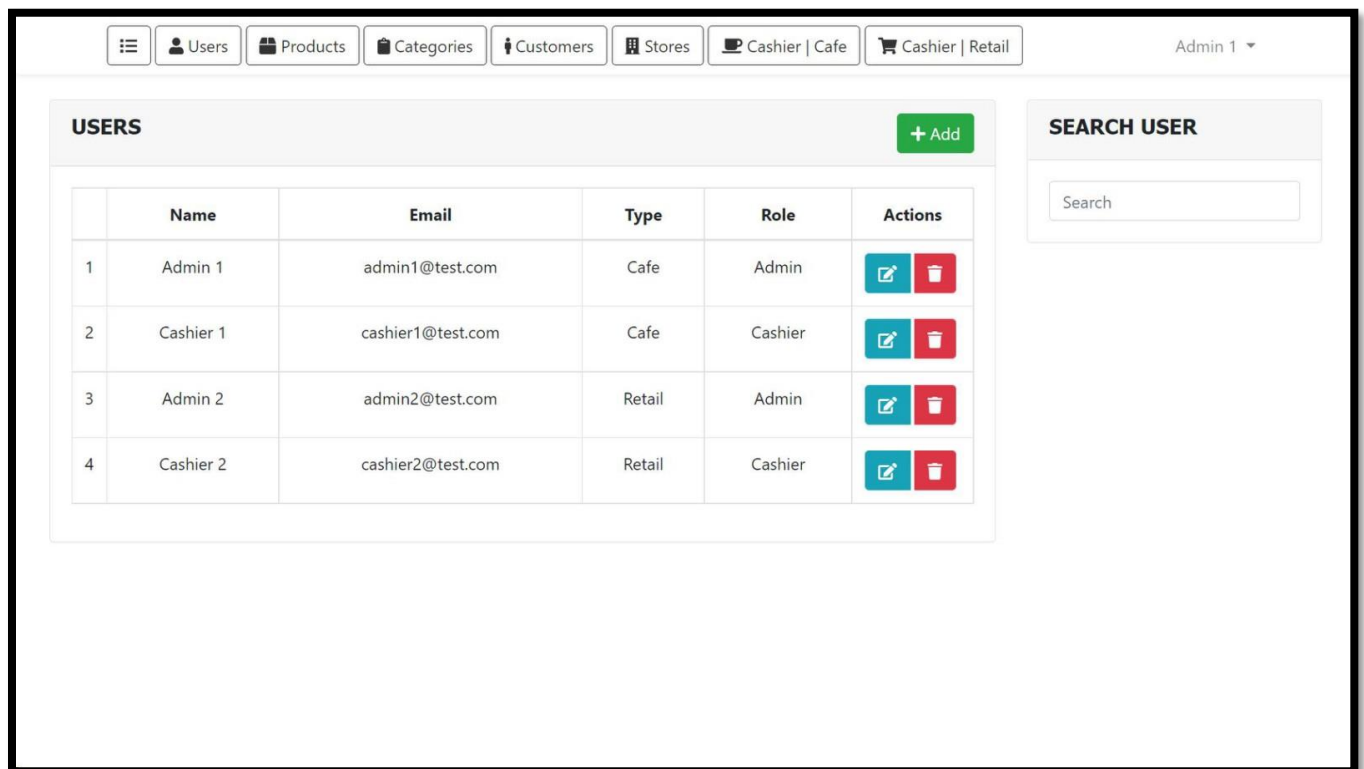


A screenshot of a web application's login page. The page has a white background with a light gray header bar containing the links "Login" and "Register". Below the header, there is a white box with a light gray border and a light gray header labeled "Login". Inside this box, there are two input fields stacked vertically, each with a label to its left: "E-Mail Address" and "Password". Below these fields is a checkbox labeled "Remember Me". At the bottom of the box, there is a blue button with the text "Login" and a link labeled "Forgot Your Password?" to its right.

Login Page



Admin Dashboard



Users Page

Users

Products

Categories

Customers

Stores
















Cashier | Cafe

Cashier | Retail

Admin 1

PRODUCTS

Archive + Add

	Product	Code	SKU	Category	Subcategory	Price	Quantity	Image	Actions
1	Coke	DRINK1	D1	Drink	Cold Drink	45.00	100		 
2	Diet Coke	DRINK2	D2	Drink	Cold Drink	45.00	100		 
3	Sprite	DRINK3	D3	Drink	Cold Drink	45.00	100		 
4	Burger	BURG1	B1	Food	Burger	70.00	100		 
5	Cheeseburger	BURG2	B2	Food	Burger	75.00	100		 

<

1

2

3

>

SEARCH PRODUCT

Search

Products Page

Users

Products

Categories

Customers

Stores



Cashier | Cafe

Cashier | Retail

Admin 1

DEACTIVATED PRODUCTS

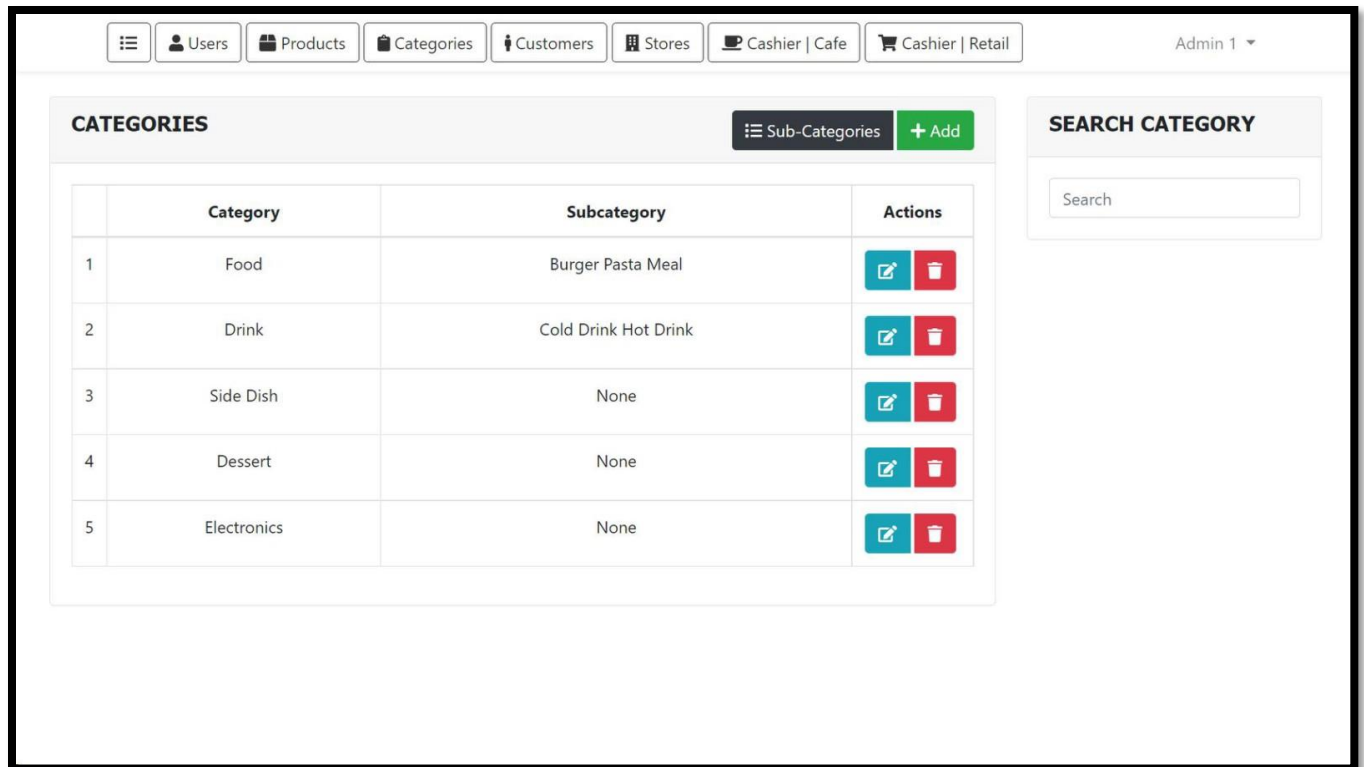
Products

	Product	Code	SKU	Category	Subcategory	Price	Quantity	Image	Actions
1	840336-021	CABLE1	C1	Electronics	None	100.00	100		

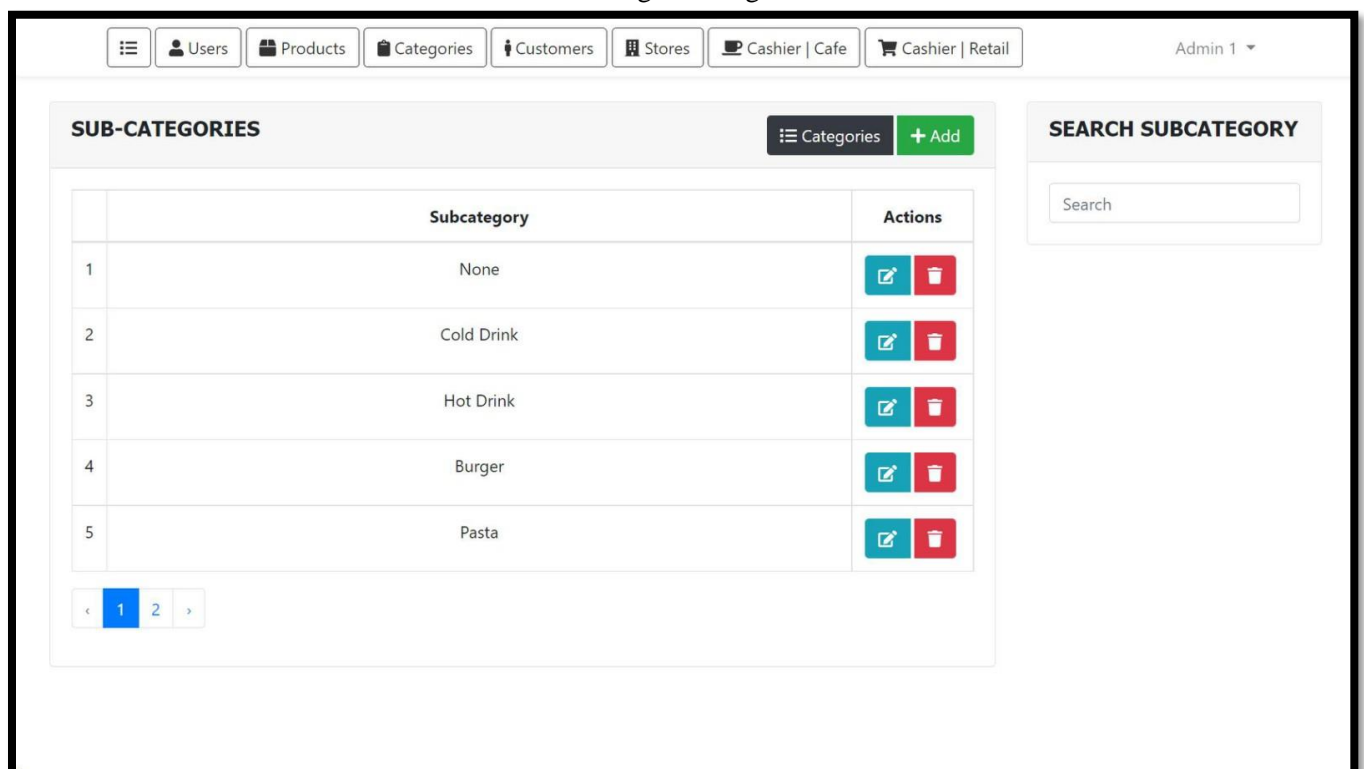
SEARCH PRODUCT

Search

Deactivated Products Page



Categories Page



Subcategories Page

Users

Products

Categories

Customers

Stores

Cashier | Cafe

Cashier | Retail

Admin 1 ▾

CUSTOMERS

+ Add

	Name	Phone	Email	Actions
--	------	-------	-------	---------

SEARCH CUSTOMER

Search

Customers Page

Users

Products

Categories

Customers

Stores

Cashier | Cafe

Cashier | Retail

Admin 1 ▾

STORES

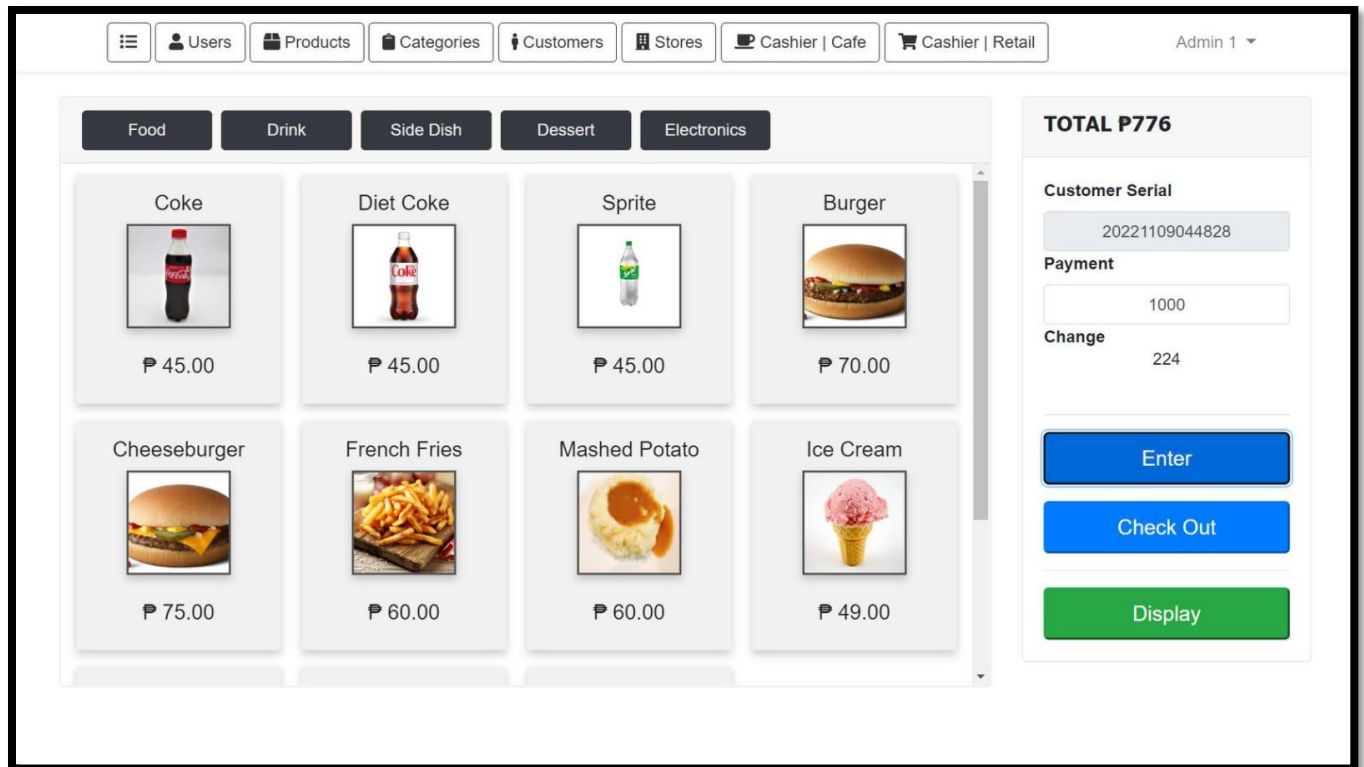
+ Add

	Branch	Location	Phone	Email	Actions
--	--------	----------	-------	-------	---------

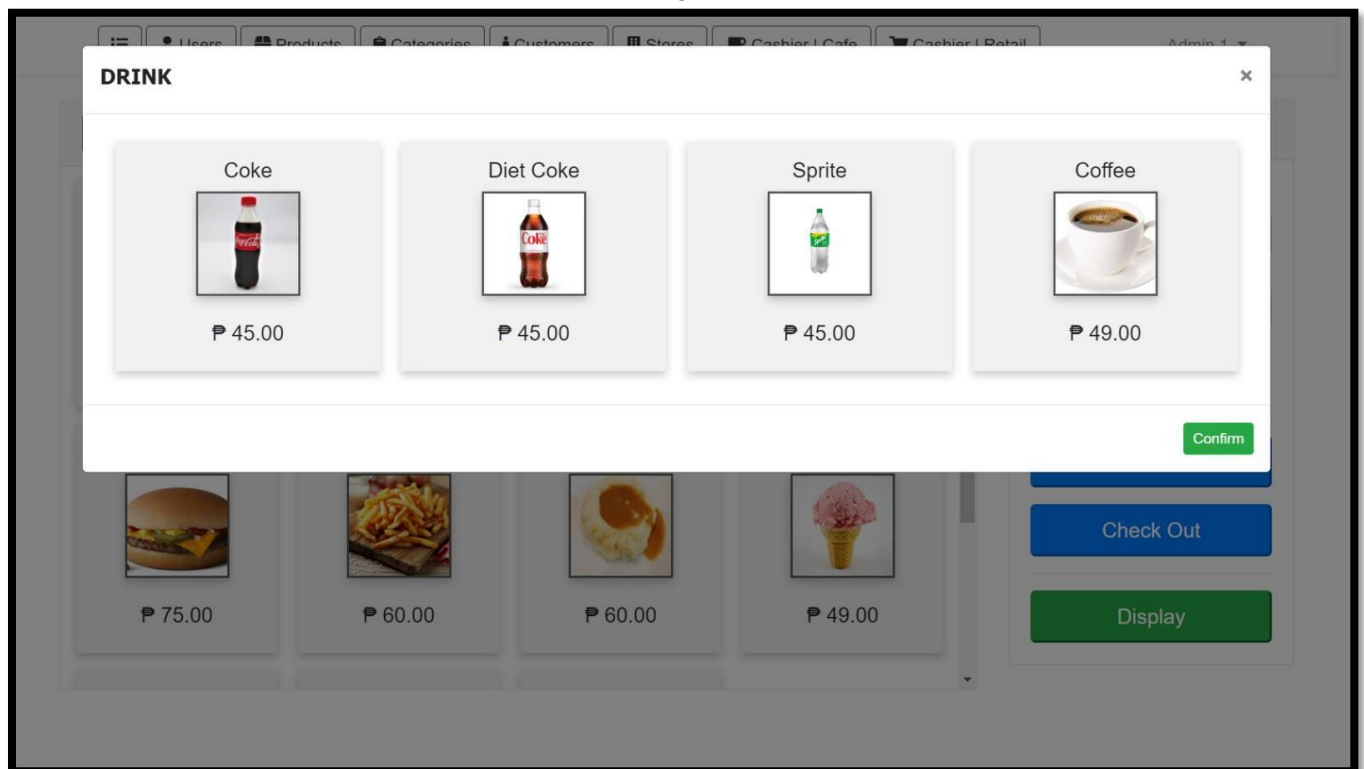
SEARCH STORE

Search

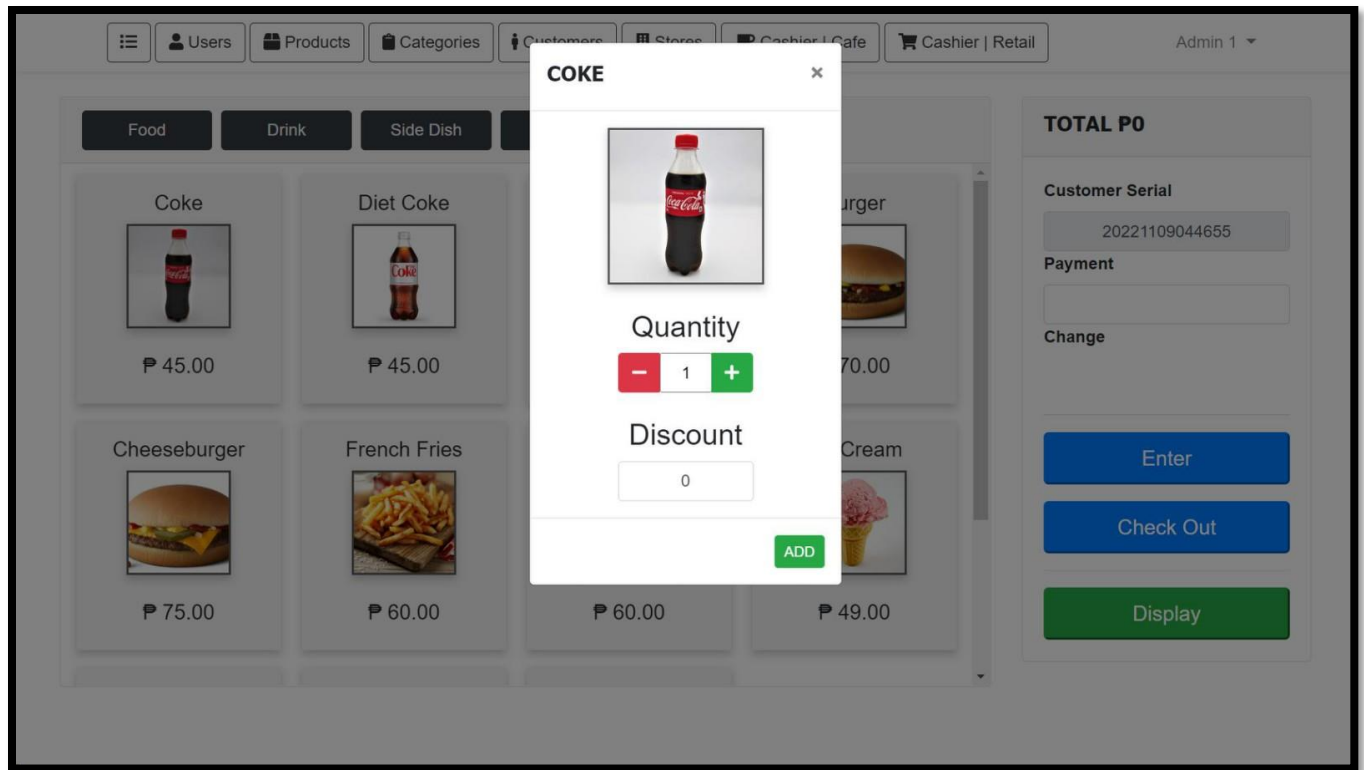
Stores Page



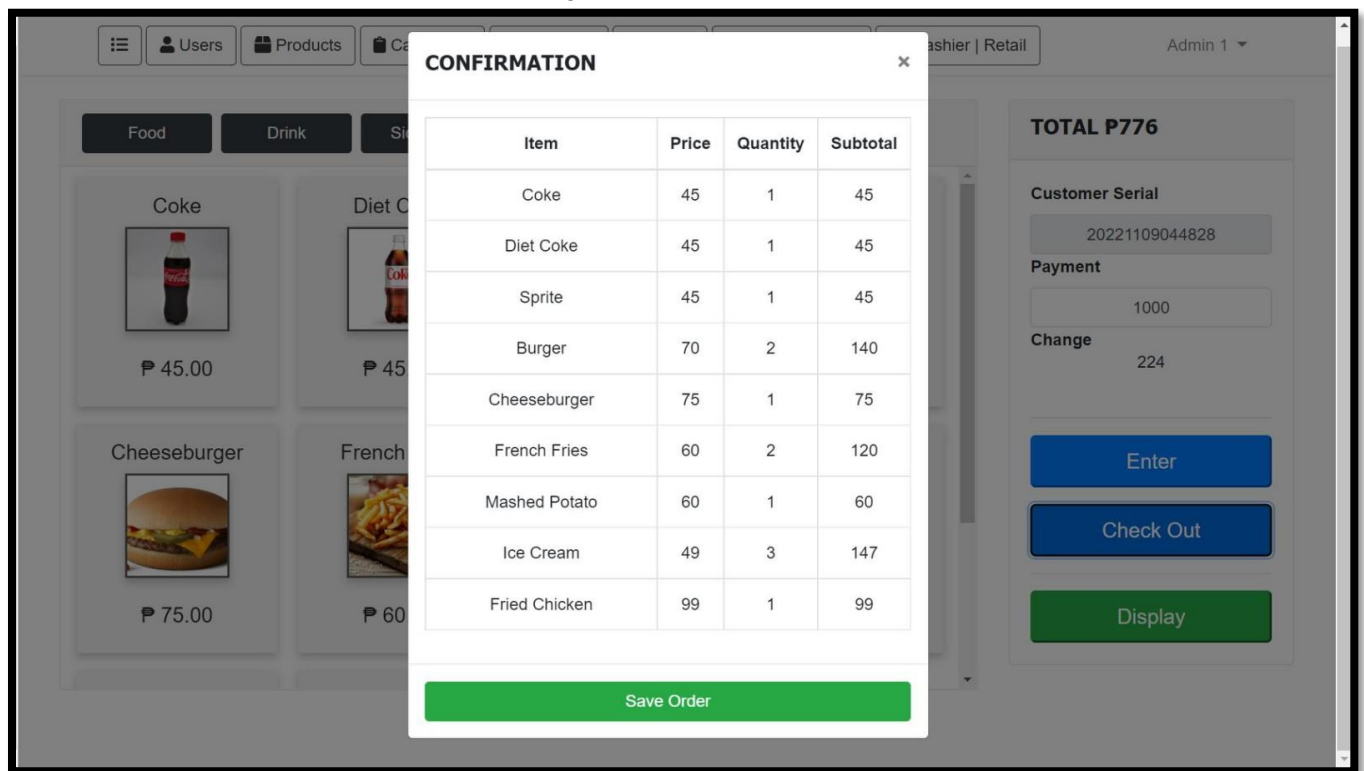
Cashier Page for Café



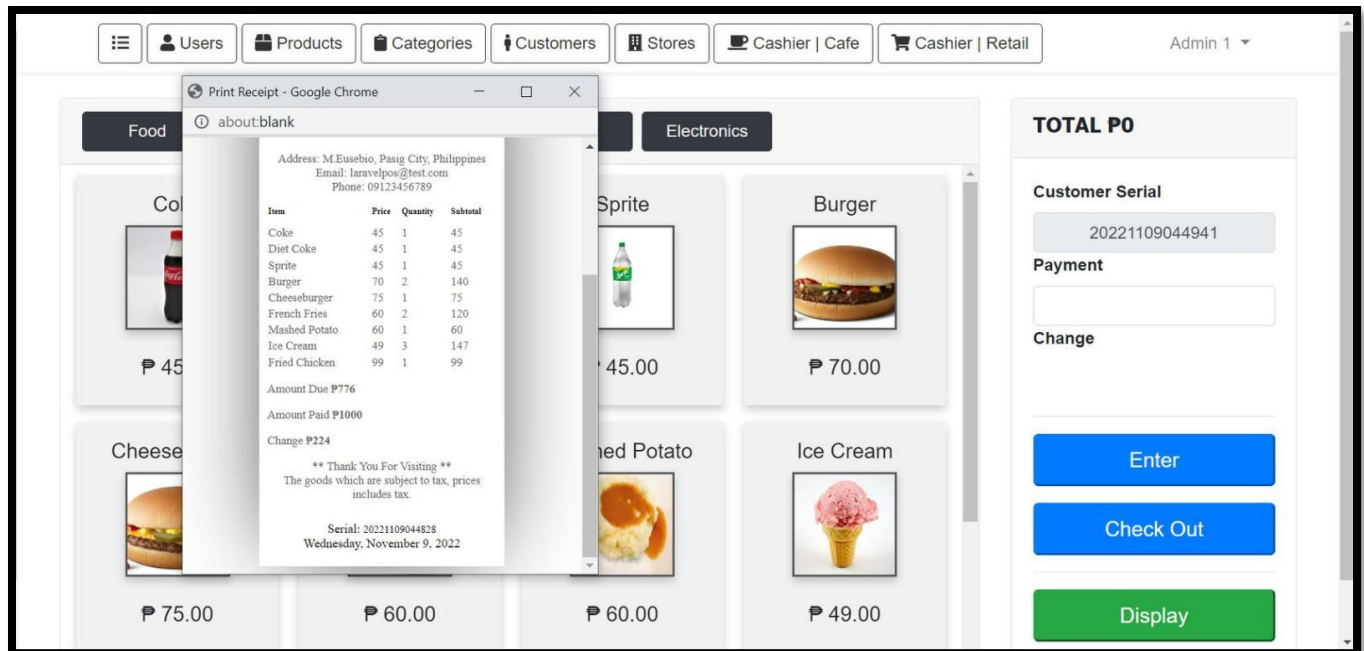
Cashier Page for Café with Subcategories



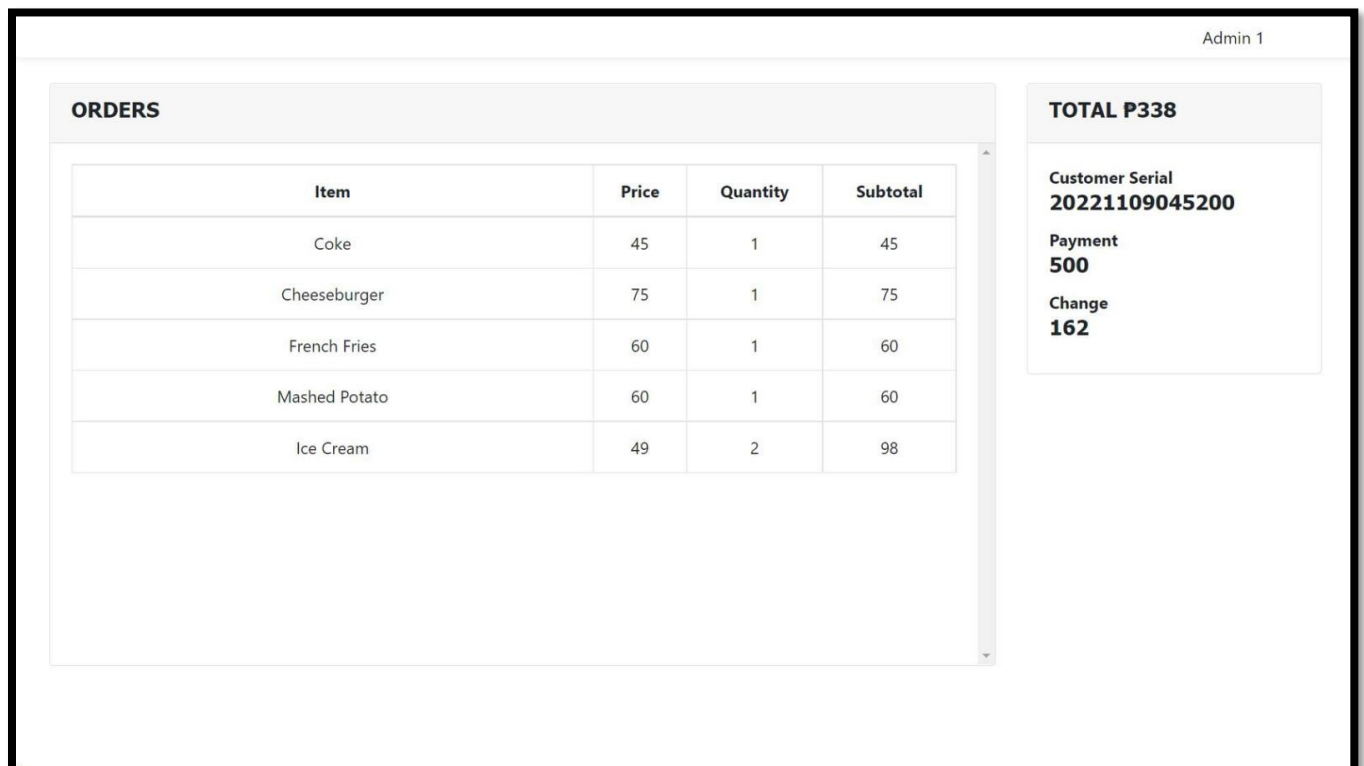
Cashier Page for Café with Product Card



Cashier Page for Café with Confirmation Card



Cashier Page for Café with Receipt



Split Screen (Display for Second Monitor)

Users

Products

Categories

Customers

Stores

Cashier | Cafe

Cashier | Retail

Admin 1 ▾

CASHIER

	Product	Quantity	Price	Discount	Total	+
1	Cheeseburger ▾	1	75	0	75	

TOTAL P0

Customer Serial

20221109044613

Payment

Change

Enter

Check Out

Display

Cashier Page for Retail

Resume

ADERIEYAN TIMOTHY G. DELA ROSA

Home Address: 64 Ignacio Avenue, North Susana Executive Village
Diliman, Quezon City
Email Address: atgdr2000@gmail.com
Mobile Number: +63 929 719 2352



OBJECTIVE

To work in a workplace that offers the opportunity for me to apply the knowledge and skills that I have learned in computer technology, and obtain a position for the purpose of assisting the company while acquiring extensive experience allowing further personal improvement and preparation for future professional practice.

AREAS OF INTEREST

- Application Development
- Web Development
- Web Design

EDUCATION

College:	BACHELOR OF SCIENCE IN COMPUTER SCIENCE Mapua University 1191 Pablo Ocampo Sr. Ext, Makati City 2019 – Present
Senior High School:	Information and Communications Technology New Era University 9 Central Ave, New Era, Quezon City 2017 – 2019
Junior High School:	New Era University 9 Central Ave, New Era, Quezon City 2013 – 2017

TECHNICAL SKILLS

- Knows how to utilize the computer programming language C++, Java, and PHP.
- Knowledge in utilizing various Microsoft Office applications such as Microsoft Word, Microsoft PowerPoint, and Microsoft Excel.
- Website and Application Designing
- Computer Hardware Knowledge
- Able to utilize video and photo editing software such as GIMP and DaVinci Resolve.

EXTRA-CURRICULAR ACTIVITIES

Sports:	Shinkyokushinkai Karate 6 th Kyu – Yellow Belt
Student Council:	Youth Forum Organization Assistant Treasurer (2017-2018) Auditor (2014-2015, 2015-2016)
Clubs:	Young Scientists Club Treasurer (2016-2017) Grade Level Coordinator (2017-2018) Socio-Historical Society Committee (2016-2017)
Choral Groups:	New Era University High School Choir Tenor 1 (2013-2014)

AWARDS AND ACHIEVEMENTS

Senior High School:	With High Honors Loyalty Awardee
---------------------	-------------------------------------

RESEARCH PAPERS AND PROJECTS HANDLED

September 2021	Sentiment Analysis of Climate Change on Twitter A sentiment analysis where the limitations of the previous studies where only one language was examined are improved to overcome the limitations of the previous studies and to provide better results.
----------------	---

October 2021	Candidate Management System A web application that manages the details or information of the participating candidates with complete design implementations and app functionalities.
April 2022	Sentiment Analysis on Covid-19 Tweets Using a Hybrid CNN-LSTM MODEL A sentiment analysis using a proposed hybrid CNN-LSTM framework for analyzing sentiments in tweets during COVID-19 pandemic.
May 2022	Edu-Classroom A learning management system that provides a built-in program for instructors to check the programs sent by the student for their activities. The system was built using HTML, CSS, PHP, and MySQL.

TRAINING AND SEMINARS ATTENDED

July 2022	OUTSYSTEMS INTRODUCTION SEMINAR Mapua University, Sagesoft Solutions Inc., Outsystems
November 2022	Internship (VST-ECS) Assigned to the MIS&IT Department, PHP team. In charge of creating a web based point of sale system for the company using PHP.

PERSONAL DATA

Date of Birth:	July 19, 2000
Place of Birth:	Diliman, Quezon City
Gender:	Male
Citizenship:	Filipino
Civil Status:	Single
Religion:	Iglesia Ni Cristo
Height:	5'5
Weight:	85 kilos
Languages:	Tagalog, English

Project Approval Form



School Of Information Technology
MAPÚA INSTITUTE OF TECHNOLOGY
5.53 8th, Gil Puyat Ave., Makati, City 1202 Philippines

APPROVAL OF PROJECT FOR OJT

NAME OF TRAINEE Aderleyan Timothy Dela Rosa
COMPANY VSTECs
DEPARTMENT MIS
REGISTERED ADDRESS M Eusebio Avenue, Pasig, 1600 Metro Manila
NAME OF SUPERVISOR _____
JOB POSITION OJT
TITLE OF PROJECT POS System

BRIEF DESCRIPTION OF PROJECT

The project is about a Point of Sale System which the company will be using to promote the current HP POS hardware.

I hereby certify that the above project and description shall be the major work to be undertaken during the OJT program. The trainee's supervisor has requested this project which will be useful in the organization and have a direct impact in the company.

Aderleyan Timothy Dela Rosa

SIGNATURE OVER PRINTED NAME OF TRAINEE / DATE

James I. Dela Rosa

SIGNATURE OVER PRINTED NAME OF SUPERVISOR / DATE

ACTION TAKEN BY THE OJT ADVISER

- ☐ APPROVED
☐ DISAPPROVED

SIGNATURE / DATE









REMARKS/COMMENTS

Accomplishment Reports



School Of Information Technology
MAPÚA INSTITUTE OF TECHNOLOGY

DAILY ACCOMPLISHMENT REPORT

NAME: Aderleyan Timothy Dela Rosa		SPECIALIZATION: Application Development	
COMPANY NAME: VSTEC'S PHILS. INC.			
DEPARTMENT ASSIGNED: MIS & IT GROUP			
SCHEDULE OF TRAINEE: Monday, Tuesday, Wednesday, and Friday, 8:00 AM to 5:00 PM			
EXPECTED DATE OF COMPLETION OF 244 HOURS: October 21, 2022			
ACTIVITY (PLS SPECIFY THE TASKS PERFORMED)	DURATION (DATES AND NO. OF HRS RENDERED)	REMARKS (eg., ACCOMPLISHED, ON PROGRESS etc)	IMMEDIATE SUPERIOR SIGNATURE
Device Setup, Installation of necessary software.	August 22, 2022 to August 26, 2022 3 Hours	ACCOMPLISHED	
List, Add, Edit function for Category.	September 05, 2022 to September 09, 2022 13.5 Hours	ACCOMPLISHED	
List, Add function for Product.	September 05, 2022 to September 09, 2022 13.5 Hours	ACCOMPLISHED	
CRUD for Product Management updated. Description changed to Category.	September 12, 2022 to September 16, 2022 12 Hours	ACCOMPLISHED	
CRUD for Product Category Management updated. Category connected to Product Management form for Add and Edit.	September 12, 2022 to September 16, 2022 12 Hours	ACCOMPLISHED	
Assisted in Cashier Function.	September 12, 2022 to September 16, 2022 12 Hours	ACCOMPLISHED	
CRUD for Customer.	September 19, 2022 to September 23, 2022 9 Hours	ACCOMPLISHED	
CRUD for Store	September 19, 2022 to September 23, 2022	ACCOMPLISHED	

	9 Hours		
Form validations for CRUDs.	September 19, 2022 to September 23, 2022 9 Hours	ACCOMPLISHED	
Product SKU and Product Code added to Product Management.	September 19, 2022 to September 23, 2022 9 Hours	ACCOMPLISHED	
GUI for cashier Cafe POS.	September 26, 2022 to September 30, 2022 13.5 Hours	ACCOMPLISHED	
Revision for Products Management.	September 26, 2022 to September 30, 2022 13.5 Hours	ACCOMPLISHED	
Revisions for cashier split screen.	October 17, 2022 to October 21, 2022 11.83 Hours	ACCOMPLISHED	
Revisions for subcategories on cafe cashier.	October 17, 2022 to October 21, 2022 11.83 Hours	ACCOMPLISHED	
Implementation of local storage for Retail and Cafe cashier.	October 17, 2022 to October 21, 2022 11.83 Hours	ACCOMPLISHED	
Debugging for cafe cashier split screen.	October 24, 2022 to October 28, 2022 10.75 Hours	ACCOMPLISHED	
Debugging for cafe cashier local storage.	October 24, 2022 to October 28, 2022 10.75 Hours	ACCOMPLISHED	

Prepared by:

Agallito
Student's Signature