THE GANACHE ONLINE CAKE ORDERING SYSTEM

THE REPORT

Submitted in partial fulfilment of the requirements of

Higher National Diploma in Information Technology

Advanced Technological Institute Gampaha

N.B.A.I.P.Nishshanka.

GAM/IT/F/2019/0024

December, 2021

Acknowledgement

I would like to express my gratitude and appreciation to all those who gave me the opportunity to complete this project. Special thanks are due to my supervisor Mrs. I.L.Silva, whose help, stimulating suggestions and encouragement helped me all the time and for her wonderful guidance during this project work in the field of Higher National Diploma Information Technology. I am also sincerely thankful for the time spent correcting my mistakes.

Many thanks go to the all lecturers and supervisors who have given their full effort in guiding me in achieving the goal as well as their encouragement to maintain our progress track. I would like to thank my project readers Mrs. N.D.Gunasekara, Mrs. M.V.M.Jayathilaka, Mrs. A.L.V.Chandima and Mrs. L.M.R.S.Kumari for their support throughout this project work.

I also acknowledge with a deep sense of revenue, my gratitude towards my parents, who have always supported me morally as well as economically.

Declaration

This report is my original work and has not been submitted previously for a Higher National Diploma at this or any other university / Institute. To the best of my knowledge it does not contain any material published or written by another person, except as acknowledged in the text.

Signature of Candidate: . . . . . .

Date:..../...../….....

Name of Candidate: . . . . . .

Countersigned by:

Signature of Supervisor(s)/Advisor(s): . . . . . .

Date:..../...../….....

Name(s) of Supervisor(s)/Advisor(s): . . . . . .

Abstract

Online cake order is a web-based application that enables customers to order cakes online. The internet users are increasing rapidly, the company has introduced an online cake ordering system for getting cake orders from customers. This application not only improves customers' experiences, but also eases the workload on the employees of the cake shop. It would be convenient for the customers to have an online cake ordering system. It would be free for users to select the cake they want and make payment for it. The customer may browse through these cakes as per the categories. If the customer likes a product, he may add it to his shopping cart. Once a customer wishes to check out, he must register on the site first. He can then login using the same email and password next time. Now he may pay through a bank transfer. The main objective is to provide better interactive and communication facilities between customers and administrators. An Administrator manages the customer information database more efficiently, orders details and maintains products and customer information. Admin can generate all this work info as a report and receive an invoice for orders. There it is very self-explanatory and user-friendly, so the user should not have any problems performing a task. Actually, we encourage the user to experiment with the controls from there. Thus, the online cake ordering web-based system project brings an entire cake shop online and makes it easy for both the buyer and the seller.

Contents

Acknowledgement ii
Declaration iii
Abstract iv
List of Tables ix
List of Figures x
CHAPTER 01 - INTRODUCTION 1
1.1 Description about the Business Organization and the Business Area Chosen 1
1.2 Business Process 1
1.3 Problem definition 2
1.4 Aims and Objectives 3
1.5 Scope with Clear Boundaries 4
1.5.1 Scope for customer in system 4
1.5.2 Scope of administration 4
1.6 Organization of the Dissertation 5
Chapter 02-Analysis 5
Chapter 03-Design 5
Chapter 04-Development 5
Chapter 05-Test Report 5
Chapter 06-Implementation 5
Chapter 07-Evaluation & Conclusion 5
Chapter 08-Reference 5
CHAPTER 02 - PROBLEM DEFINITION AND SYSTEM ANALYSIS 6
2.1 Study of the Problem 6
2.2 Facts Gathering Techniques Used and the Findings 7
2.2.1 Current System Use Case Diagram 8
2.2.2 Current System Activity Diagram 9
2.2.3 Current System Class Diagram 10
2.3 Functional Requirements 11
2.3.1 Admin 11
2.2.2 Customer 11
2.2.3 Visitor 11
2.4 Non-Functional Requirements 12

2.5 Software Requirements 12
2.6 Hardware Requirements 12
2.7 Business Systems Options (BSO) 13
2.7.1 BSO 1 - Set Up Shop Anywhere 13
2.7.2 BSO 2 - Store Managements 13
2.7.3 BSO 3 - Receive Customers Reviews 13
2.8 Cost Benefit Analysis 14
CHAPTER 03 - SYSTEM DESIGN 15
3.1 Introduction 15
3.2 Use-Case Diagram 15
3.3 Use-Case Description 16
3.3.1 Admin 16
3.3.2 Customer 17
3.3.3 Manage Order 18
3.3.4 Manage Payments 19
3.3.5 Login 20
3.3.6 Manage Cart 21
3.3.7 Manage Product 22
3.3.8 Manage Product Category 23
3.4 Activity Diagrams 24
3.4.1. Admin Side 24
3.4.2 Customer Side 25
3.5 Class diagrams 26
3.6 Normalized database design 27
3.7 Design of Data Capturing Interfaces and Report Layouts 28
3.7.1 Home Page 28
3.7.2 About Us Page 29
3.7.3 Contact Us Page 29
3.7.4 Single Product Page 30
3.7.5 Customize Order Page 31
3.7.6 Sign Up Page 32
3.7.7 login Page 33
3.7.8 Checkout Page 33

3.7.9 My Orders Page 34
3.7.10 Customize Orders Page 34
3.7.11 Payment Page 34
3.7.12 Invoice Page 35
3.7.13 Forget Password Page 35
3.7.14 Admin Main Dashboard Page 36
3.7.15 Orders Page 36
3.7.16 Customize Orders Page 37
3.7.17 Payment Page 37
3.7.18 Product Page 38
3.7.19 View All Product Page 38
3.7.20 Category Page 39
3.7.21 Customer Info Page 39
3.7.22 Admin Info Page 40
3.7.23 Site-Setting Page 40
3.7.24 Report Page 41
3.7.24 Invoice Page 41
3.7.25 Calendar Page 42
CHAPTER 04 - DEVELOPMENT 43
4.1 Introduction 43
4.2 Web-Site 43
4.3 Web-Page 43
4.4 Development Tools and Technology 44
4.4.1 HTML/HTML5 44
4.4.2 CSS 44
4.4.3 PHP 45
4.4.4 Java Script 45
4.4.5 AngularJS 45
4.4.6 Bootstrap 45
4.4.7 MySQL 46
4.4.8 XAMPP 46
CHAPTER 05 - TESTING 47
5.1 Introduction 47

5.2 Two Category of Software Testing 47
5.3 Different Types of System Testing 48
5.4 Software Testing Methodologies 49
CHAPTER 06 – IMPLEMENTATION 55
6.1 Introduction 55
6.2 Installation Guide 55
6.3 User Guide 56
6.3.1 Customer User Guide 56
6.3.2 Administrator User Guide 60
CHAPTER 07 - EVALUATION & CONCLUSION 62
7.1 Evaluation 62
7.2 Conclusion 63
CHAPTER 08 - REFERENCES 64

List of Tables

Table 3.3.2 Admin use case 16
Table 3.3.3 Customer use case 17
Table 3.3.3 Manage order use case 18
Table 3.3.5 Manage payments use case 19
Table 3.3.6 login use case 20
Table 3.3.7 Manage cart use case 21
Table 3.3.8 Manage products use case 22
Table 3.3.9 Manage product category use case 23
Table 5.5.10 Test results 54

List of Figures

Figure 1.2.1 Business Process....1
Figure 2.2.1 Use case Diagram of Current System....8
Figure 2.2.2. Current System Activity Diagram....9
Figure 2.2.3 Current System Class Diagram....10
Figure 3.2 Use Case Diagram....15
Figure 3.4.1 Admin Side....24
Figure 3.4.2 Customer Side....25
Figure 3.5 Class diagrams....26
Figure 3.6 Normalized database design....27
Figure 3.7.1 home page....28
Figure 3.7.2 About us page....29
Figure 3.7.3 Contact us page....29
Figure 3.7.4 Single product page....30
Figure 3.7.5 customize orders page....31
Figure 3.7.6 Sign up page....32
Figure 3.7.7 Login page....33
Figure 3.7.8 Checkout page....33
Figure 3.7.9 My orders page....34
Figure 3.7.10 Customize orders page....34
Figure 3.7.11 Payment page....34
Figure 3.7.12 Invoice page....35
Figure 3.7.13 Forgot Password....35
Figure 3.7.14 Dashboard page....36
Figure 3.7.15 Orders page....36
Figure 3.7.16 Customize Orders page....37
Figure 3.7.17 Payment page....37
Figure 3.7.18 Product page....38
Figure 3.7.19 View all product page....38
Figure 3.7.20 Category page....39
Figure 3.7.21 Customer info page....39
Figure 3.7.22 Admin- User Info page....40

Figure 3.7.23 Site Setting page 40
Figure 3.7.24 Reports page 41
Figure 3.7.24 Invoice page 41
Figure 3.7.25 Calendar page 42
Figure 6.3.1.1 Signup form 56
Figure 6.3.1.2 Email verification 57
Figure 6.3.1.3 Login form 57
Figure 6.3.1.4 forget password form 57
Figure 6.3.1.5 cart page 58
Figure 6.3.1.6 checkout form 58
Figure 6.3.1.7 payment page 59
Figure 6.3.1.8 order status view form 59
Figure 6.3.2.1 Add new user form 60
Figure 6.3.2.2 register account email 60
Figure 6.3.2.3 administrator login form 61
Figure 6.3.2.4 reset password form 61
Figure 6.3.2.5 Admin Dashboard 61

CHAPTER 01 - INTRODUCTION

1.1 Description about the Business Organization and the Business Area Chosen

The project, "The Ganache Online Cake Ordering Website," allows users to check for various cake designs available at the online store. The project consists of a list of cake products displayed in various categories for special occasions.

The user may browse through these cakes as per categories. If the user likes a product, he may add it to his shopping cart. Once a user wishes to check out, they must first register on the site. The user can then login using the same ID password next time. Once the user makes a successful order, the user gets an order confirmation receipt with the order ID in the user's email. Thus, the online cake shopping project brings an entire cake shop online and makes it easy for both the buyer and the seller.

1.2 Business Process

A process is a series of steps undertaken to achieve a desired outcome or goal. The business process of the Ganache cake shop consists of interrelated steps that store, retrieve, manage, and distribute information to support decision making.

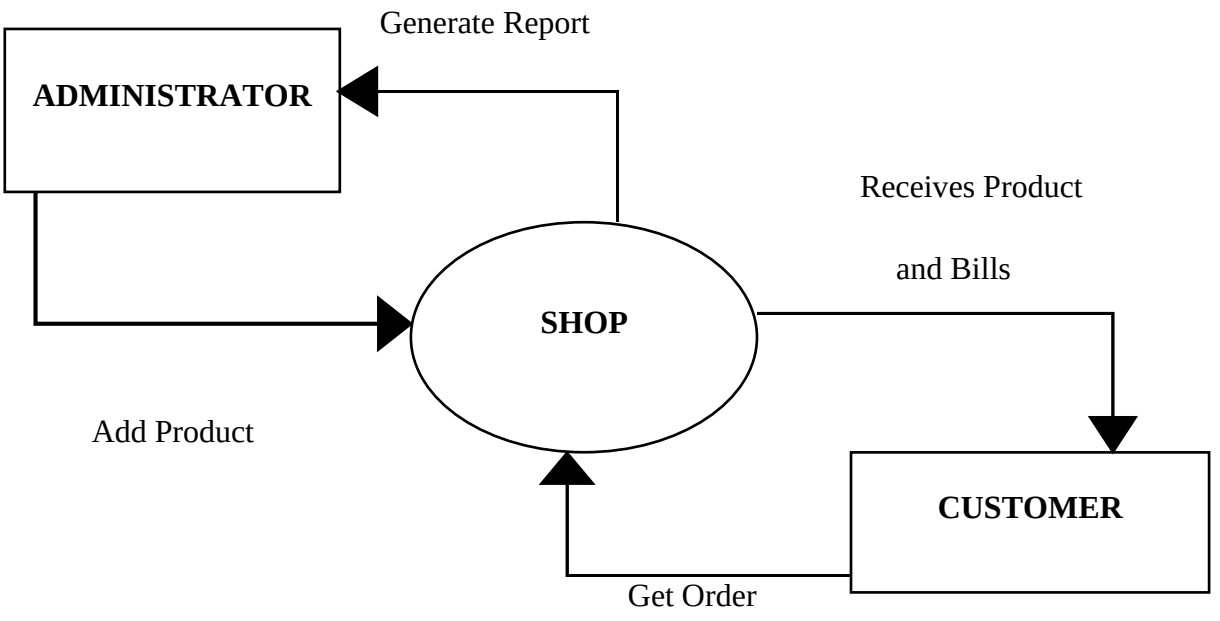


Figure 1.2.1 Business Process

1.3 Problem definition

The main disadvantage would be in terms of convenience. People may not have the time to leisurely commit to shopping in- store and therefore prefer buying products online.

The basic idea is that the candidates can order products using their registration username and password provided to them. The database will maintain the product detail information. Customers can view their product details. This online shopping system involves two types of users.

- Customer

- Administrator

Manual systems are tedious and have difficulty in generating different reports as per the business requirements. It is not very accurate, and ambiguity exists in the manual system. A number of registers must be maintained. Calculators should be done manually. Stock must be checked often.

Furthermore,

- It used to take more time to find customers because there was a requirement for extra manual effort, such as to hiring a candidate.
- It has no user-friendly interface.
- It does not allow the customer to check their profile in the proper way, which leads to customer dissatisfaction.
- The existing system does not contain functionalities for fast retrieval of information.

1.4 Aims and Objectives

Online shopping is the process whereby consumers directly buy goods and services without any intermediary service over the internet. The goal of this website is to develop a web-based interface for customers. The website would be easy to use and, hence, make the online ordering experience pleasant for them.

- The main goal of this system is to provide customers with online cake booking within a reasonable time frame.
- This system is design and develops as a user-friendly system.
- It is easy to use and has an efficient computerized system.
- To provide a better graphical user interface (GUI).
- Data can be secured using the login and password method.
- In the online system, customers can select types of cake.
- To develop an attractive showcase item.
- To provide information about the new release of cake.
- It provides more flexibility to the user compared with the other existing systems.
- This website is user-friendly and places the order online.
- It provides good communication for the customer.
- It provides a facility to generate the reports very easily.

1.5 Scope with Clear Boundaries

The project consists of a list of cake items displayed in various categories.

User has also option of ordering custom cakes according to their requirements, like the cake's flavor, size, shape and so on. Thus, the online cake shopping project brings an entire cake shop online and makes it easy for both the buyer and the seller.

The customer can order cake items online. The customer should register to login by entering their profile details. Before ordering cake, the customer should add items to the cart. Items that are added to the cart will be saved, so that the customer can choose the other cake as well. Customer can order items will ask delivery address and pick-up date. After the order details are shown and confirmed.

Customer can send feedback and comments. After order confirmation if a customer wants to cancel the order, they must inform the company before 24 hours.

1.5.1 Scope for customer in system

- Any customer can register on website using the registration form.
- A customer can order a cake by submitting an online order within the time frame specified.
- Customer can see the list of all categories.

1.5.2 Scope of administration

- Administrator can add new product and their details.
- Administrator can update all information in database.
- Administrator can maintain information dynamically about products and customers.
- Administrator can dynamically accept the online the order and manage the delivery schedule.

1.6 Organization of the Dissertation

Chapter 02-Analysis

This chapter explains the requirements gathering techniques, details of the ordering system, functional and nonfunctional requirements, and the online ordering web site.

Chapter 03-Design

This chapter explains the use-case diagram of the proposed system, the database design of the system, and the main interfaces of the system.

Chapter 04-Development

This chapter explains the website and the development tools used for it.

Chapter 05-Test Report

This chapter explains the test method used for this website.

Chapter 06-Implementation

This chapter explains the implementation technologies used for this website.

Chapter 07-Evaluation & Conclusion

This chapter explains the future enhancements of the system and the lessons learnt from the overall project work.

Chapter 08-Reference

All the URL references and necessary quotations that helped to write this report are contained in this section.

CHAPTER 02 - PROBLEM DEFINITION AND SYSTEM ANALYSIS

2.1 Study of the Problem

The existing system is tedious and difficulty in generating different reports as per the business requirements. Here the existing system is a manual that doesn't maintain details with proper security and can't track details easily. All the business process details managed manually. Existing system doesn't contain functionalities of fast retrieval information. It can be easy to accidentally switch details and end up with inconsistency in data entry or in handwritten orders. This has the effect of not only causing problems with customer service but also making information unable be used for reporting or finding trends with data discovery. Reporting and checking that data is robust can get more time. When mistakes are made or changes or corrections are needed, often a manual transaction must be completely redone rather than just updated. With manual or partially automated systems information often must be written down and copied or entered more than once.

The proposed ordering system is critical to set up online ordering shop' customers to browse the website' and a system administrator can manage all processes online and maintain lists of products categories.

The database will maintain the product details information and all the order details. Customers can view their order details. This online ordering system involves two types of users.

- Customer
- Administrator

2.2 Facts Gathering Techniques Used and the Findings

- Interviewing the owner of the business - Discuss the current state of the business and the problems it faces. Discuss the new changes they need to make when the business process is to be online. Gathering information from business partners within the business firsthand is also extremely helpful.

- Sampling of existing documentation, forms, and databases- Study how information is currently available and stored in the system. Accept orders currently in business and study how transactions are done. Study the information taken in data collection and how to analyze it.

- Questionnaires- Inquire about the current situation in the business world and how it needs to be changed.

- Observing the Enterprise in Action Using Objective Analysis– Educate the business process well with customers and various sectors. Awareness of how different parties are involved and their needs.

- Research the system and problem - Good research may enable one insight on how others have solved similar problems. As a source for reference, it may be good to look up information found inside computer trade journals, reference books, and on the internet.

2.2.1 Current System Use Case Diagram

Figure 2.2.1 Use case Diagram of Current System

Here, the existing system is a manual system. All the orders and other business processes depend on the physical environment. All the customer details, orders, and payment details are stored and maintained via paper work.

A process is a series of steps undertaken to achieve a desired outcome or goal. The business process of the Ganache cake shop consists of interrelated steps that store, retrieve, manage, and distribute information to support decision making.

2.2.2 Current System Activity Diagram

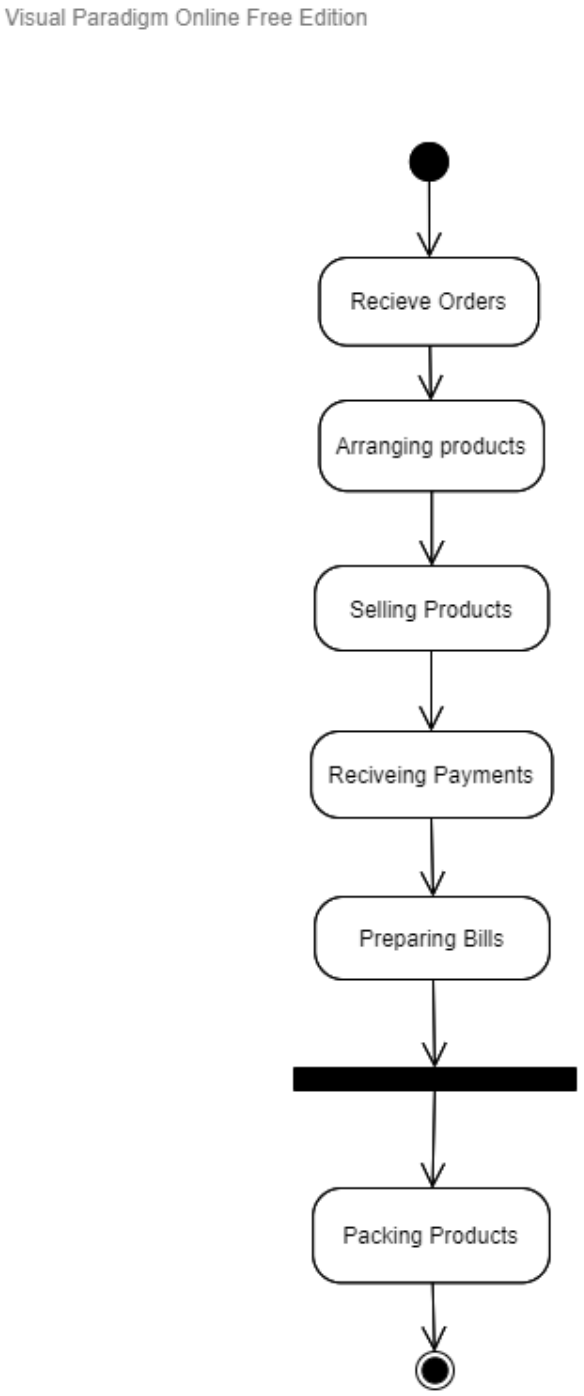


Figure 2.2.2. Current System Activity Diagram

2.2.3 Current System Class Diagram

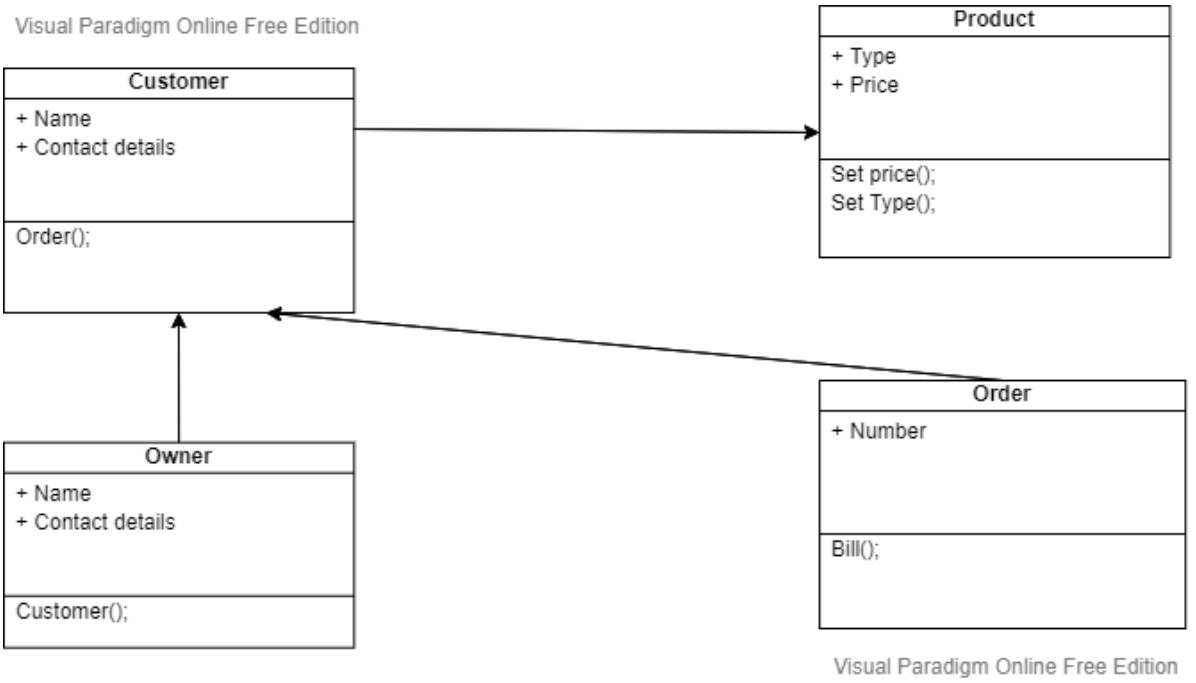


Figure 2.2.3 Current System Class Diagram

2.3 Functional Requirements

2.3.1 Admin

- Can login
- Can Add item
- Can update item
- Can delete item
- Can Generate reports
- view customer details
- view order details
- view order status
- view payment details
- generate order notification

2.2.2 Customer

- Can register
- Can login
- Can view items
- Can add item to cart
- Can remove item from cart
- Can replace order
- Can logout
- view payment details
- cancel order
- update cart
- view order status
- receive order notification

2.2.3 Visitor

- Can View products

2.4 Non-Functional Requirements

Nonfunctional Requirement The supplementary specification applies to online shopping system. This specification defines the non-functional requirement of the system such as,

- Security - There are 2 user logins. Only admin can manage stock recodes and print sale's report.
- Usability - Admin and user can easy to handle interactive interface, search option and side map.
- Efficiency - Easy to use and compatible with major web browsers. Easy to search stock quickly and get calculation for admin.
- Availability - The system should be operational 24 hours a day, 7 a week.
- Reliability - The system is available during online time only

2.5 Software Requirements

- Web presentation: HTML, CSS, PHP
- Backend Database: MYSQL
- Operating System: Windows 10
- Web Server: XAMPP
- Browser: Chrome/Microsoft Edge

2.6 Hardware Requirements

- Processor: Intel Core i7 (11Gen)
- RAM Capacity: 8 GB
- Storage: 512GB SSD
- Keyboard: Standard keyboard
- Mouse: Optical

2.7 Business Systems Options (BSO)

2.7.1 BSO 1 - Set Up Shop Anywhere

This web-based system is designed to be the online store's mainstay so administrator can add products and manage orders to this entire online platform. Customers can easily search the product's menu and see what is available and what can order they want. They have the ability to choose when they would like to receive the order. Customers go online, search for an item, get a fast response and can buy it just as quickly. In addition, the design allows customers to view on any device and anywhere they are connected. All are accessible across all devices from tablets to PCs.

2.7.2 BSO 2 - Store Managements

This system is easy to use and easy to master. The navigating dashboard includes important information therefore user to respond to their sales in a quick and simple manner. Administrators can view all their past orders and quickly re-order their favorite items. With the ability to store, organize, and analyze immense amounts of data quickly, there is no wonder why databases are essential. Through organized and updated data, companies can quickly respond and update based on changing market conditions. With better data management systems and procedures comes higher quality information. A database management system helps in providing a framework to facilitate data quality initiatives. In turn, higher quality information helps in making better, faster decisions in business.

2.7.3 BSO 3 - Receive Customers Reviews

They also share reviews on the things they buy. Good reviews result in two extra benefits of ecommerce. One is that buyers gain trust in your store based on the number of positive reviews. This is that it can help you identify your best-selling items. This system is being safer and healthier for customers and businesses. According to customers satisfaction can highly customize orders. It helps to increase customer loyalty. The features a drag and drop customer experience, easy checkout, customer address books, save favorite products. Sellers can leverage this customer flexibility to build their revenue. They can sell on an online marketplace confidently knowing that there are plenty of buyers.

2.8 Cost Benefit Analysis

Costs	Benefits
Implementation costs • Development of platform • Integration with other platforms • Smart devices • Training Ongoing costs • Enhancement and upgrades • Service and support • Replacement devices • Training on new features and new associates	Cost benefits • Less staff needed dedicated to cash register Customer benefits • Seamless shopping to purchase, and sorter wait lead to fewer lost customer • Higher Loyalty • Improved fast and convenient checkout

Table 2.8 Cost Benefit Analysis

CHAPTER 03 - SYSTEM DESIGN

3.1 Introduction

System design is the process of defining the elements of a system such as the architecture, modules and components, the different interfaces of those components and the data that goes through that system. It is meant to satisfy specific needs and requirements of a business or organization through the engineering of a coherent and well-running system. [1]

3.2 Use-Case Diagram

A use case diagram is a way to summarize details of a system and the users within that system. It is generally shown as a graphic depiction of interactions among different elements in a system. [2]

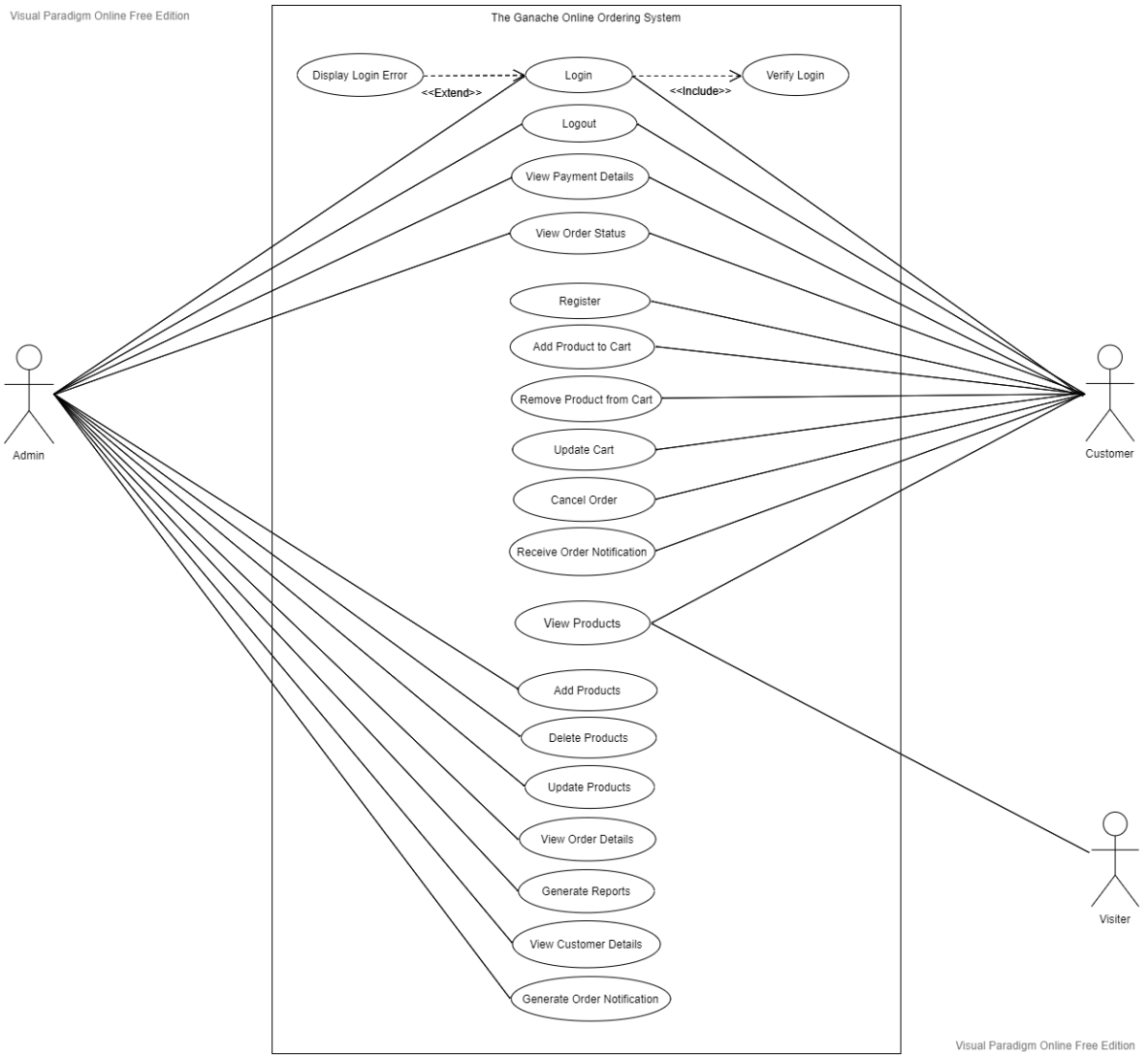


Figure 3.2 Use Case Diagram

3.3 Use-Case Description

3.3.1 Admin

USE CASE NAME:	**Admin**
Description:	This use case allows users to perform actions relevant to Administrator. The functions can be performed by the administrator after logging. A successful logged administrator can MANAGE PRODUCTS, MANAGE ORDERS, MANAGE USERS, AND GENERATE REPORTS
PRIMARY ACTORS:	Administrator
SECONDARY ACTOR:	None
INCLUDE USE CASES:	1.Add Products 2.Delete Products 3.Update Products 4.View Customer Details 5.View Order Details 6.View Order Status 7.View Payment Details 8.View Order Status 9.View Payment Details 10.Generate Reports 11.Generate Order Notifications
EXTENDS USE CASES:	1.Stock
PRECONDITIONS:	must have login into the system successfully
POSTCONDITIONS:	The system displays relevant functions
MAIN FLOW:	1. The user enters use case 2. The system validates the access level 3. The system displays the product functions
ALTERNATIVE FLOW:	None

Table 3.3.1 Admin use case

3.3.2 Customer

USE CASE NAME:	**Customer**
Description:	Customer should enter their details to create new account. The functions can be performed by the user after logging. Successful logged customers can VIEW PRODUCTS, ADD PRODUCT to CART, UDATE CART, and ORDER PRODUCTS.
PRIMARY ACTORS:	Customer
SECONDARY ACTOR:	Admin
INCLUDE USE CASES:	1.View Products 2.Add products to cart 3.Remove products to cart 4.Update products to cart 5.Receive Order Notification 6.View Order Status 7.View Payment Details
EXTENDS USE CASES:	1.Stock
PRECONDITIONS:	must have login into the system successfully
POSTCONDITIONS:	The system displays relevant functions
MAIN FLOW:	1. The user enters use case 2. The system validates the access level 3. The system displays the relevant functions
ALTERNATIVE FLOW:	None

Table 3.3.2 Customer use case

3.3.3 Manage Order

USE CASE NAME:	**Manage Order**
Description:	This use case allows users to perform actions relevant to Orders. The functions can be performed by the administrator after logging. A successful logged user can CREATE, VIEW, UPDATE, and DELETE relevant product details.
PRIMARY ACTORS:	Administrator
SECONDARY ACTOR:	Customer
INCLUDE USE CASES:	1. View Order Details 2. View Order Status 3. Generate Order Notification
EXTENDS USE CASES:	1.Stock
PRECONDITIONS:	User should order products from providing relevant user details.
POSTCONDITIONS:	A separate bill is generated for the confirmation purpose. All the information is being saved in the database.
MAIN FLOW:	1. The user enters use case 2. The system validates the access level 3. The system displays the order functions
ALTERNATIVE FLOW:	None

Table 3.3.3 Manage order use case

3.3.4 Manage Payments

USE CASE NAME:	**Manage Payments**
Description:	This use case allows users to perform actions relevant to payments. The functions can be performed by the administrator after logging. A successful logged user can CREATE, VIEW, UPDATE, DELETE relevant payment details.
PRIMARY ACTORS:	Administrator
SECONDARY ACTOR:	Customer
INCLUDE USE CASES:	1. View Payment Details
EXTENDS USE CASES:	1.Stock
PRECONDITIONS:	Add payments of the order after purchase successfully.
POSTCONDITIONS:	A separate bill is generated. All the information is being saved in the database.
MAIN FLOW:	1. The user enters use case 2. The system validates the access level 3. The system displays the payments functions
ALTERNATIVE FLOW:	None

Table 3.3.4 Manage payments use case

3.3.5 Login

USE CASE NAME:	**Login**
Description:	This use case authorized user is allowed to access. User enters the username and password. Check username and password is valid or not. User is directed to next page or shows the message box "Login Failed".
PRIMARY ACTORS:	Administrator
SECONDARY ACTOR:	Customer
INCLUDE USE CASES:	
EXTENDS USE CASES:	
PRECONDITIONS:	User enters the username and password.
POSTCONDITIONS:	User is directed to next page or shows the message box "Login Invalid".
MAIN FLOW:	1. The user enters use case 2. The system validates the access level 3. The system displays the login successful or login invalid.
ALTERNATIVE FLOW:	None

Table 3.3.5 login use case

3.3.6 Manage Cart

USE CASE NAME:	**Manage Cart**
Description:	This use case allows users to perform actions relevant to Cart. The functions can be performed by the customer after logging. A successful logged user can ADD PRODUCT TO CART, REMOVE PRODUCT FROM CART, UPDATE relevant cart details.
PRIMARY ACTORS:	Customer
SECONDARY ACTOR:	Administrator
INCLUDE USE CASES:	1. Add Product to cart 2. Remove Product from cart 3. Update Cart
EXTENDS USE CASES:	1.Stock
PRECONDITIONS:	Can add product to cart successfully
POSTCONDITIONS:	The system displays relevant functions. Recodes will be added to the database.
MAIN FLOW:	1. The user enters use case 2. The system validates the access level 3. The system displays the cart functions
ALTERNATIVE FLOW:	None

Table 3.3.6 Manage cart use case

3.3.7 Manage Product

USE CASE NAME:	**Manage Product**
Description:	This use case allows users to perform actions relevant to Products. The functions can be performed by the administrator after logging. A successful logged user can CREATE, VIEW, UPDATE, and DELETE relevant product details.
PRIMARY ACTORS:	Administrator
SECONDARY ACTOR:	None
INCLUDE USE CASES:	1. View Product 2. Add Product 3. Update Product 4. Delete Product
EXTENDS USE CASES:	1.Stock
PRECONDITIONS:	must have login into the system successfully
POSTCONDITIONS:	The system displays relevant functions
MAIN FLOW:	1. The user enters use case 2. The system validates the access level 3. The system displays the product functions
ALTERNATIVE FLOW:	None

Table 3.3.7 Manage products use case

3.3.8 Manage Product Category

USE CASE NAME:	**Manage Product Category**
DESCRIPTION:	This use case allows users to perform actions relevant to Products. To access all functions authorized users must be logged. a successful user can CREATE, VIEW, UPDATE, DELETE relevant Category details.
PRIMARY ACTORS:	Administrator
INCLUDE USE CASES:	1. View Category 2. Add Category 3. Update Category 4. Delete Category
PRECONDITIONS:	must have login into the system successfully
POSTCONDITIONS:	The system displays relevant functions
MAIN FLOW:	1. The user enters use case 2. The system validates the access level 3. The system displays the functions

Table 3.3.8 Manage product category use case

3.4 Activity Diagrams

An activity diagram visually presents a series of actions or flow of control in a system similar to a flowchart or a data flow diagram. Activity diagrams are often used in business process modeling. They can also describe the steps in a use case diagram. Activities modeled can be sequential and concurrent. In both cases an activity diagram will have a beginning (an initial state) and an end (a final state). [3]

3.4.1. Admin Side

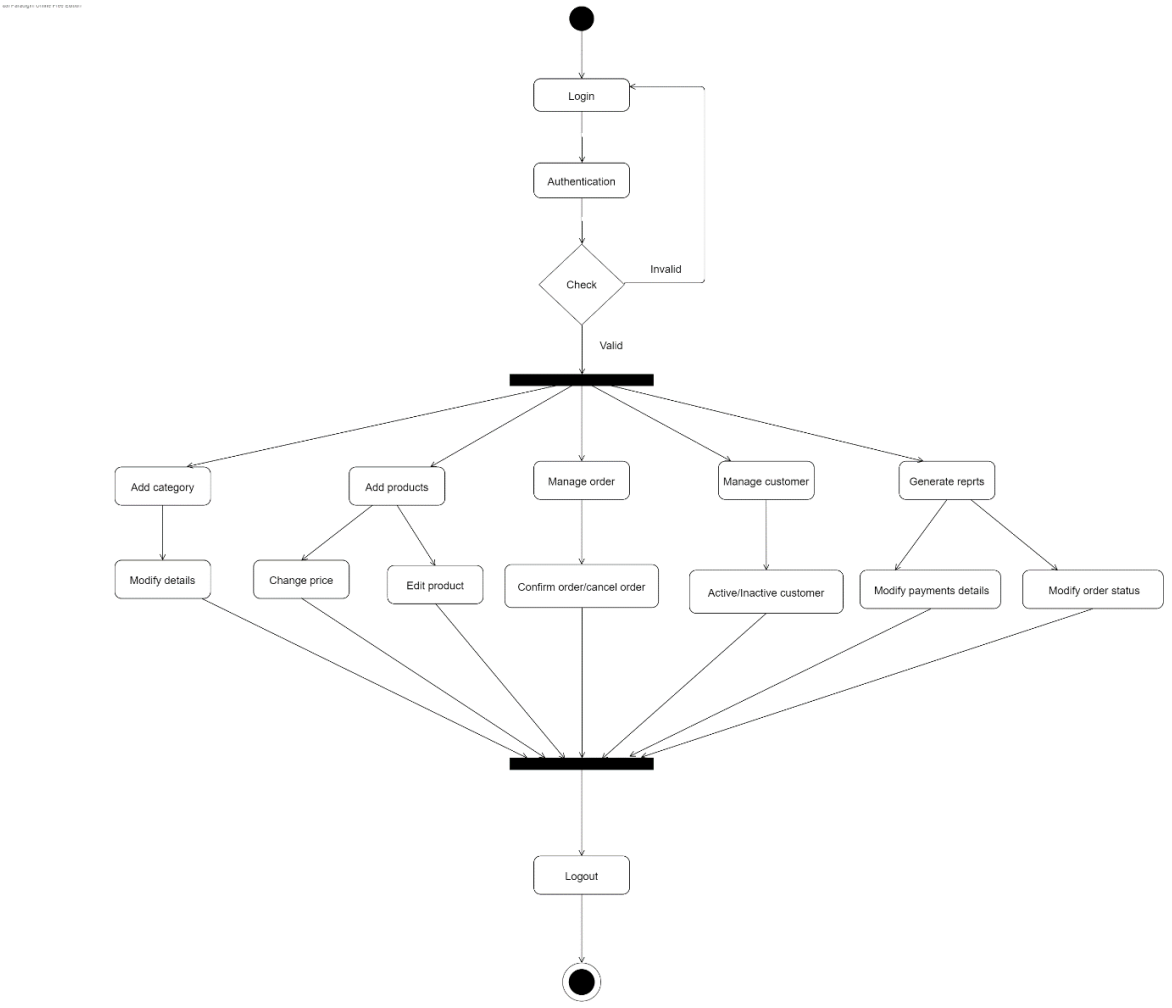


Figure 3.4.1 Admin Side

3.4.2 Customer Side

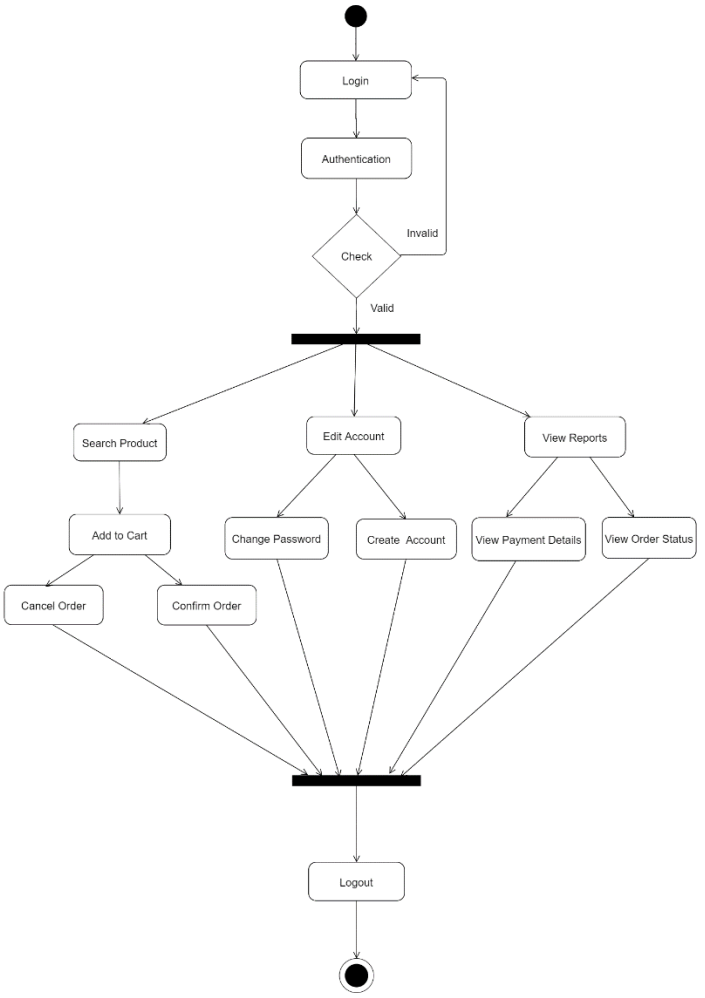


Figure 3.4.2 Customer Side

3.5 Class diagrams

Class diagrams are the main building block in object-oriented modeling. They are used to show the different objects in a system, their attributes, their operations and the relationships among them.

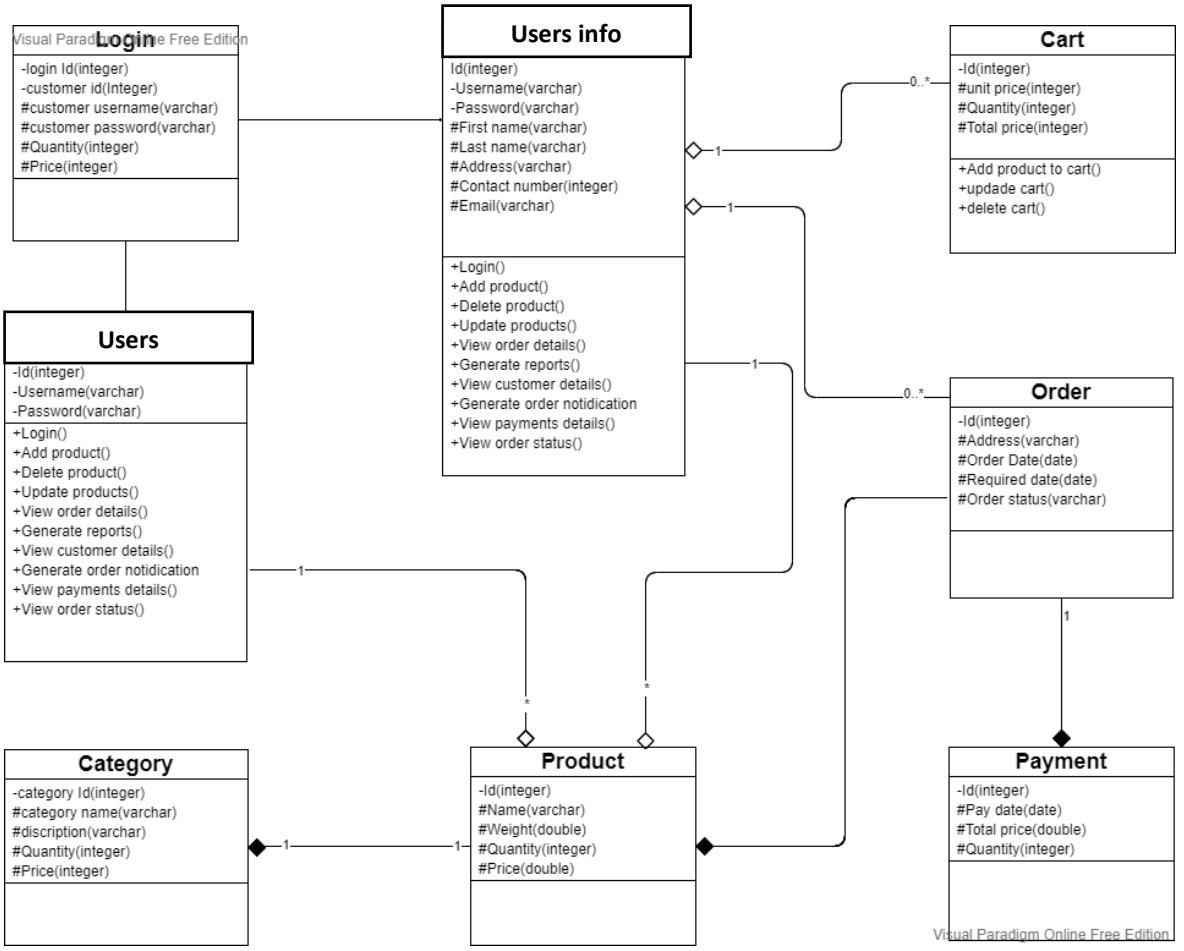


Figure 3.5 Class diagrams

3.6 Normalized database design

Database diagrams graphically show the structure of the database. Using database diagrams, you can create and modify tables, columns, relationships, and keys. Additionally, you can modify indexes and constraints. [4]

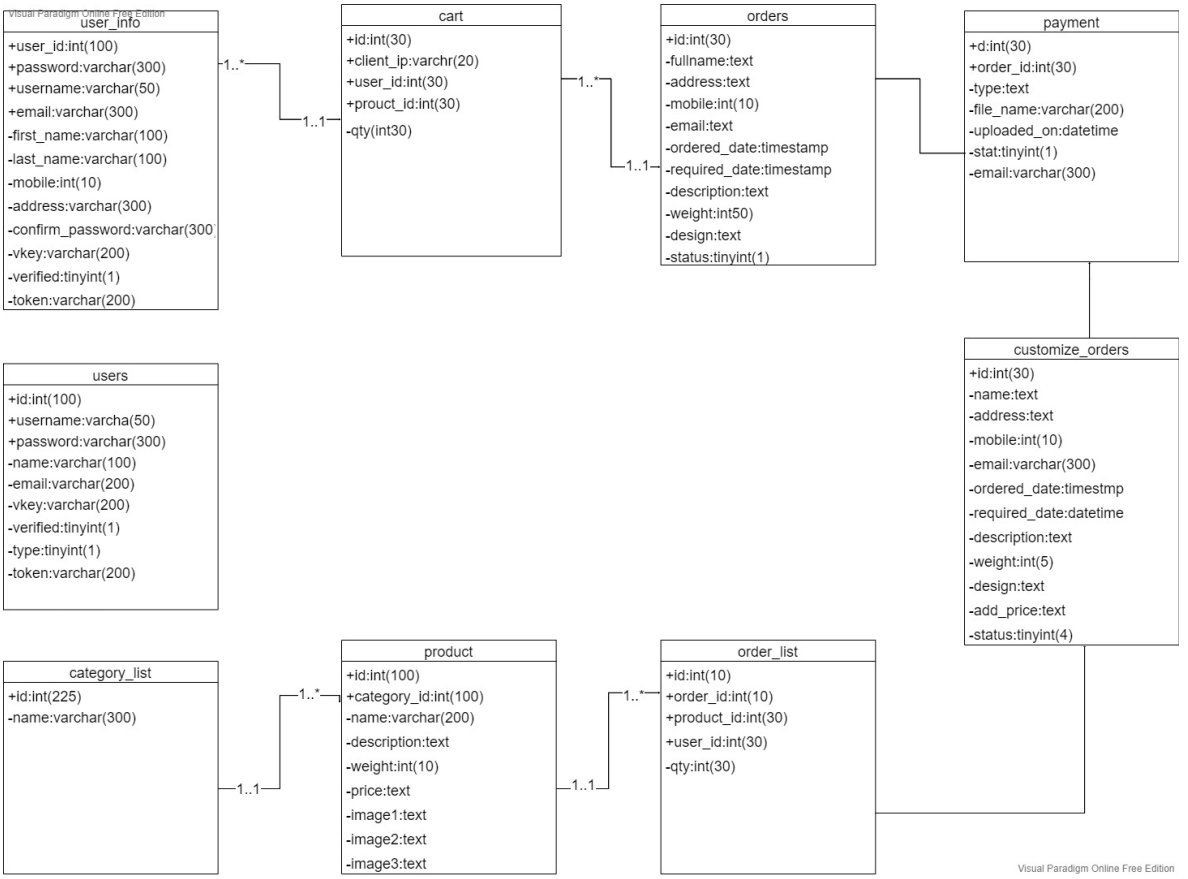


Figure 3.6 Normalized database design

3.7 Design of Data Capturing Interfaces and Report Layouts

3.7.1 Home Page

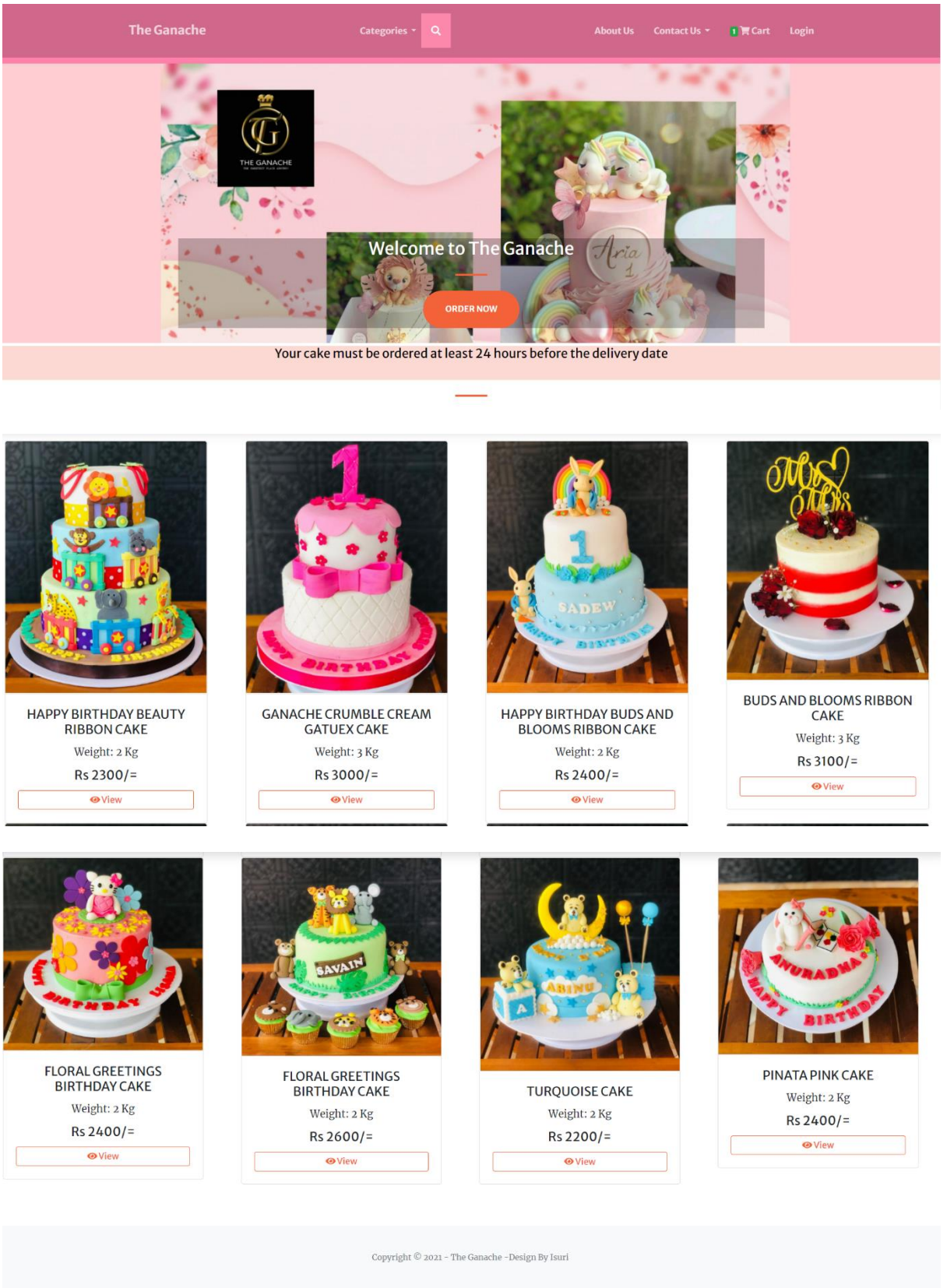


Figure 3.7.1 home page

3.7.2 About Us Page

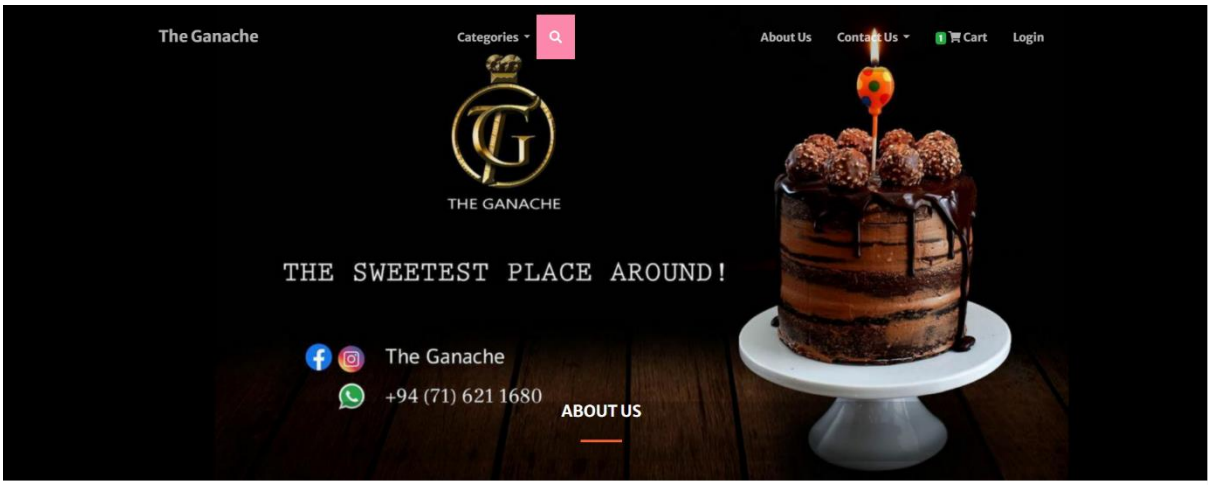


Figure 3.7.2 About us page

3.7.3 Contact Us Page

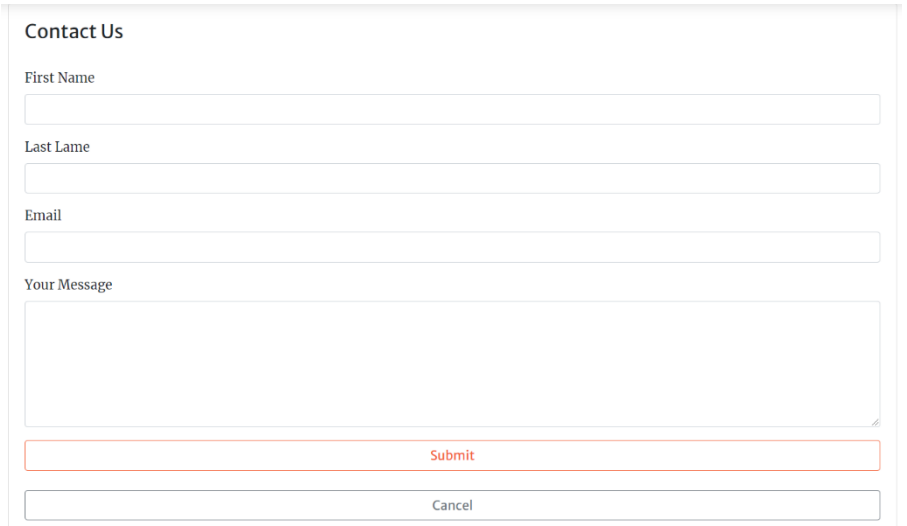


Figure 3.7.3 Contact us page

3.7.4 Single Product Page

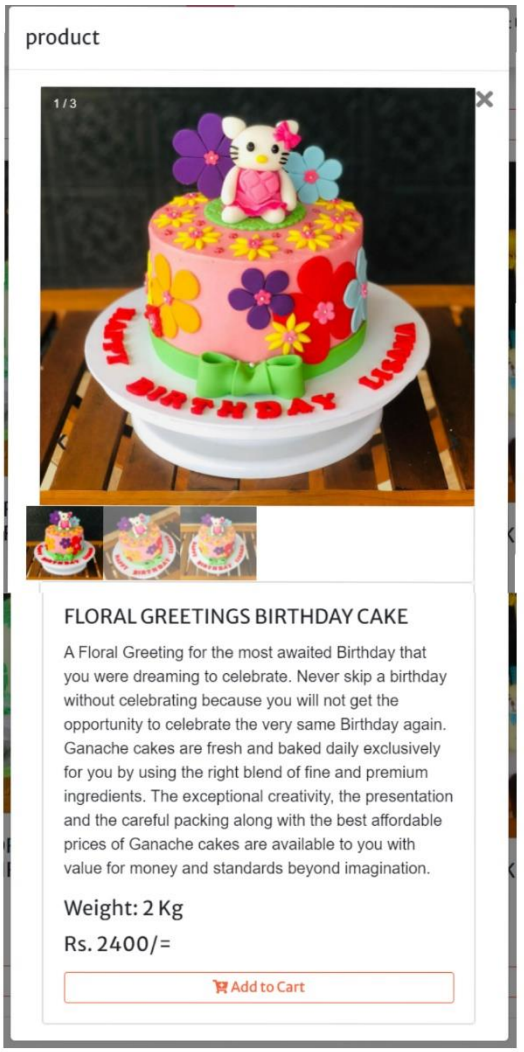


Figure 3.7.4 Single product page

3.7.5 Customize Order Page

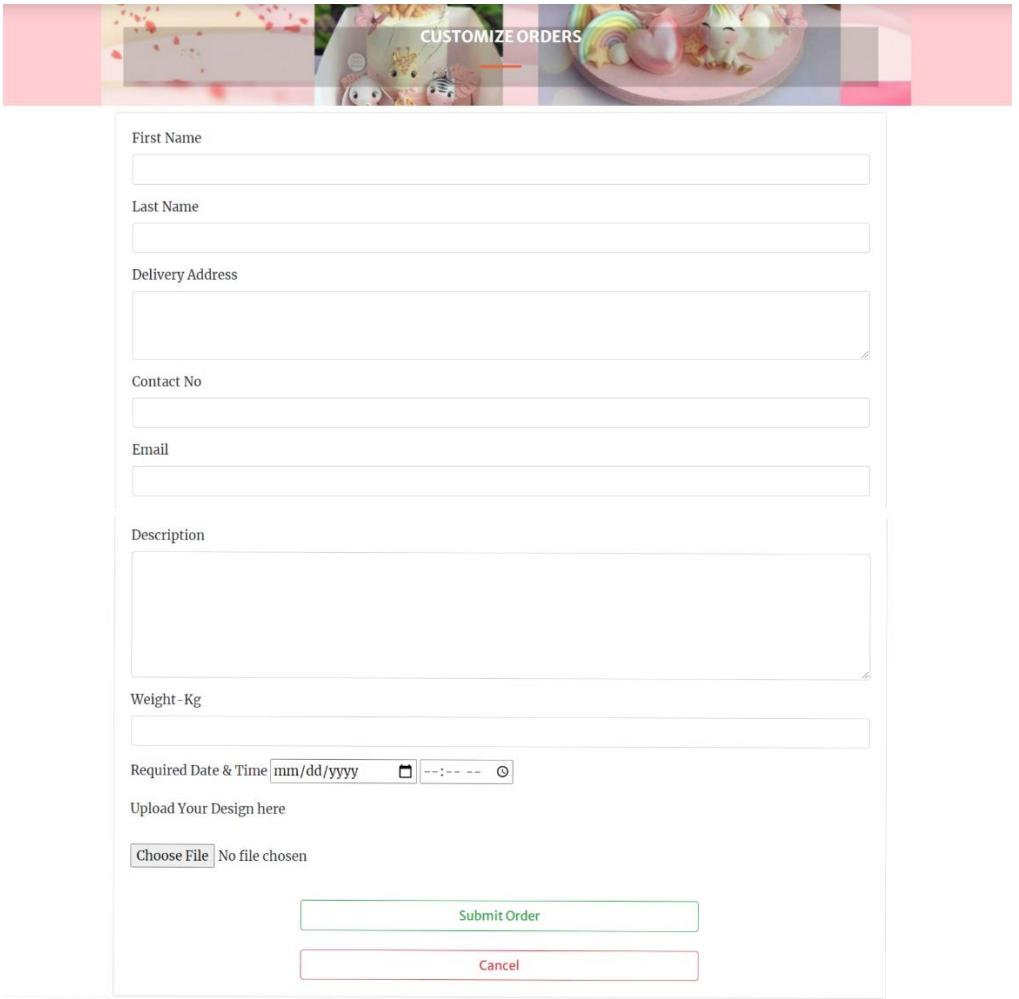


Figure3.7.5 customize orders page

3.7.6 Sign Up Page

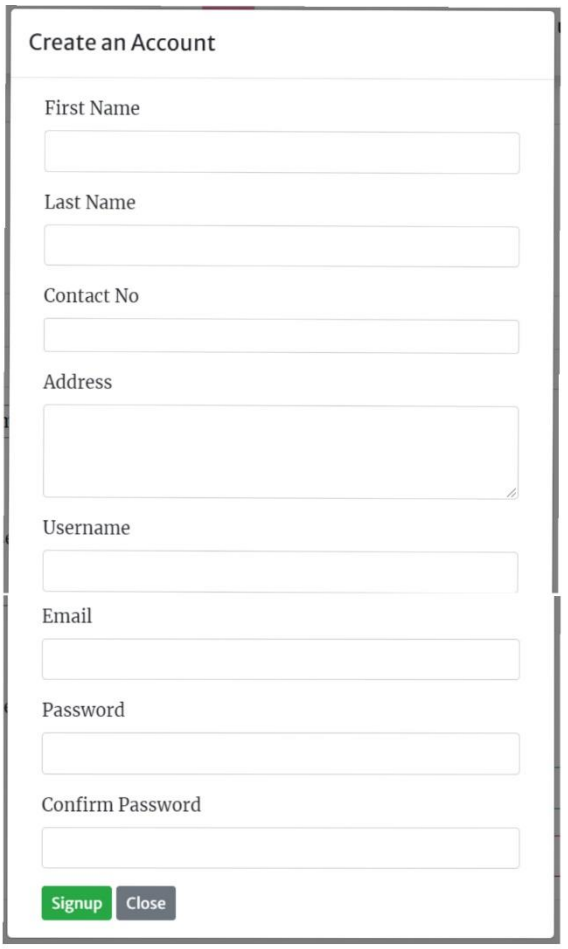


Figure 3.7.6 Sign up page

3.7.7 login Page

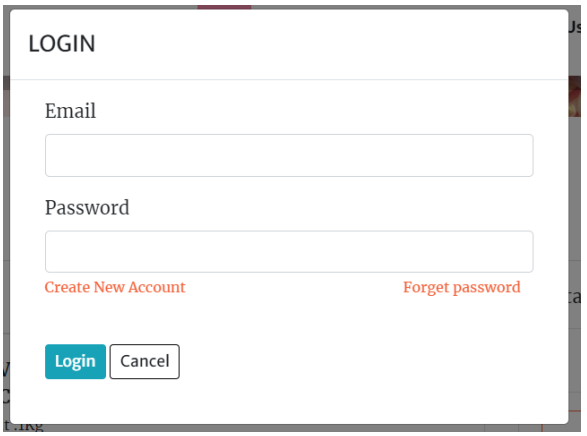


Figure 3.7.7 Login page

3.7.8 Checkout Page

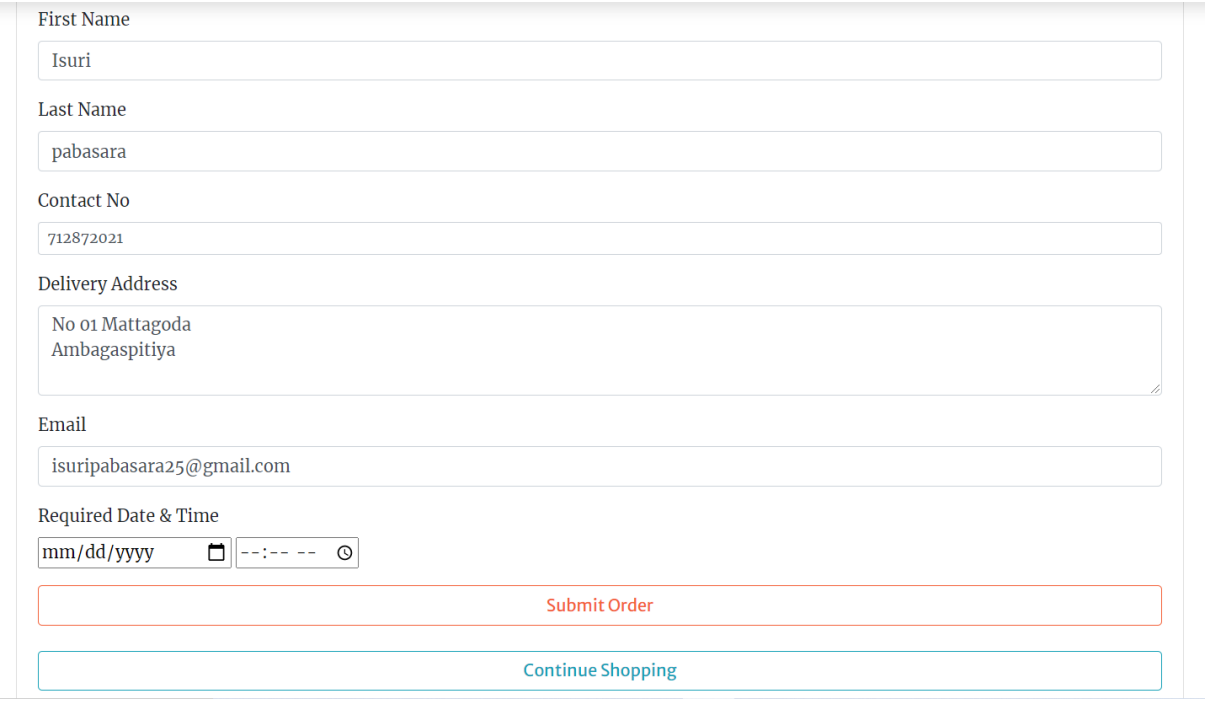


Figure 3.7.8 Checkout page

3.7.9 My Orders Page

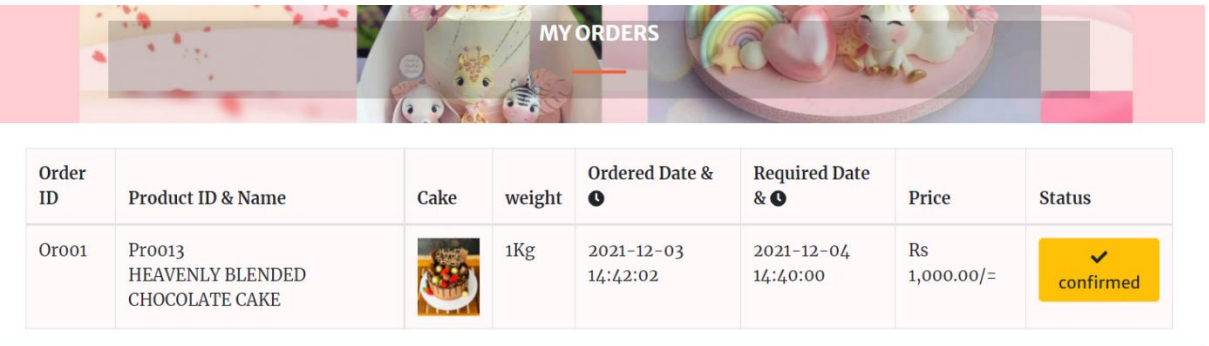


Figure 3.7.9 My orders page

3.7.10 Customize Orders Page

Figure 3.7.10 Customize orders page

3.7.11 Payment Page

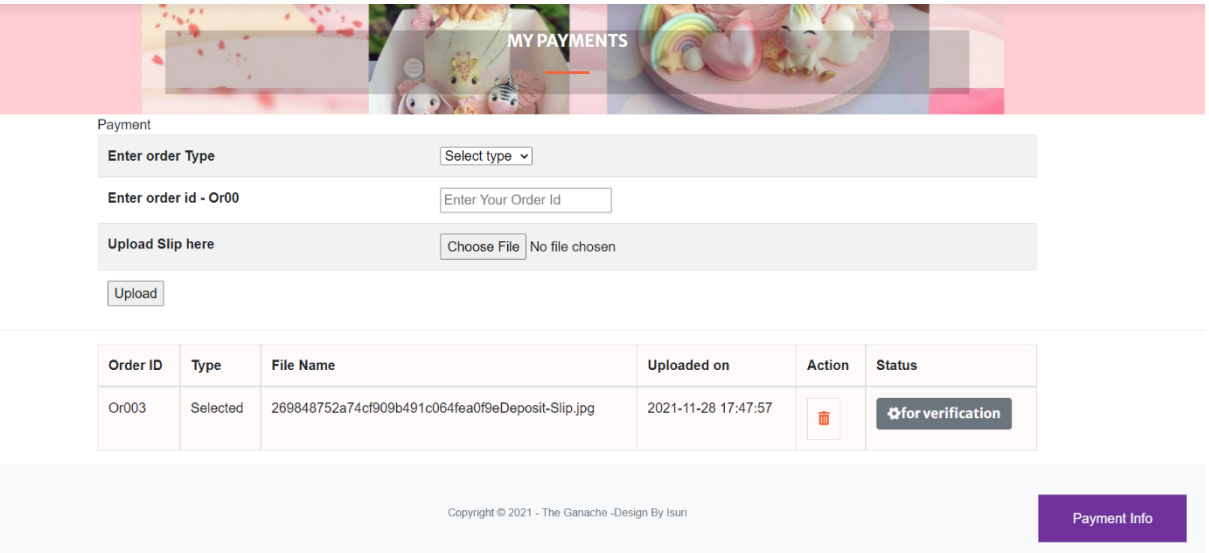


Figure 3.7.11 Payment page

3.7.12 Invoice Page

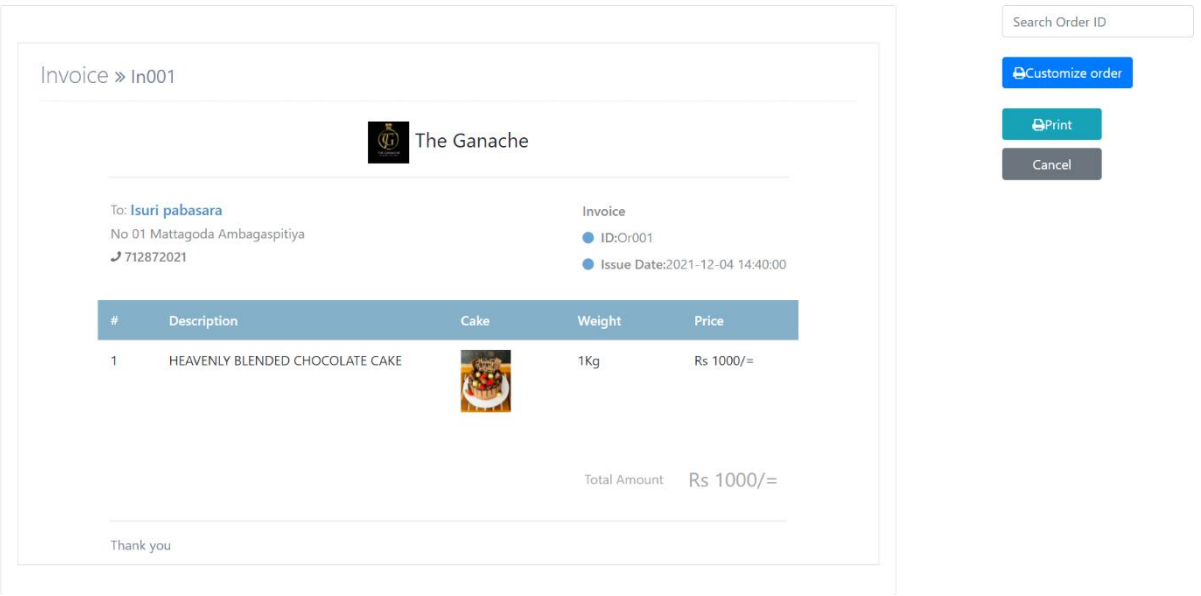


Figure 3.7.12 Invoice page

3.7.13 Forgot Password Page

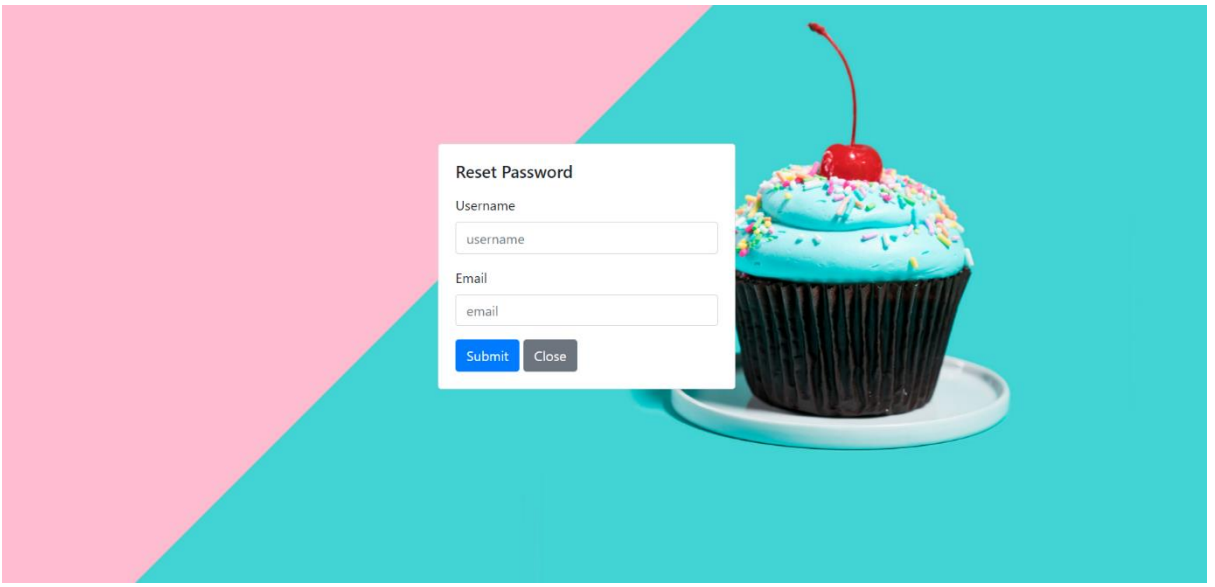


Figure 3.7.13 Forgot Password

3.7.14 Admin Main Dashboard Page

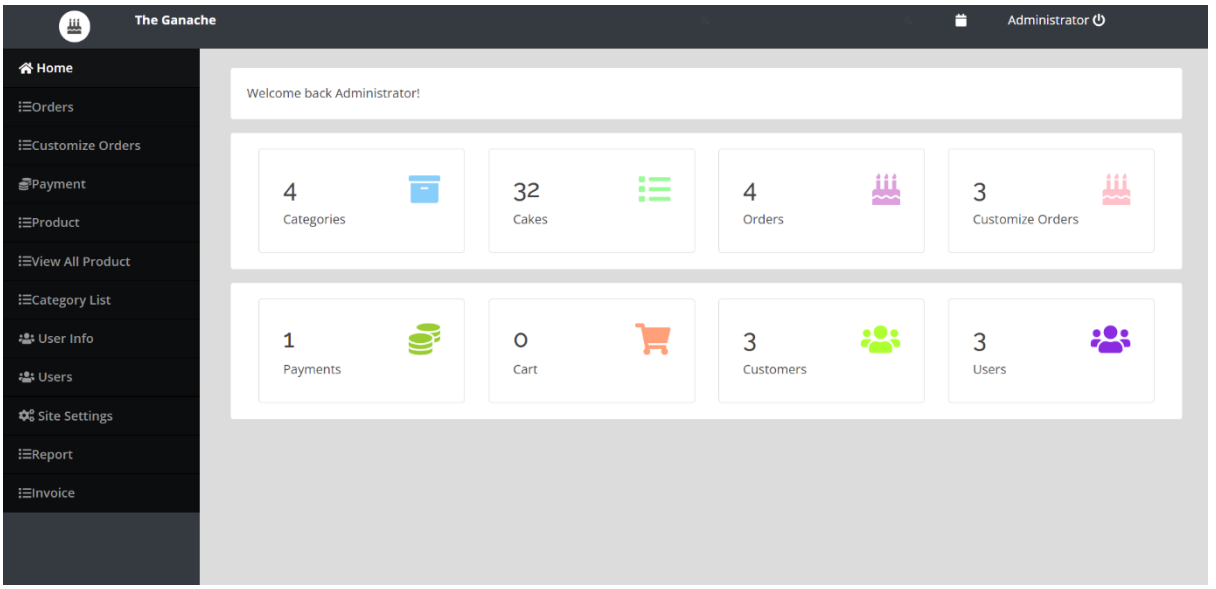


Figure 3.7.14 Dashboard page

3.7.15 Orders Page

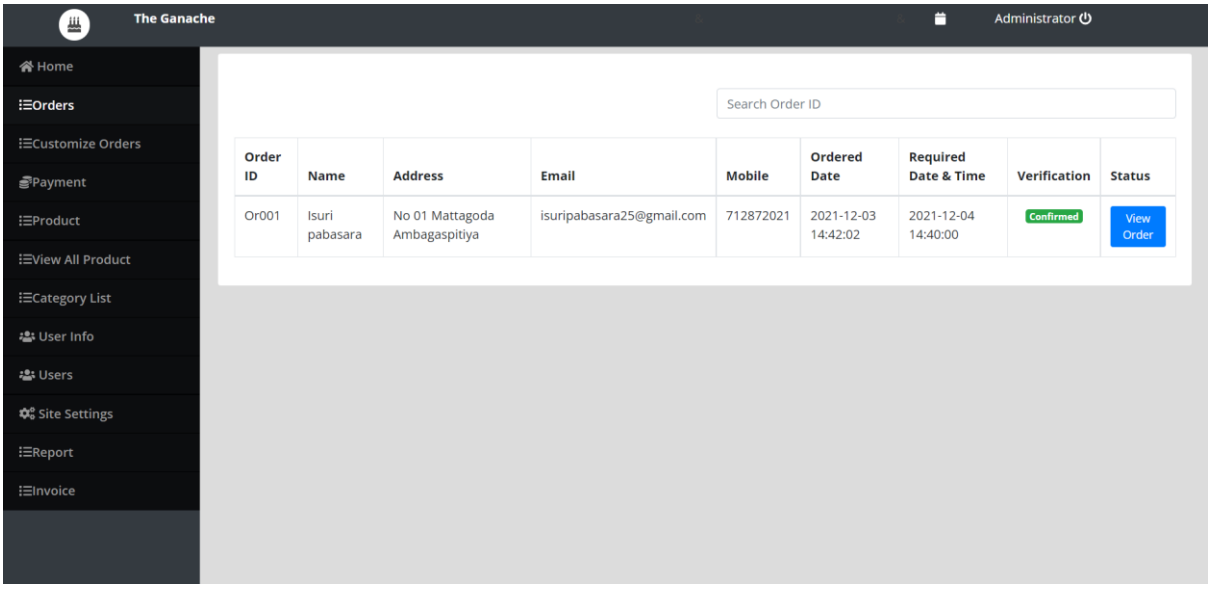


Figure 3.7.15 Orders page

3.7.16 Customize Orders Page

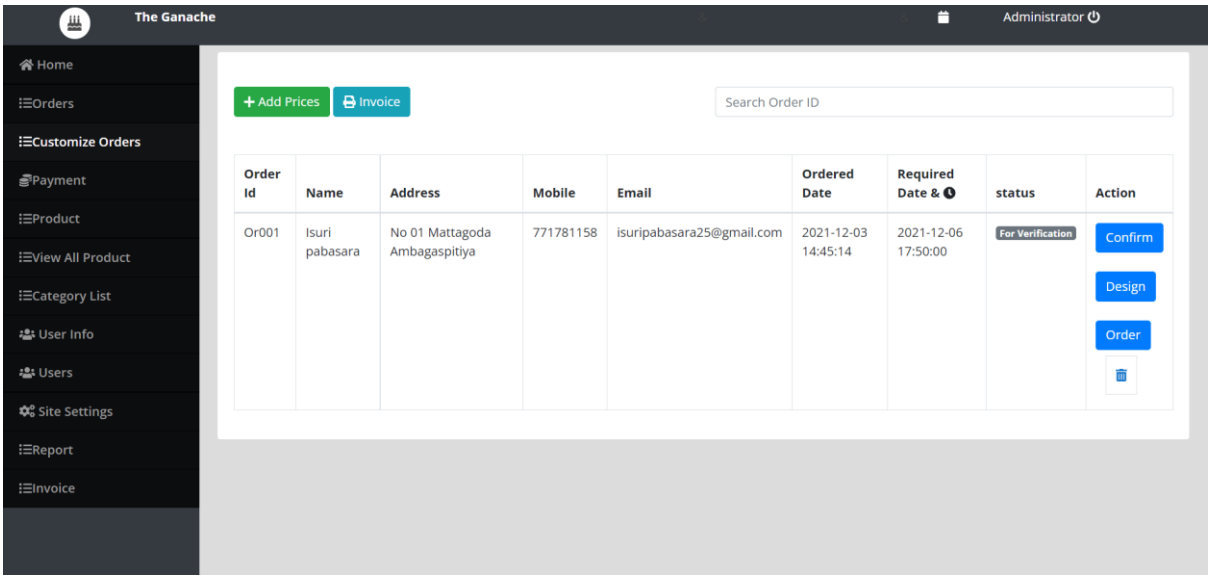


Figure 3.7.16 Customize Orders page

3.7.17 Payment Page

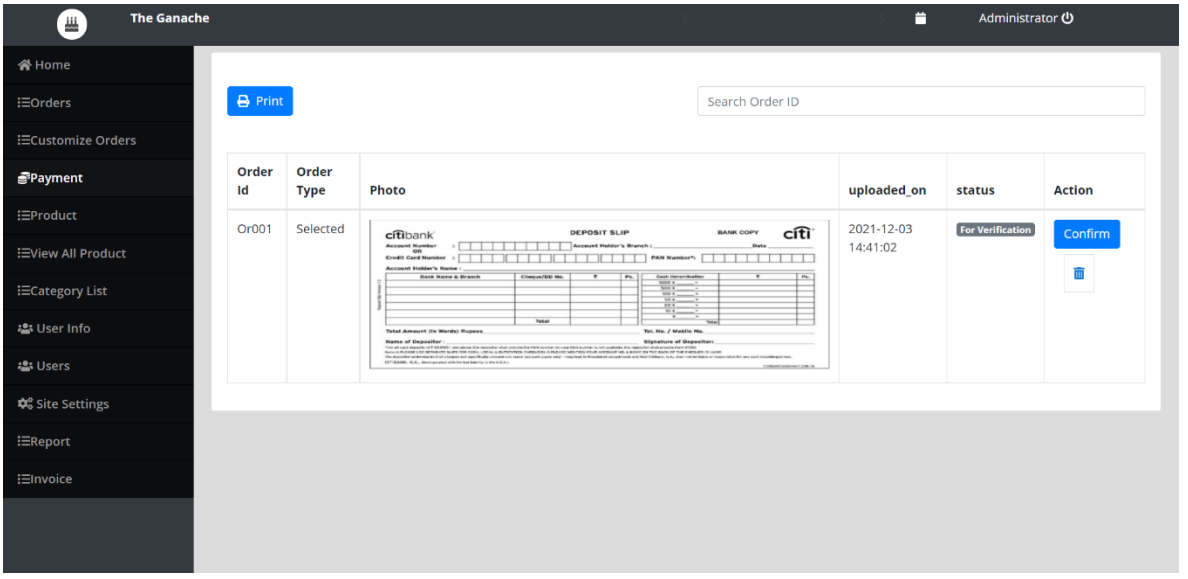


Figure 3.7.17 Payment page

3.7.18 Product Page

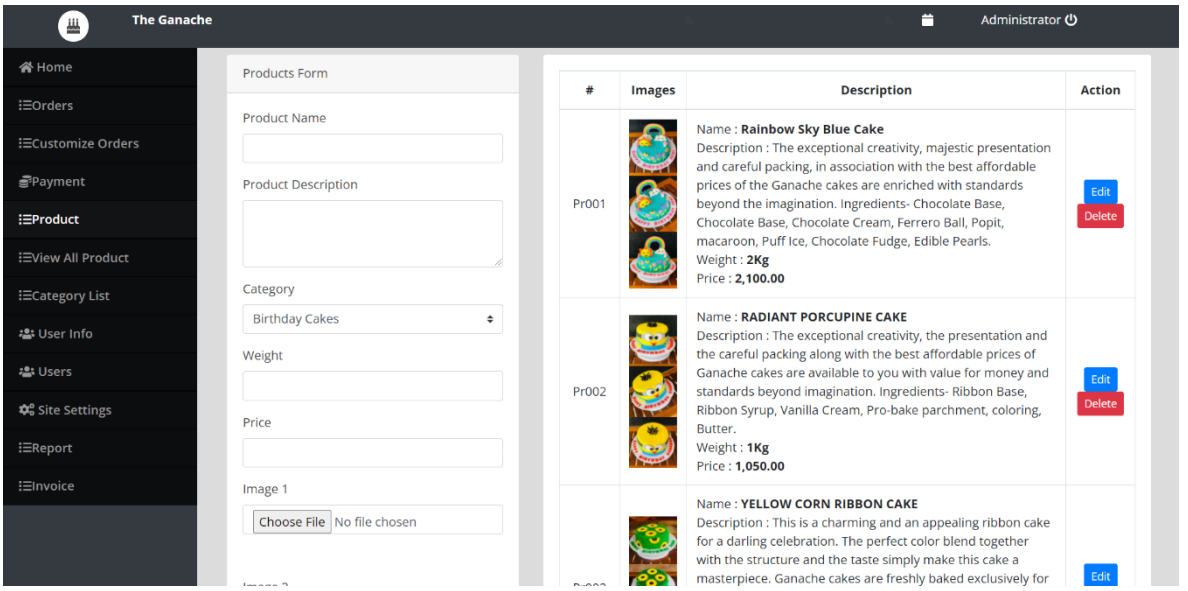


Figure 3.7.18 Product page

3.7.19 View All Product Page

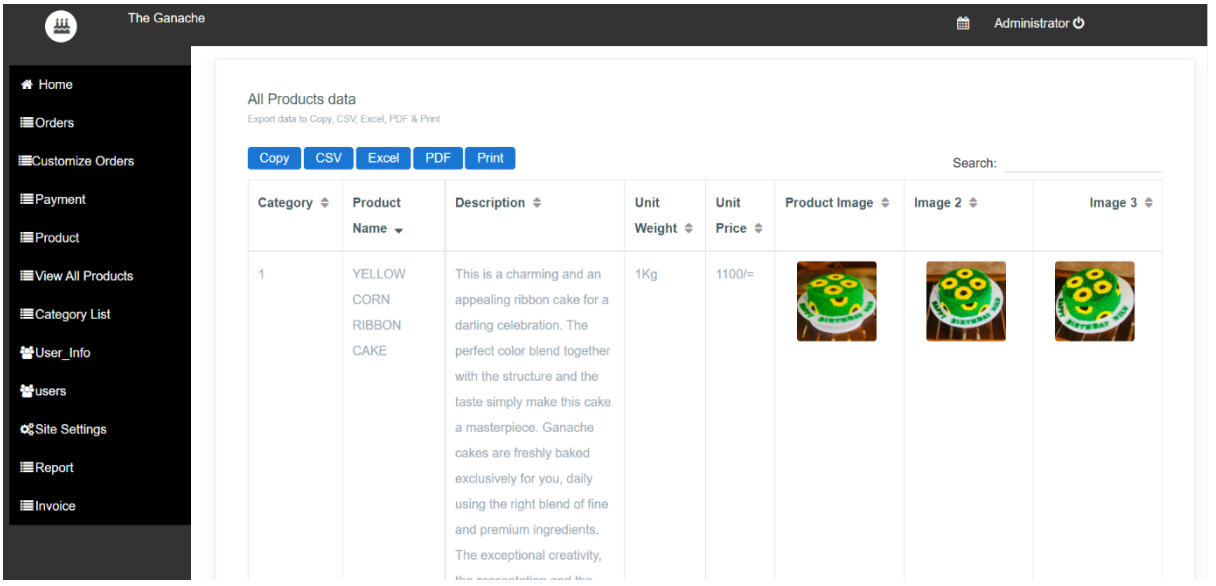


Figure 3.7.19 View all product page

3.7.20 Category Page

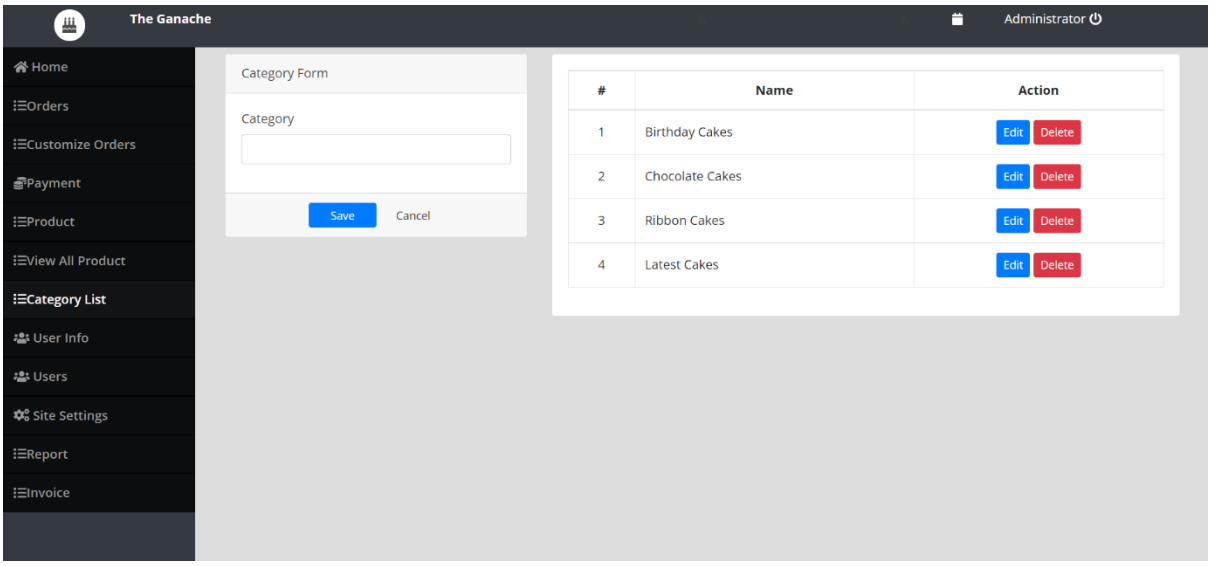


Figure 3.7.20 Category page

3.7.21 Customer Info Page

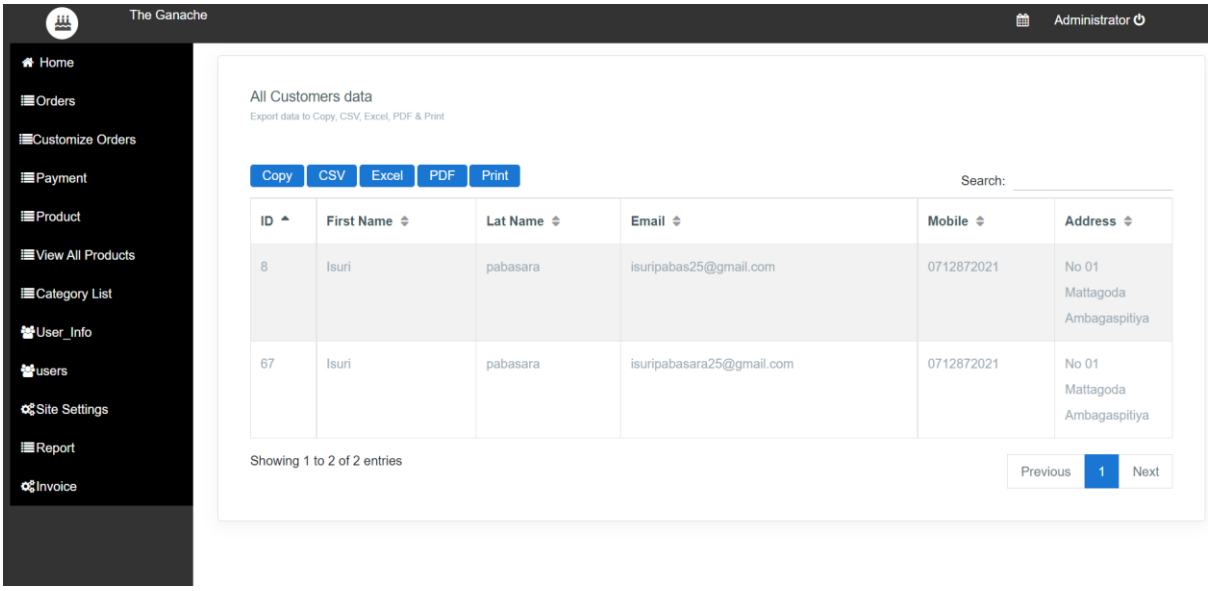


Figure 3.7.21 Customer info page

3.7.22 Admin Info Page

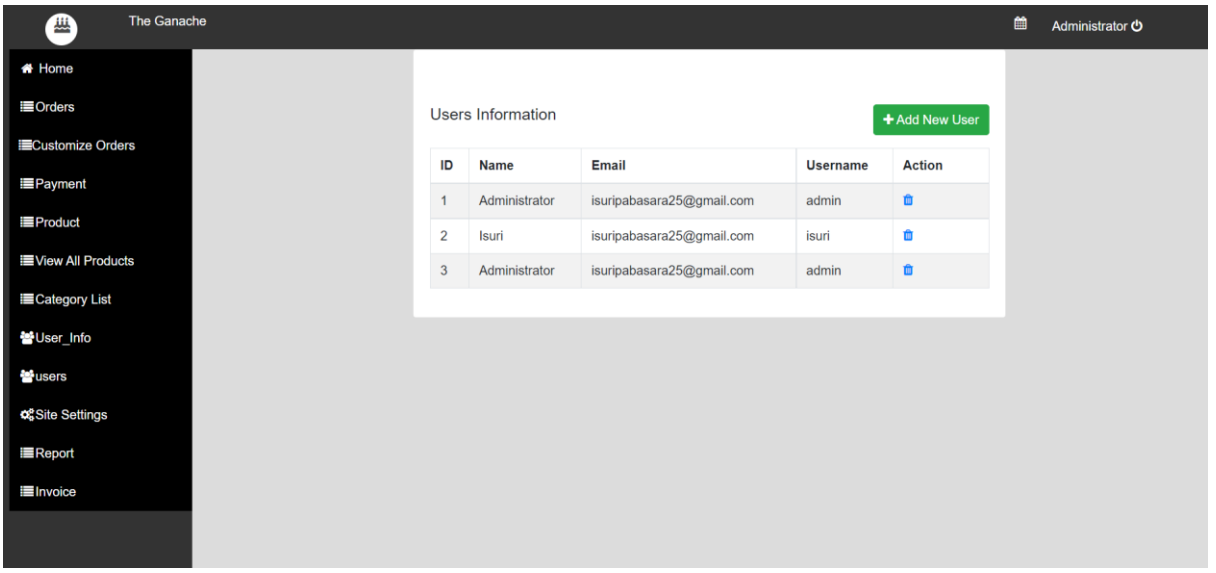


Figure 3.7.22 Admin- User Info page

3.7.23 Site-Setting Page

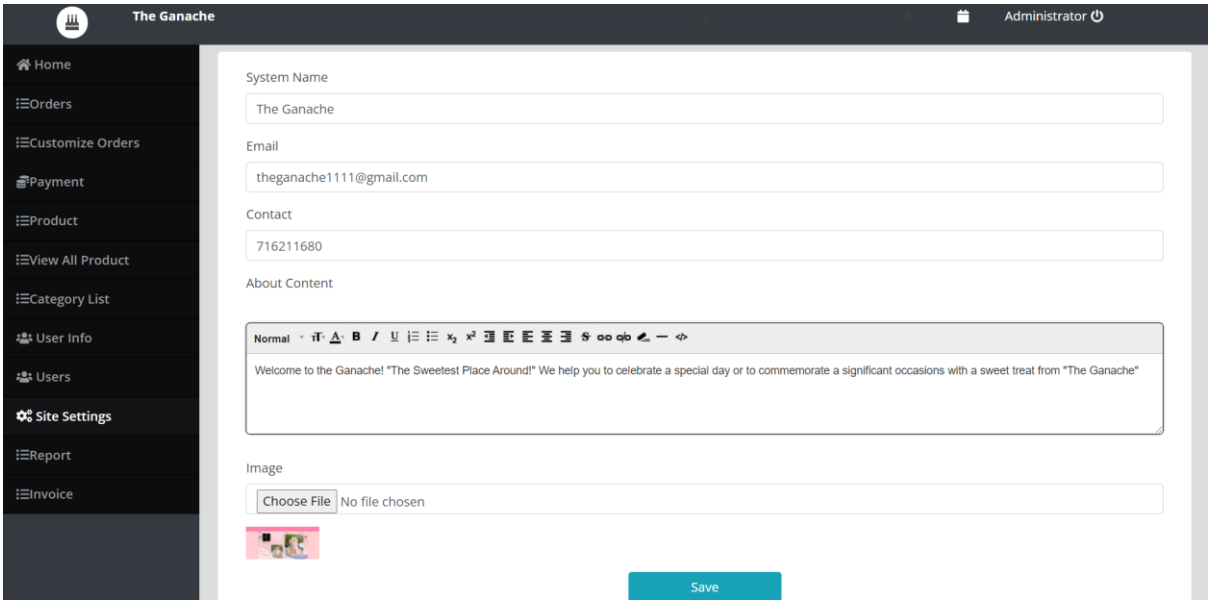


Figure 3.7.23 Site Setting page

3.7.24 Report Page

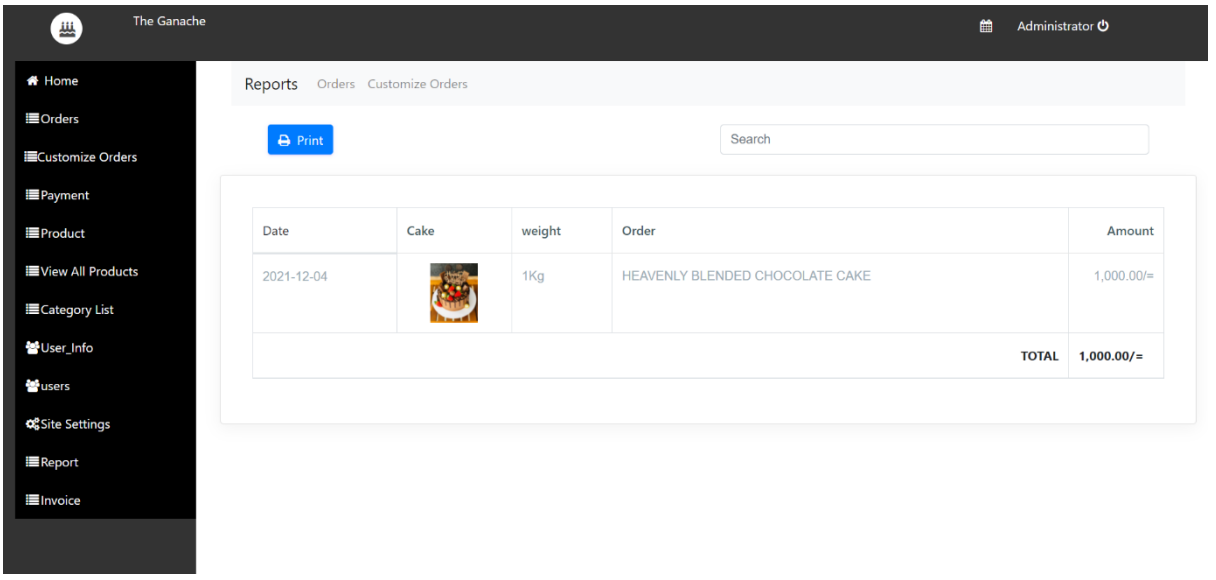


Figure 3.7.24 Reports page

3.7.24 Invoice Page

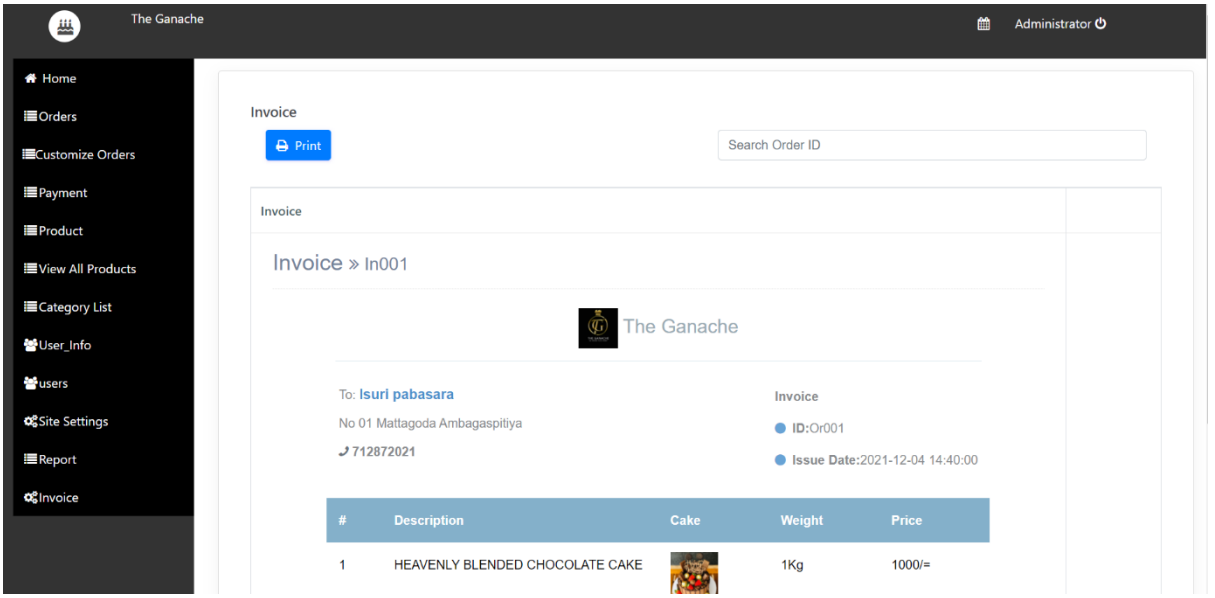


Figure 3.7.24 Invoice page

3.7.25 Calendar Page

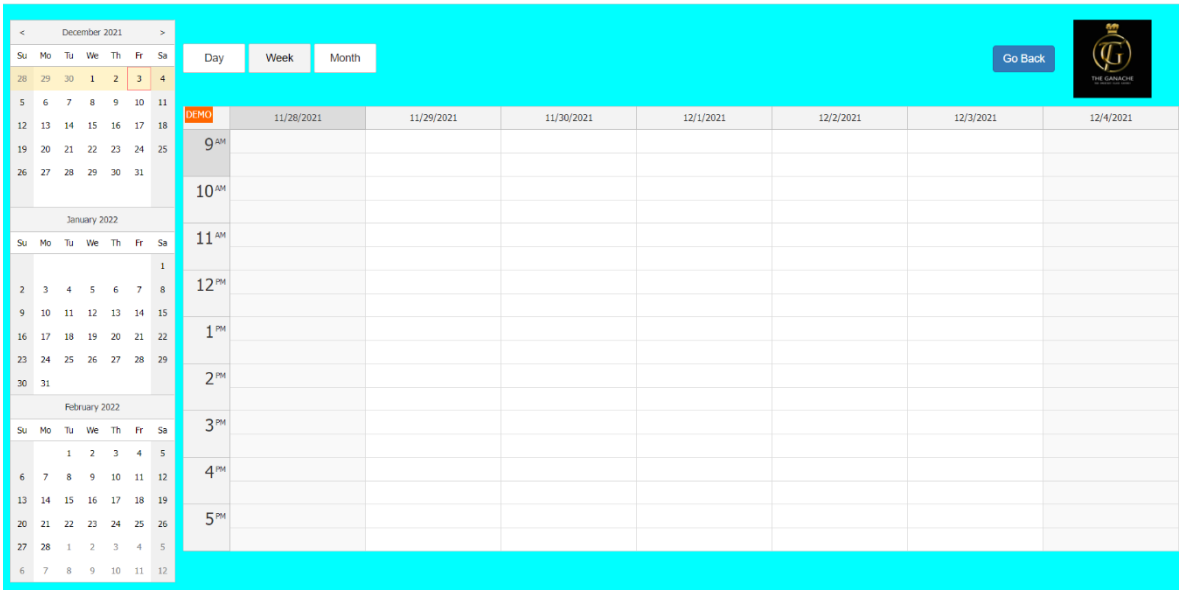


Figure 3.7.25 Calendar page

CHAPTER 04 - DEVELOPMENT

4.1 Introduction

Web development refers to the building, creating, and maintaining of websites. It includes aspects such as web design, web publishing, web programming, and database management. It is the creation of an application that works over the internet.

The word Web Development is made up of two words, that is:

- **Web:** It refers to websites, web pages, or anything that works over the internet.
- **Development:** Building the application from scratch.

In the process of Web Development, Developers build web pages and applications for either the Intranet, a private network, or the Internet. Web Development does not necessarily focus on a website's design; rather, it is majorly concerned with the programming and coding part, which is the main reason for the functioning of the website. [5]

4.2 Web-Site

website, also called Web site, collection of files and related resources accessible through the World Wide Web and organized under a particular domain name. Typical files found at a website are HTML documents with their associated graphic image files (GIF, JPEG, etc.), scripted programs (in Perl, PHP, Java, etc.), and similar resources. The site's files are usually accessed through hypertext or hyperlinks embedded in other files.

4.3 Web-Page

A web page or webpage is a document, commonly written in HTML, that is viewed in an Internet browser. A web page can be accessed by entering a URL address into a browser's address bar. A web page may contain text, graphics, and hyperlinks to other web pages and files.

A web page is often used to provide information to viewers, including pictures or videos to help illustrate important topics. A web page may also be used as a method to sell products or services to viewers. Multiple web pages make up a website, like our Computer Hope website.

4.4 Development Tools and Technology

Web Development Tools help the developers to work with a variety of technologies. Web Development Tools should be able to provide faster mobile development at lower costs.

They should help the developers in creating a responsive design. Responsive web design will improve the online browsing experience, and facilitate improved SEO, lower bounce rates, and lower maintenance needs. Moreover, the Front-End Development Tool that you choose should be Scalable. [6]

4.4.1 HTML/HTML5

HTML stands for Hyper Text Markup Language. It is used to design web pages using a markup language. HTML is the combination of Hypertext and Markup language. Hypertext defines the link between the web pages. A markup language is used to define the text document within tag which defines the structure of web pages. This language is used to annotate (at the note for computer) text so that a machine can understand it and manipulate text accordingly. Most of the markup (e.g. HTML) languages are human readable. The language uses tags to define what manipulation has to be done on the text. It is used for structuring and presenting the content on the web pages. HTML5 is the fifth version of HTML. Many elements are removed or modified from HTML5.

4.4.2 CSS

Cascading **S**tyle **S**heets, fondly referred to as CSS, is a simple design language intended to simplify the process of making web pages presentable.

CSS handles the look and feel part of a web page. Using CSS, you can control the color of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, what background images or colors are used, layout designs, variations in display for different devices and screen sizes as well as a variety of other effects.

CSS is easy to learn and understand but it provides powerful control over the presentation of an HTML document. Most commonly, CSS is combined with the markup languages HTML or XHTML.

4.4.3 PHP

PHP stands for Hypertext Preprocessor. It is an open-source server-side scripting language used for dynamic web development and can be embedded into HTML codes.A PHP script is usually embedded into another language, such as HTML codes since a browser does not understand PHP.

4.4.4 Java Script

JavaScript is a text-based programming language used both on the client-side and server-side that allows you to make web pages interactive. Where HTML and CSS are languages that give structure and style to web pages, JavaScript gives web pages interactive elements that engage a user. Common examples of JavaScript that you might use every day include the search box on Amazon, a news recap video embedded on The New York Times, or refreshing your Twitter feed.

4.4.5 AngularJS

AngularJS is a client-side JavaScript MVC framework to develop a dynamic web application. AngularJS was originally started as a project in Google but now, it is open-source framework.

AngularJS is entirely based on HTML and JavaScript, so there is no need to learn another syntax or language.

AngularJS changes static HTML to dynamic HTML. It extends the ability of HTML by adding built-in attributes and components and also provides an ability to create custom attributes using simple JavaScript.

4.4.6 Bootstrap

Bootstrap is a free and open source front end development framework for the creation of websites and web apps. The Bootstrap framework is built on HTML, CSS, and JavaScript (JS) to facilitate the development of responsive, mobile-first sites and apps.

4.4.7 MySQL

MySQL is a relational database management system (RDBMS) developed by Oracle that is based on structured query language (SQL).

A database is a structured collection of data. It may be anything from a simple shopping list to a picture gallery or a place to hold the vast amounts of information in a corporate network. In particular, a relational database is a digital store collecting data and organizing it according to the relational model. In this model, tables consist of rows and columns, and relationships between data elements all follow a strict logical structure. An RDBMS is simply the set of software tools used to actually implement, manage, and query such a database.

4.4.8 XAMPP

XAMPP is an abbreviation where X stands for Cross-Platform, A stands for Apache, M stands for MYSQL, and the Ps stand for PHP and Perl, respectively. It is an open-source package of web solutions that includes Apache distribution for many servers and command-line executables along with modules such as Apache server, MariaDB, PHP, and Perl.

XAMPP helps a local host or server to test its website and clients via computers and laptops before releasing it to the main server. It is a platform that furnishes a suitable environment to test and verify the working of projects based on Apache, Perl, MySQL database, and PHP through the system of the host itself. Among these technologies, Perl is a programming language used for web development, PHP is a backend scripting language, and MariaDB is the most vividly used database developed by MySQL.

CHAPTER 05 - TESTING

5.1 Introduction

System Testing is a level of testing that validates the complete and fully integrated software product. The purpose of a system test is to evaluate the end-to-end system specifications. Usually, the software is only one element of a larger computer-based system. Ultimately, the software is interfaced with other software/hardware systems. System Testing is actually a series of different tests whose sole purpose is to exercise the full computer-based system.

5.2 Two Category of Software Testing

- White Box Testing

White box testing, also known as transparent box or glass box testing, is a security testing technique where the internal code is visible to the tester. It primarily focuses on strengthening security, verifying the flow of inputs and outputs through the application, and improving the usability and design of the software.

By conducting white box testing, testers can analyze coding practices, data flow, information flow, control flow, and error and exception handling within the system, to verify the intended and unintended behavior of the software before it is deployed in the production environment.

- Black Box Testing

Black box testing is a fundamental part of routine security testing activities. It is a high-level security testing technique which aims to evaluate the security of the application without actually looking into the internal structure of the software application.

In white box testing, the testers are familiar with the internal architecture of the software being tested, but they aren’t in black box testing. This may lead to them missing security vulnerabilities in the software as they may not fully understand the flow as well as someone who can read what the code is doing (as in white box testing). [7]

5.3 Different Types of System Testing

- **Functionality Testing -** Also known as functional completeness testing. To ensure that the functionality of the product working as per the requirements defined, within the capabilities of the system.
- **Recoverability Testing -** To ensure how well the system recovers from various input errors and other failure situations. Recovery testing done to show a software solution is reliable, trustworthy and successfully recover from possible crashes.
- **Interoperability Testing -** To ensure whether the system works well with third-party products or not.
- **Performance Testing -** To make sure the system's performance under the various condition, regarding performance characteristics.
- **Regression Testing -** To make sure the system's stability as it passes through the integration of different subsystems and maintenance tasks. It also makes sure no old bugs appear from the addition of new software modules over time.
- **Usability Testing -** To make sure the user's ease to use the application, flexibility in handling controls and the ability of the system to meet its objectives.
- **Migration Testing -** Migration testing done to ensure that the software moved from old system infrastructures to current system infrastructures without any issues.

5.4 Software Testing Methodologies

Testing is an essential part of the Software Development Process. A robust and stable software product can be delivered with the use of standard testing methodologies that will help to predict the timeline of the software system.

The Testing Steps are,

- **Unit Testing:**

A Unit is a smallest testable portion of system or application which can be compiled, liked, loaded, and executed. This kind of testing helps to test each module separately.

The aim is to test each part of the software by separating it. It checks that component are fulfilling functionalities or not. This kind of testing is performed by developers.

- **Integration Testing:**

Integration means combining. For Example, in this testing phase, different software modules are combined and tested as a group to make sure that integrated system is ready for system testing.

Integrating testing checks the data flow from one module to other modules. This kind of testing is performed by testers.

- **System Testing:**

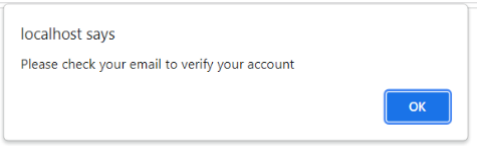
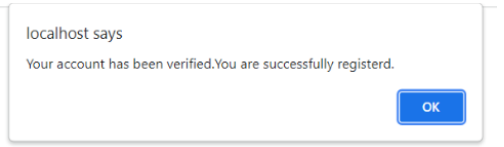
System testing is performed on a complete, integrated system. It allows checking system's compliance as per the requirements. It tests the overall interaction of components. It involves load, performance, reliability and security testing.

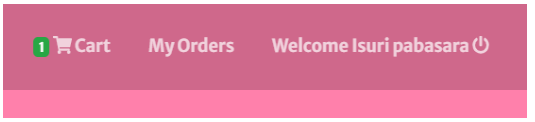
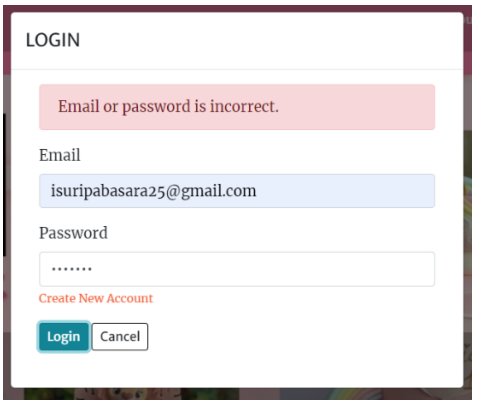
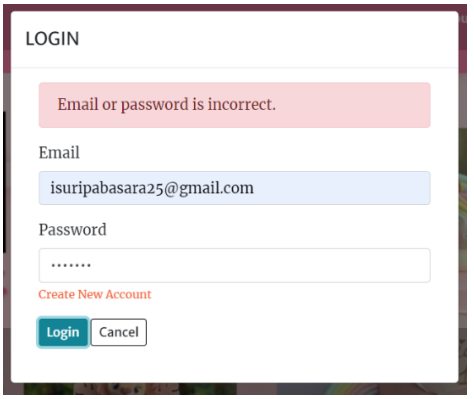
System testing most often the final test to verify that the system meets the specification. It evaluates both functional and non-functional need for the testing.

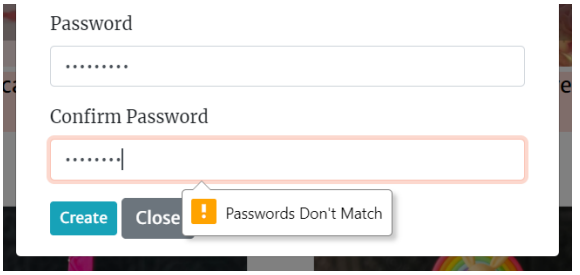
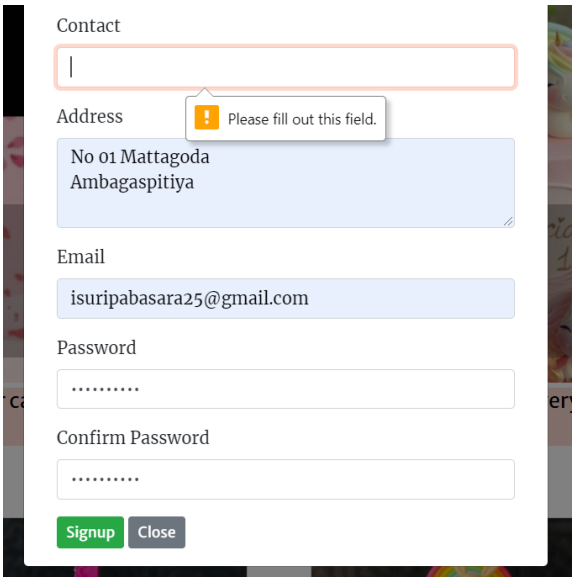
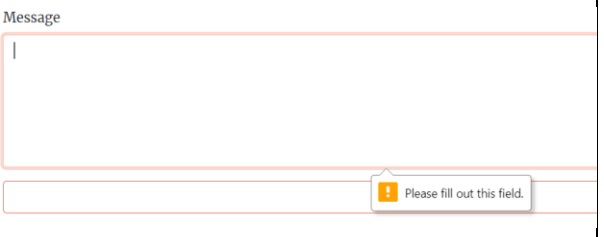
- **Acceptance Testing:**

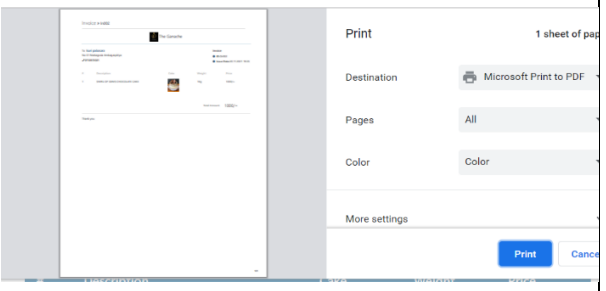
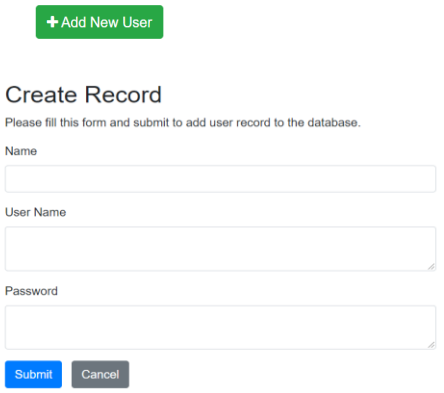
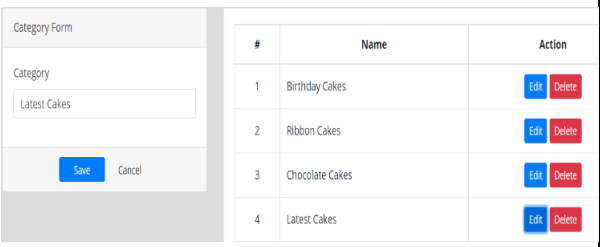
Acceptance testing is a test conducted to find if the requirements of a specification or contract are met as per its delivery. Acceptance testing is basically done by the user or customer. However, other stockholders can be involved in this process. [7]

5.5 Test Result

No	Steps to test	Expected result	Status
1	Enter valid email address to register a user account.	Receive a verified account email. 	✓
2	Enter already exit email address to register a user account.	Display error message "email already exits."	✓
3	Enter already exit username address to register a user account.	Display error message "username already exits."	✓
4	Click the account verification link.	User can successfully register to the system. 	✓
5	The user forgets password, entering an email address and username in forget password form.	User successfully submitted the email and username; user can receive password reset link to update a new password.	✓

No	Steps to test	Expected result	Status
6	Enter valid email and enter correct password Enable account status.	After successfully login display welcome user full name, my cart and my orders. 	✓
7	Enter correct email enter invalid password Enable account status.	Display error message "email or password is incorrect." 	✓
8	Enter Invalid email enter correct password Enable account status.	Display error message "email or password is incorrect." 	✓

No	Steps to test	Expected result	Status
9	Enter wrong confirm password to sign up as a new member.	Display error message “Passwords Don’t Match.” 	✓
10	Enter Signup button some fields are missing	Display error message “Please fill out this field.” 	✓
11	Enter “send message” button without filling data.	Show message “Please fill out this field” 	✓
12	Click checkout button without login.	Go to login form before checkout.	✓

No	Steps to test	Expected result	Status
13	Click the print button to received invoice.	Open selected order id invoice in print view. 	✓
14	Enter add new button in admin user field.	Show window "Add new user" 	✓
15	Enter edit button in category field.	Show "Edit category details" & successfully edit category details. 	✓

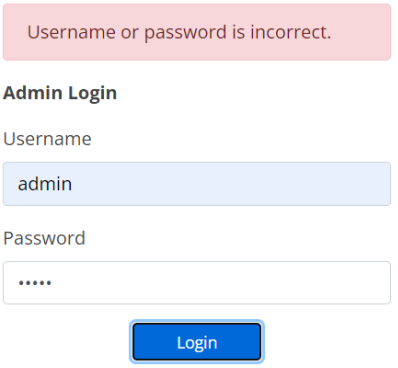
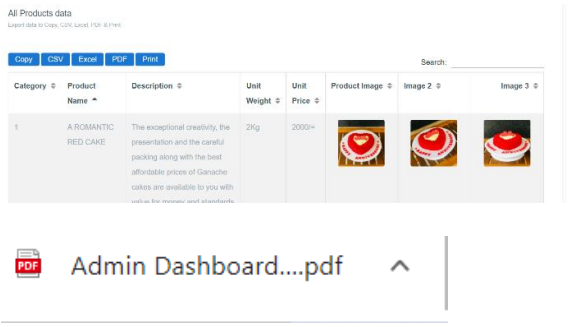
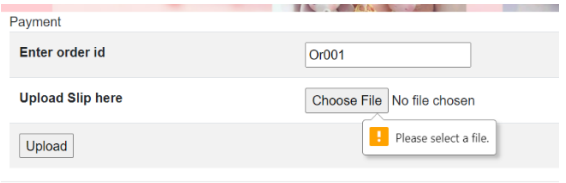
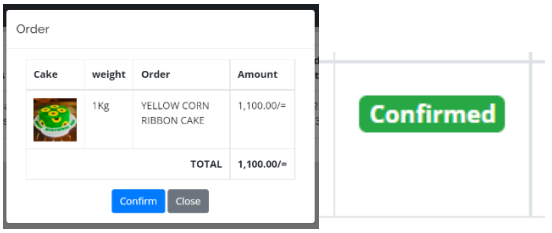
No	Steps to test	Expected result	Status
16	Enter incorrect username or password to admin login.	Display error message “Username or Password is incorrect.” 	✓
17	Enter copy as excel, pdf buttons to get all product records.	Downloading files 	✓
18	Enter payment slip upload button without choose file.	Display “Please select file”. 	✓
19	Enter confirm order status.	Display confirm message. 	✓

Table 5.5.1 Test results

CHAPTER 06 – IMPLEMENTATION

6.1 Introduction

System implementation projects are long, difficult journeys by which organizations move from an old set of technology, methods, procedures to a new one. A software implementation method is a systematic, structured approach to effectively integrate a software-based service or component into the workflow of an organizational structure or an individual end-user. It is vital to select the right strategy for implementing the application to assure successful results.

6.2 Installation Guide

The objective of this project is to develop an online cake ordering store. When the user types in the URL of the cake store in the address field in the browser, a web server is connected to get the requested information in the.NET Framework. IIS (Internet Information Service) acts as the web server. The sole task of a Web server is to accept an HTTP request and return the requested resource in an HTTP response. The first thing IIS does when a request comes in is decide how to handle it. Its decision is based upon the request file's extension.

6.3 User Guide

6.3.1 Customer User Guide

Step 1 – Fill out the signup form to register with the system. Make sure you enter a valid email address, mobile number, and other user information. Your password must contain at least one number and one uppercase and lowercase letter, and at least eight or more characters.

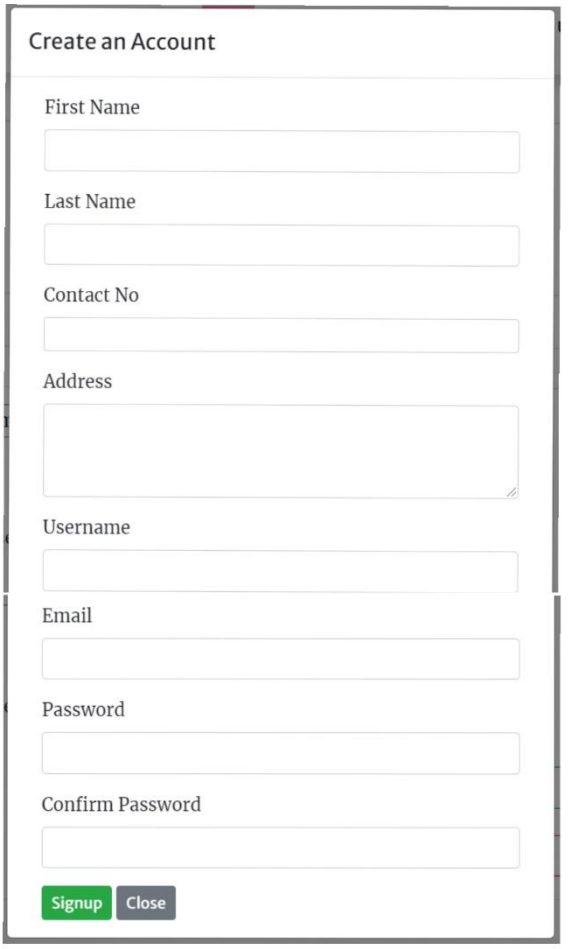


Figure 6.3.1.1 Signup form

Step 2 – When the user submits the signup form correctly, the user will receive a verified account email at the provided email address. Next, click the link, and the user can successfully register on the system.

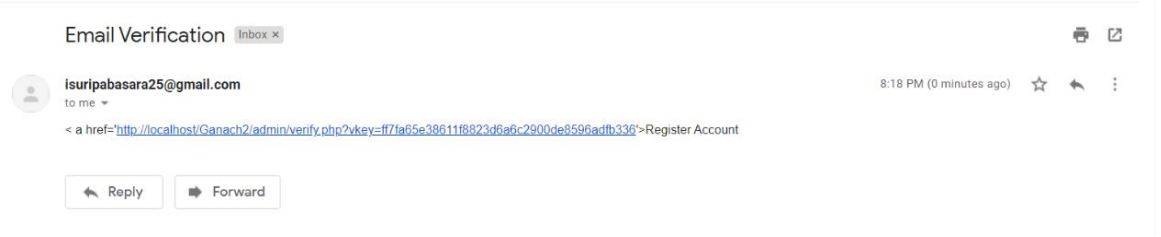


Figure 6.3.1.2 Email verification

Step 3 – Users should enter their email address and password to log into the system.

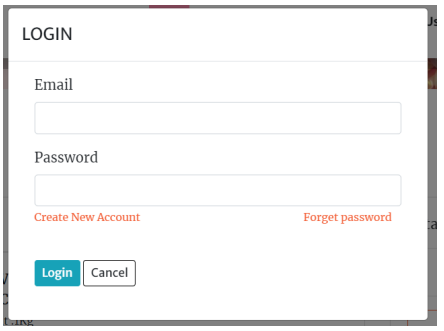


Figure 6.3.1.3 Login form

Step 4 –A user who forgets their password can recover it by entering an email address and username. When the user successfully submits the email and username, they will receive a link to update their new password.

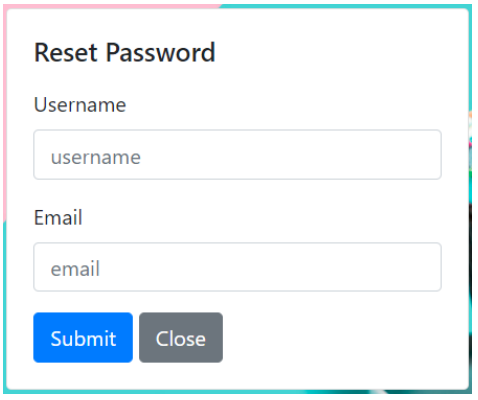


Figure 6.3.1.4 forget password form

Step 5 – The customer can add items to their cart and checkout order by entering related order information.

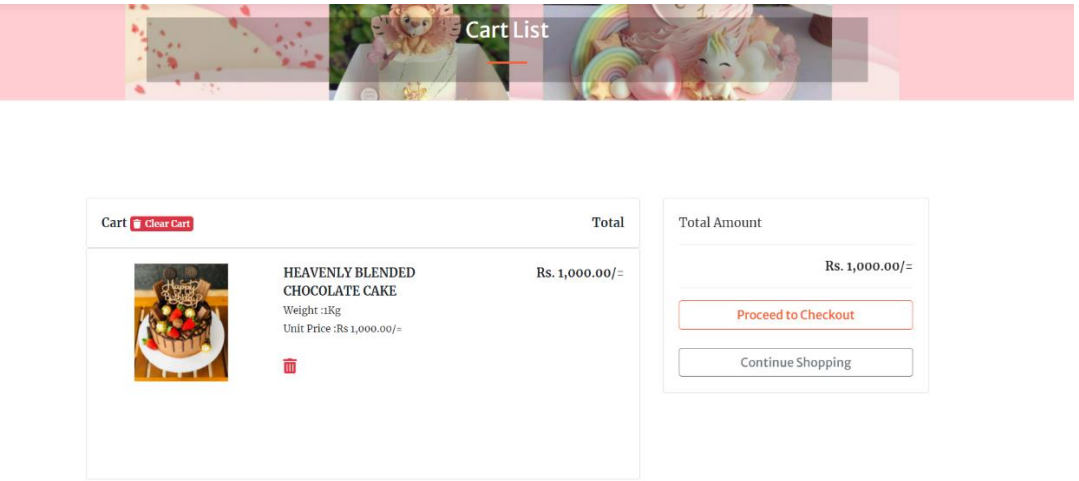


Figure 6.3.1.5 cart page

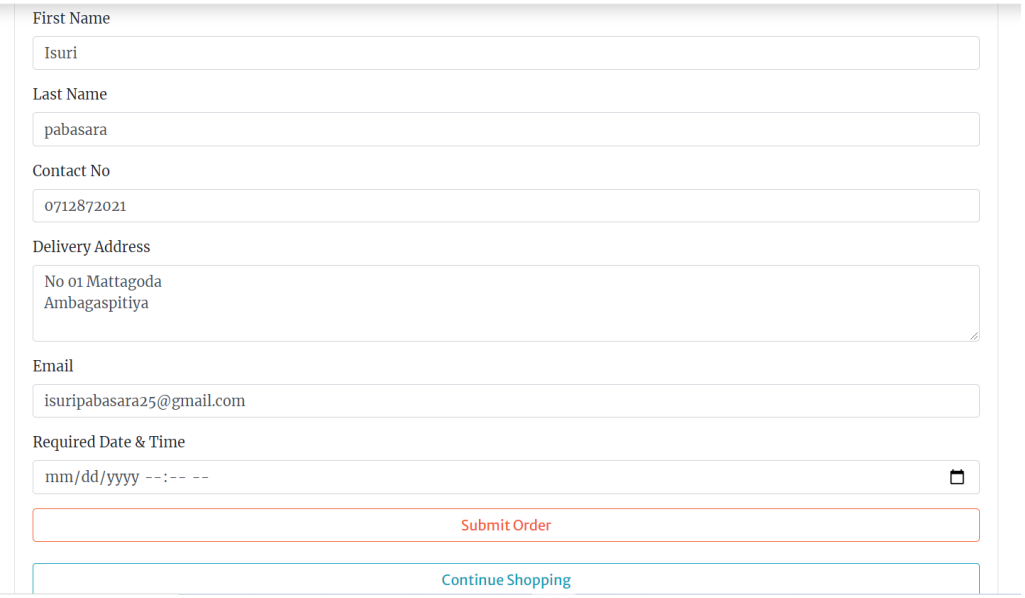


Figure 6.3.1.6 checkout form

Step 6– After that, the customer should pay trough a bank deposit by providing bank account details.

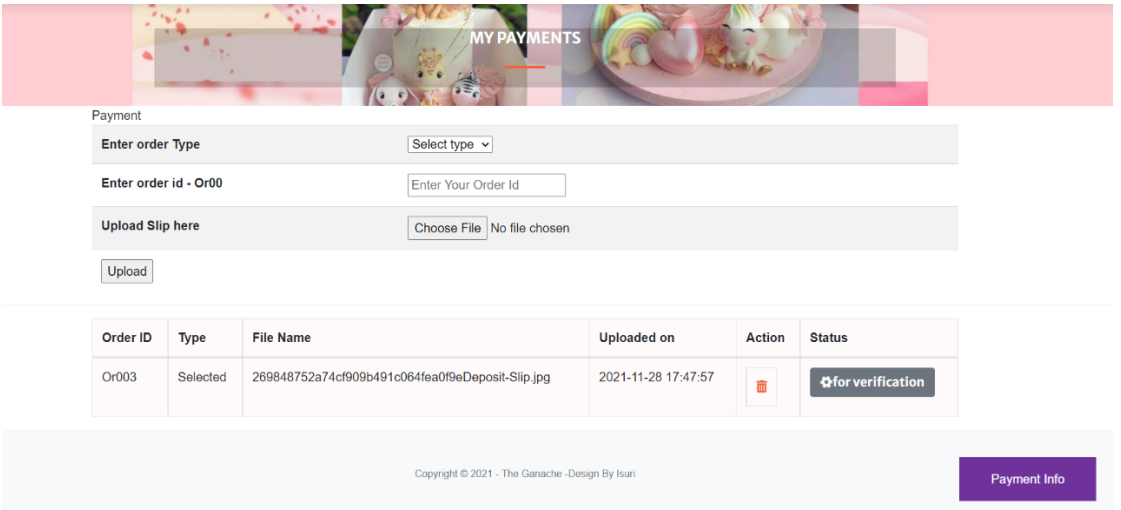


Figure 6.3.1.7 payment page

Step 7 – A successfully submitted order can view the order status in the order confirmation section.

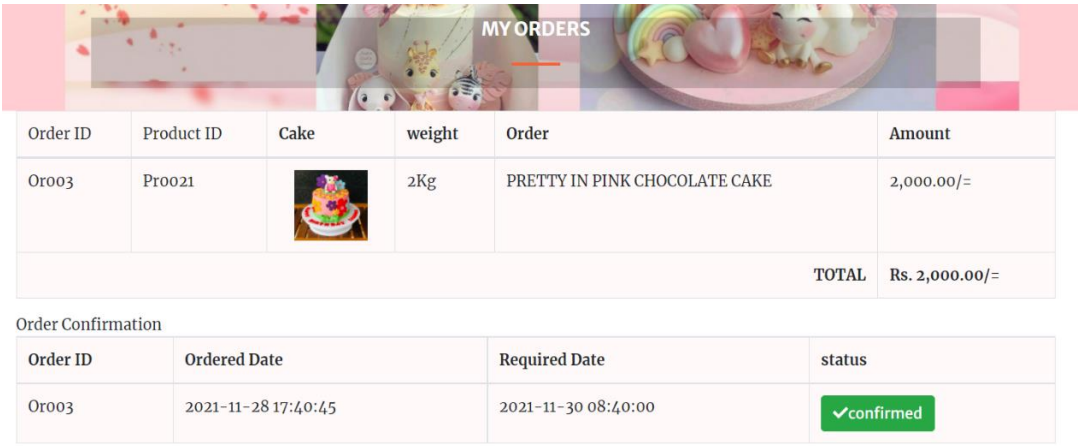


Figure 6.3.1.8 order status view form

6.3.2 Administrator User Guide

Step 1 – The administrator can add other staff by adding a username and password to register with the system. Administrator and staff passwords must contain at least one number and one uppercase and lowercase letter, and at least eight or more characters.

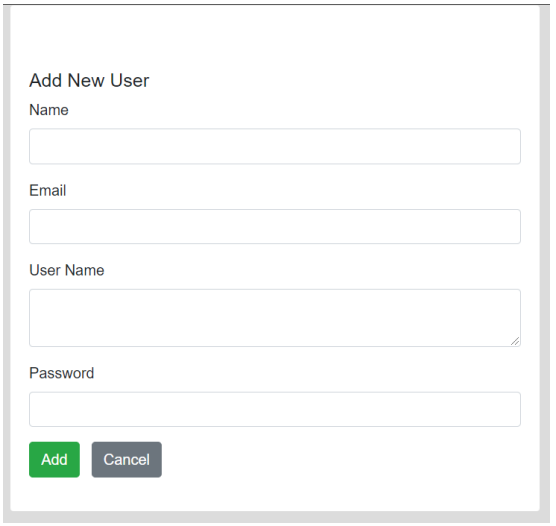


Figure 6.3.2.1 Add new user form

Step 2 – When the administrator submits the registration form correctly, staff can receive email at the company email address. Next, click the link, and the user can successfully register on the system.

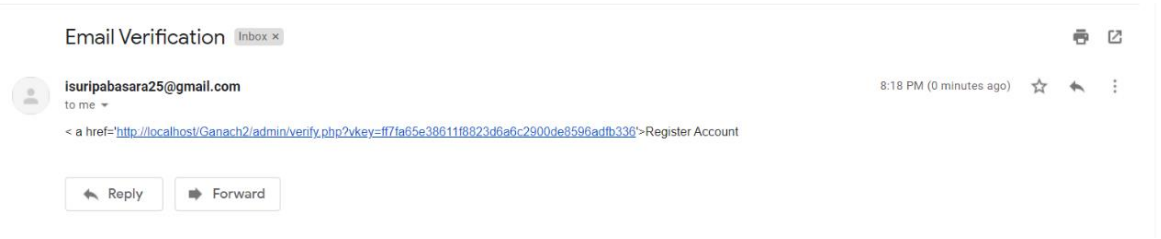


Figure 6.3.2.2 register account email

Step 3 – A administrator should enter a username and password to log into the system.

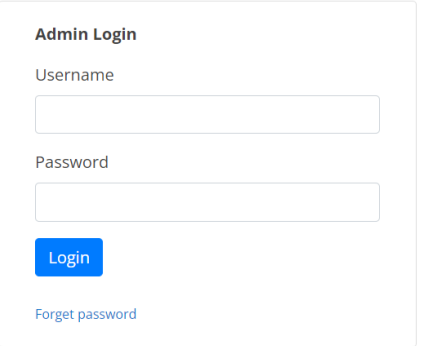


Figure 6.3.2.3 administrator login form

Step 4 – If the admin forgets the password, it can be recovered by entering an email address and username.

When the user successfully submits the email and username, they will receive a link to update their new password.

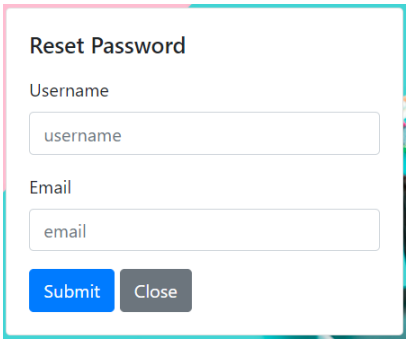


Figure 6.3.2.4 reset password form

Step 5 – The administrator can access the dashboard after successfully logging in.

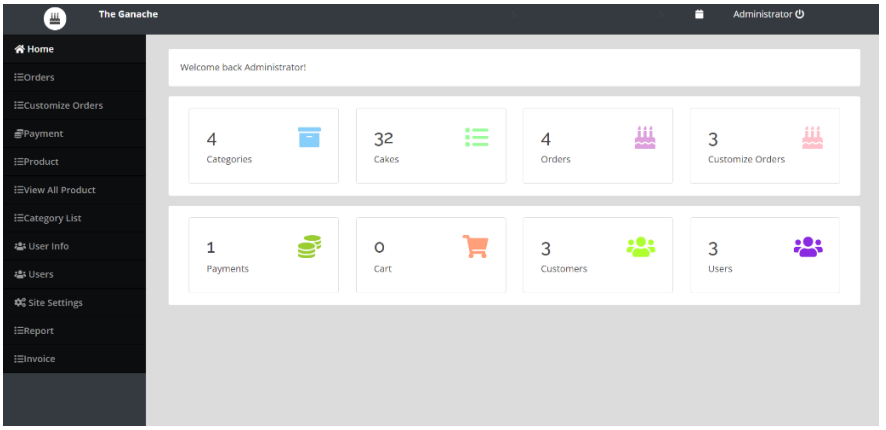


Figure 6.3.2.5 Admin Dashboard

CHAPTER 07 - EVALUATION & CONCLUSION

7.1 Evaluation

The number of internet users is increasing, therefore the company has decided to introduce a new online cake order store to deal with this situation. The project, "The Ganache Online Cake Ordering System," allows users to check for various cake designs available at the online store. This will be good for increasing customer orders and managing all processes. All the orders are managed online. Users can view all the cake details on the website and can select or customize one. Mainly categorized into three categories: special birthday cake designs, chocolate cake designs, ribbon cake designs, and the latest design items with related price, weight, and other details. The customer can choose a cake or a customized cake with their own requirements. Signup on the website and afterward, the customer can log into their user profile using a verified email address and password. After logging in, customers can view all previous orders and add to cart items and checkout orders from their carts by filling in related information about ordering. After checkout, the user can pay by bank transfer and upload the slip to the payment section. All the orders and payment information can be viewed on the user's profile.

A customer can get notification of order confirmation from it. All orders, payments, and all products are handled by the admin dashboard. Thus, the online cake shopping system brings an entire cake shop online and makes it easy for both shop management and the seller. This Cake Order Web application will help customers order cakes. This system will surely enhance the image of the cake shop, and customer satisfaction will increase.

The system is very flexible and useful. This software has a user-friendly screen that enables users to use it without any inconvenience.

7.2 Conclusion

Today, online shopping is one of the major buying and selling systems. Therefore, most of the business processes are done on the internet. This project also aims to provide better service through the Internet to all the customers. When compared to the current system, this system would be more efficient. It will be easier and more user-friendly.

This system can take care of each member, whether they are an administrator or customer. This system will help them properly manage the products of their customers. This system is completely secure since every user is provided with a User ID and password, so there is no chance of any unauthorized access. So, using this system will help in reducing labor costs and provide more facilities for customers to like the services.

CHAPTER 08 - REFERENCES

[1] https://www.techopedia.com/definition/29998/system-design

[2] https://whatis.techtarget.com/definition/use-case-diagram

[3] https://www.smartdraw.com/activity-diagram/

[4] https://docs.microsoft.com/en-us/sql/ssms/visual-db-tools/create-a-new-database-diagram- visual-database-tools

[5] https://www.techopedia.com/definition/23889/web-development

[6] https://www.softwaretestinghelp.com/best-front-end-web-development-tools/

[7] https://www.softwaretestinghelp.com/what-is-acceptance-testing/

[8] https://www.guru99.com/system-testing.html

[9] https://www.w3schools.com/php/

[10] https://codepen.io/collection/KuDsH/