

Talam Cake Ordering System

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system

Abstract

The Talam Cake Ordering System is an online platform developed to facilitate the purchasing of Talam cakes from Zamrich Laris Enterprise, which specializes in making Kuih Talam, a traditional Malaysian dessert. Currently, orders are placed manually via WhatsApp, making it difficult for the firm to systematically record sales and manage orders. Customers also face challenges due to the manual order management process. This inconsistent and inefficient approach prompted the development of a more organized system. Utilizing web-based technology and a structured methodology, this system was designed and rigorously tested to address these issues. The prototyping methodology guided the development process, employing Visual Studio Code for design, Laragon for the database, and Windows 11 as the operating system. The goal is to streamline order placement, reduce manual data entry, and ensure accuracy in processing Kuih Talam orders for Zamrich Laris Enterprise.

1. Introduction

The food and beverage industry, also known as the food service sector, encompasses businesses involved in preparing, packaging, and serving food and drinks. It has a significant impact on local and international trade, job creation, and cultural traditions [1]. Challenges in this industry include food safety, sustainability, and regulatory compliance. Information technology (IT) has played a transformative role in addressing these challenges. IT systems streamline supply chain management, automate inventory and ordering, and facilitate point-of-sale transactions [2]. Online ordering and delivery services, customer relationship management tools, and data analytics contribute to efficiency and personalized marketing. IT also enhances food safety through traceability technologies and supports informed decision-making. In Malaysia, the traditional dessert Kuih Talam passed down through generations, involves a unique cooking technique of steaming two layers of batter with pandan and coconut. The dessert, also known as "Kueh Dulang," is named after the steaming process and is refrigerated overnight to achieve a diamond-shaped serving cake that can be cut into various shapes for consumption.

Zamrich Laris Enterprise specializing in the production and sale of Kuih Talam. Currently, the business operates through manual orders where customers place orders by contacting the owner via WhatsApp. Order processing may be slow if the owner overlooks it. The owner is facing challenges in efficiently handling regular talam cake orders, leading to issues with incorrect order data and overlapping orders received via WhatsApp. Sales recording problems further impact on the business, causing inaccuracies and disorganization in manual records. The current method, involving notes and Microsoft Word or Excel, proves time-consuming and challenging to manage as sales increase monthly. Customers also experience difficulties placing orders due to the owner managing the process alone, resulting in delays and uncertainty about available talam cake options.

To address these issues, a Talam Cake Ordering System is necessary to streamline order management, improve data accuracy, and enhance the overall efficiency of the business.

To address this issue, a Talam Cake Ordering System is needed to streamline order management and improve overall efficiency. Therefore, a web-based Kuih Talam Ordering System was developed to solve the problems faced. This system can help the owner manage orders more quickly and effectively. This system can also store data securely.

In general, this project report is divided into four sections. Section 1 discusses the background of the project. Literature review in section 2, discusses the related studies which compare three existing systems related to developed system. Section 3 discusses the methodology and methods used to develop the Talam Cake Ordering System. Next, analysis and design are discussed in section 4. The results of the system development were discussed in section 5, followed by the conclusion in section 6.

2. Literature Review

In this section, will conduct a search through a review of the literature. The literature review conducted was a comprehensive summary of past or previous studies that will be counted, explained, summarized, objectively evaluated, and clarified in a comprehensive review [3]. Three existing systems have been examined to gather and collect more useful information for the proposed system development. The systems studied were Sri Talamaz System, Nyonya Lab System and Aroma Nyonya System.

2.1 Sri Talamaz System

On the front page of Sri Talamaz system there are categories that can be ordered which are sections for lunch, afternoon tea, bite quizzes, hot sections such as samosas, curry puff and drinks in addition to just ordering Kuih Talam. The system has a login and registration page for new customers. In addition, this system can make an option to preorder or order on the same day, where this function is new for the food ordering system. This system provides a calendar for the preorder option while for the order option on the same day, two options are provided, namely for delivery either take away or cash on delivery. However, the system has some buttons that do not work when pressed.

2.2 Nyonya Lab System

Nyonya Lab's system specializes in Kuih Talam only and has three menus, the first menu for the main page, the second menu for the catalogue and finally the menu for frequently asked questions. The Nyonya Lab system does not have for users to register such as login or sign up. This system also has categories for best sellers, platter sets, 4-tier tiffin, bamboo sets and full moon sets. This system is the same as the existing system, there is an order section, an add to cart section and there is also a calendar section for customers to make reservations according to the date they want. However, there are some functions that are not available in this system, for example there is no place for customer to login or signup.

2.3 Aroma Nyonya System

Aroma Nyonya System is equipped with several menus namely home, about, basic ingredient, where to buy, order now and contact. The system can select the packaging to be ordered and the option will appear for the type of order either pickup or delivery. The design used is very appropriate, clear and makes it easy for users to use. The weakness of this system is that there is no cash on delivery and the money that has been paid cannot be returned. This will cause the user to be unable to book and cancel because the money paid will not be refunded. Also, there is no place for customer to log in or sign up

2.4 Talam Cake Ordering System

The procedure of ordering talam can be made easier with the help of the suggested Talam Cake Ordering System. This system's primary functions are those of administrators and customers. First, order management has the same report-generating capabilities as an administrator does for product management. Customers may then check product management, place orders, and make payments using their personal login credentials, whether they are utilizing the system for catering or personal shopping. The Talam Cake Ordering System will be a web-based system designed to streamline the talam cake ordering process for both customers and the owner that incorporates modern technology, to provide customers with a user-friendly platform to browse product, place orders and make secure payments. The proposed system not only addresses the challenges of the current manual ordering method but also aligns with contemporary digital trends, improves accessibility, and offers a more efficient and pleasant talam cake ordering experience for customers.

2.5 Comparison with the Existing Systems.

Table 1 shows a comparison between the three existing system and the system that will be developed. Three existing web-based systems have been examined to gather and collect more useful information for the proposed system development. The systems studied were the Sri Talamaz system, the Nyonya Lab system, and Aroma Nyonya system.

Table 1 Comparison with The Existing Systems

Features/System	Sri Talamaz System	Nyonya Lab System	Aroma Nyonya System	Talam Cake Ordering System
Login and registration	√	X	X	√
Order Process	√	√	√	√
Cash On Delivery	X	X	X	√
Cut-Off Time reservation	X	√	X	√
Report	X	X	X	√

3. Methodology

The method that used in the project is Prototyping model. The prototyping model is a systems development approach in which a prototype system is constructed, tested and then revised as needed until an acceptable result is obtained from which the whole system or product can be produced [4]. Table 2 shows the prototyping model phases.

Table 2 Prototyping Model Phases

Phase	Task	Output
Requirement Analysis	<ul style="list-style-type: none"> Interview the owner. Analysis of existing systems. Analysis method that will be used. Flowchart design, DFD, ERD and context diagram. 	<ul style="list-style-type: none"> All analysis findings are kept for future reference. Make a study about the system that will be developed.
Quick Design	<ul style="list-style-type: none"> Design interface. Design system database. Determine hardware and software that will be used. 	<ul style="list-style-type: none"> The interface of Talam Cake Ordering system and database.
System prototype	<ul style="list-style-type: none"> Start the system development for the prototype system by choosing which programming language is suitable for the system. 	<ul style="list-style-type: none"> The module is ready developed.
User Evaluation	<ul style="list-style-type: none"> Testing the prototype system to the user. 	<ul style="list-style-type: none"> Feedback from user about the system with the project that has been developed.
Refining prototype	<ul style="list-style-type: none"> Receive feedback about existing modules from users. Correcting and testing process. 	<ul style="list-style-type: none"> New module according to feedback from users. Improvement to the last prototype.
Implementation and Maintenance	<ul style="list-style-type: none"> Test prototype that has been successfully developed. Maintain technology on the system. 	<ul style="list-style-type: none"> The system regularly gets updates on the new technologies.

4. Analysis and Design

This phase discusses the Talam Cake Ordering System's design and analysis. The system was developed using a structural method. During this phase, the complex activity of system development is divided into several smaller sub-activities that work together to achieve the overall goal of system development [5]. This phase includes

structural approach diagrams such as Data Flow Diagrams (DFD), Entity Relationship Diagrams (ERD), Flowcharts, and System Architecture.

4.1 Context Diagram

Context diagram presents the overview of interaction between the system and its user. Context diagram also show the input and output to and from its user and system. Figure 1 shows the context diagram of the Talam Cake Ordering System.

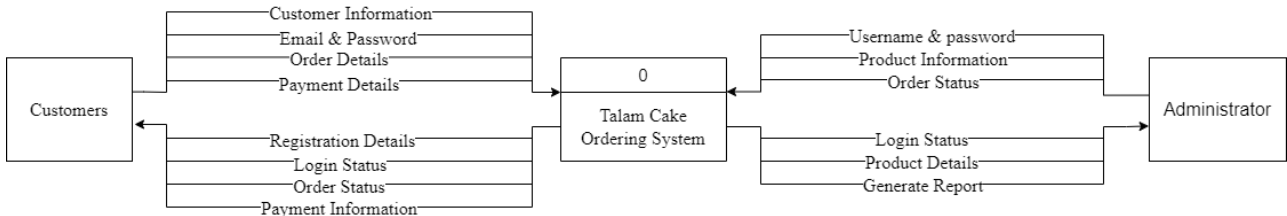


Figure 1 Context Diagram of Talam Cake Ordering System

4.2 Data Flow Diagram Level 0

Data Flow Diagram (DFD) is a graphical representation of the flow of data or input from an entity through a process, which then generates output either to another entity or stored in data storage [6]. DFD shows each input and output for each entity and process. Figure 2 shows the Level 0 Data Flow Diagram (DFD 0) of the developed system.

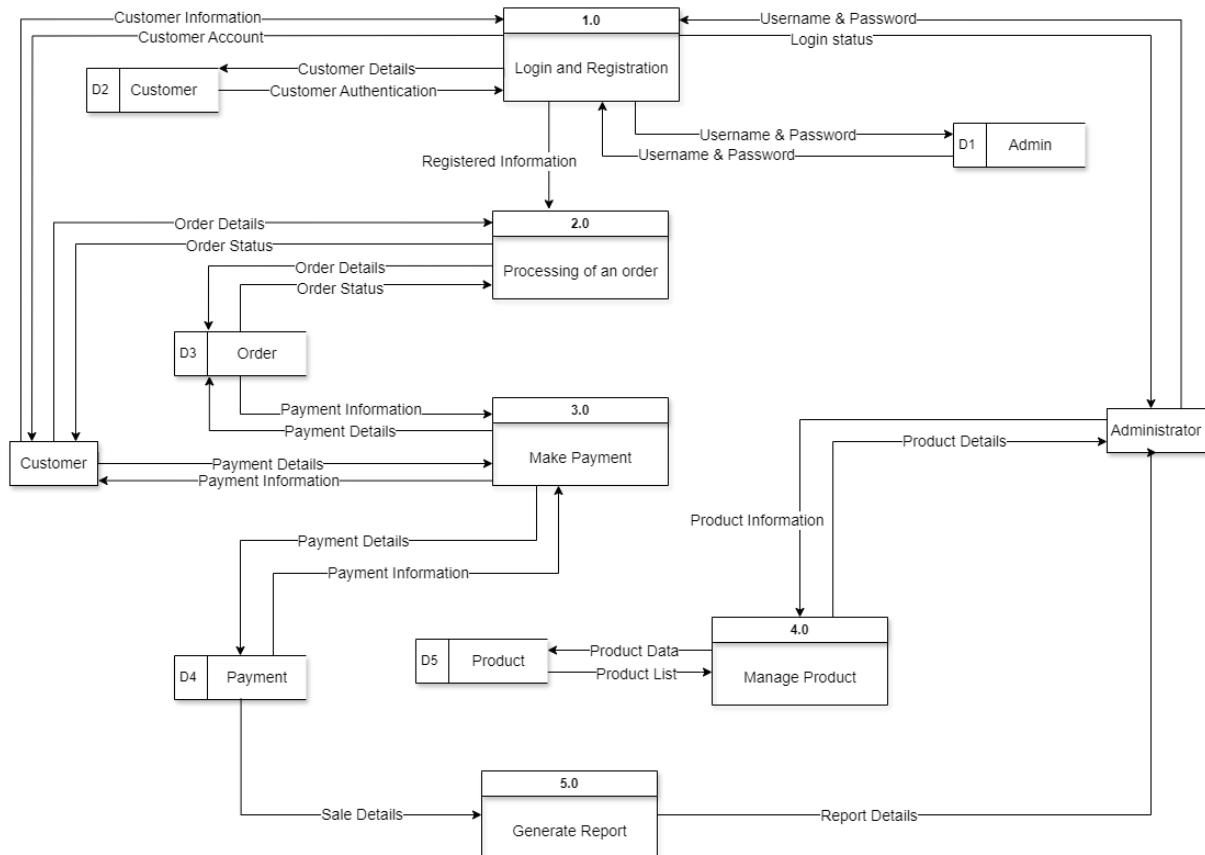


Figure 2 DFD for Talam Cake Ordering System

4.3 Entity Relationship Diagram

An Entity Relationship Diagram, commonly referred to as ERD, ER Diagram, or ER model, serves as a structural diagram in the realm of database design [7]. It employs various symbols and connectors to illustrate crucial information: the primary entities within the system's scope and the connections between these entities. Figure 3 shows the ERD of the developed system.

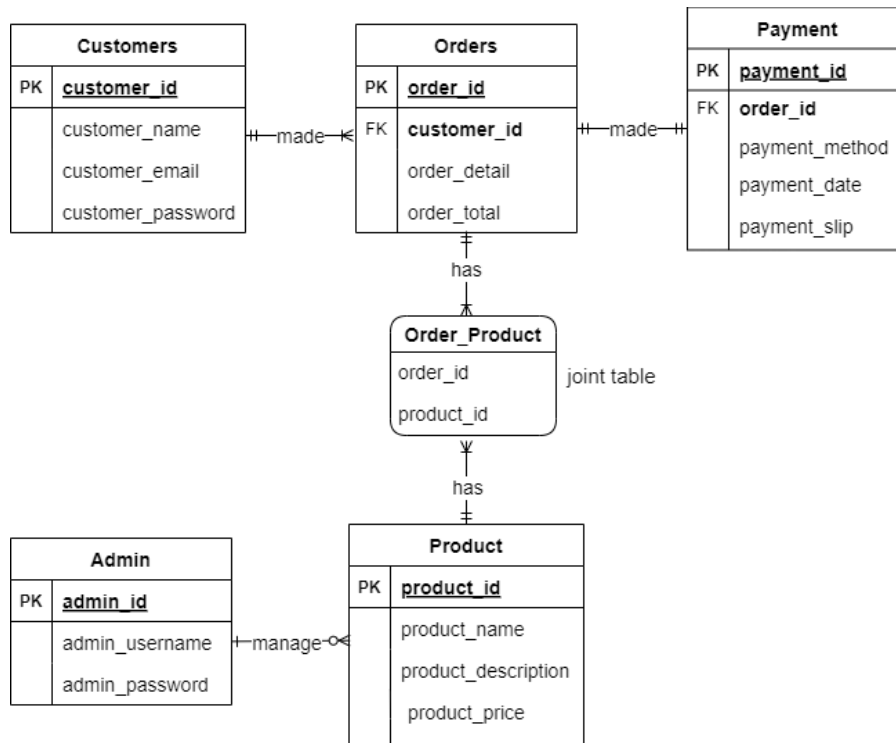


Figure 3 ERD for Talam Cake Ordering System

4.4 Flowchart

Flowchart is a graphical tool to illustrate the flow of information, decision points, and the order of actions within a system [8]. The standard symbols in a flowchart include rectangles for processes, diamonds for decision points, ovals for the start and end points, and arrows indicating the direction of flow. Figure 4 shows the flowchart diagram of the developed new system. Figure 4 (a) shows a flowchart diagram for the customers, the process begins with the customer make registration then logging into the system and selecting desired Kuih Talam from the display products and proceed to make payment with the payment method selection to place order. Figure 4 (b) shows the flowchart diagram progresses for administrator.

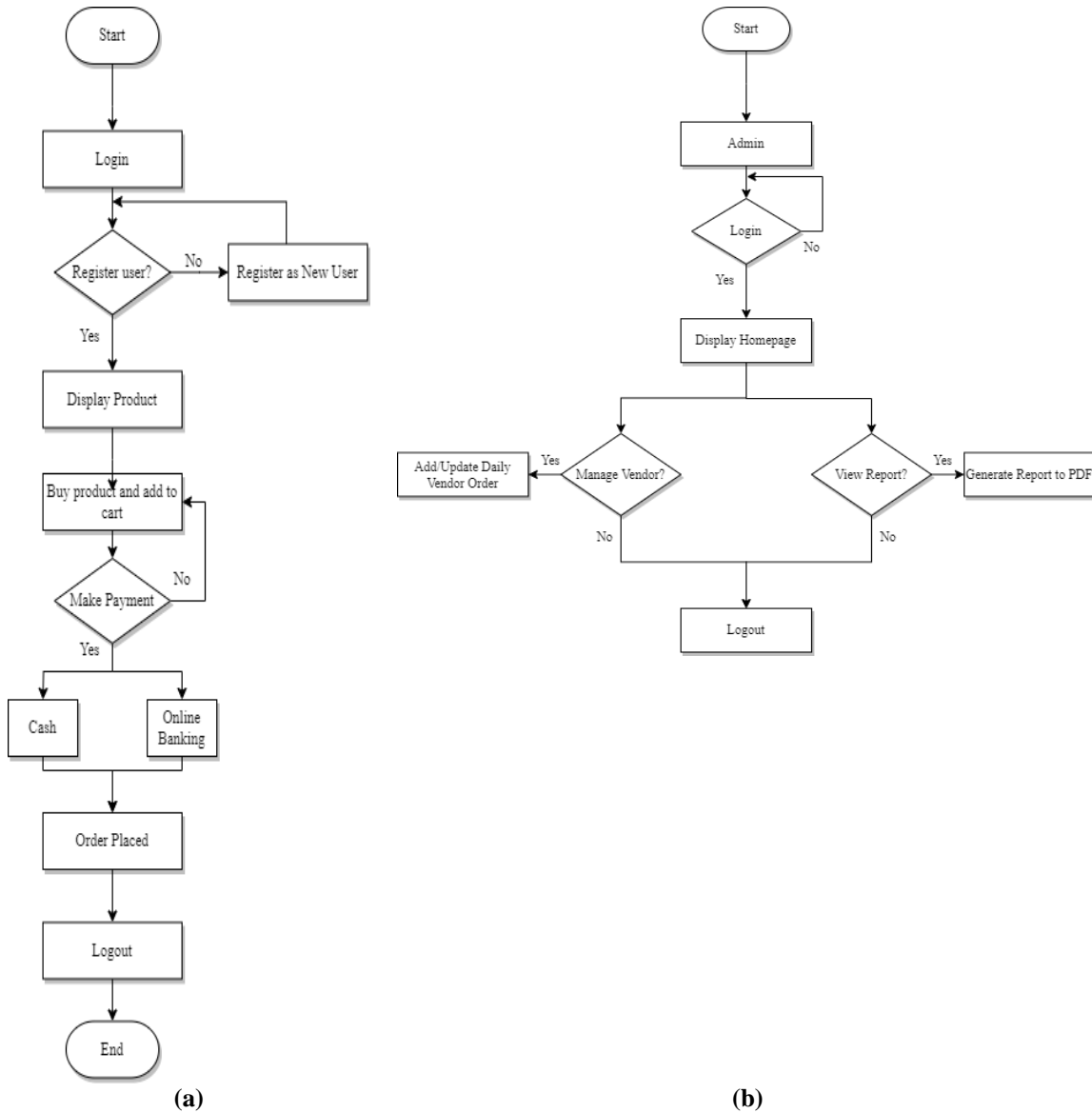


Figure 4 (a) Flowchart for customer; (b) Flowchart for administrator

4.5 System Architecture

The system architecture of the Talam Cake Ordering System can be seen in Figure 5, providing a graphical representation of the system's behaviour, structure, and perspective [9]. The administrator and the customer are the users. If the customer has an account, they can use the system to place a talam cake order and make the payment; if not, they must register for an account. Before completing their booking, customers can make their selections based on the categories offered, whether they buy as catering, or personally. The account has already been set up, so the administrator does not need to register anymore. Product orders, payment tracking, and sales are all available to administrators via the system. The system interface, which is compromised with the page that offers the module or function, will be accessed by both users. It also interacts with the database management, which allows for the storage of newly added and modified data, as well as data transmission and retrieval.

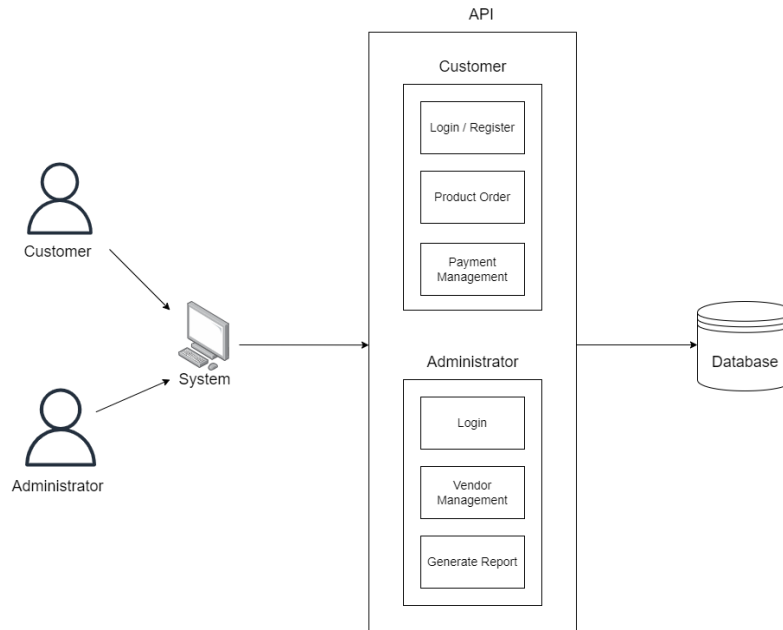


Figure 5 System Architecture

5. Result and Discussion

This section is left for the implementation of the system and user testing that was conducted for Talam Cake Ordering System to targeted users.

5.1 Implementation of Module

Implementation and testing are the last phase where the system will be tested, and its functionality will be defined. There are five modules that are implemented as functional module development for the system.

Registration and login module is for customers. Registration for the new customer to sign up new account while login for customer that already have an account. Figure 6 (a) shows the coding for registration and figure 6 (b) shows the coding for login. Figure 7 (a) shows a registration page interface, there are four requirements which are name, mobile phone, email and password. Figure 7 (b) shows login page interface for customers.

```

<h2><b><?PHP echo $SHOP_NAME;?></b></h2>
Sign in to your account
</header>
<hr>
<div class="w3-container w3-padding w3-margin">
  <form action="" method="post">
    <div class="w3-section">
      <label>Email *</label>
      <input class="w3-input w3-border w3-round" type="email" name="email" required>
    </div>
    <div class="w3-section">
      <label>Password *</label>
      <input class="w3-input w3-border w3-round" type="password" name="password" maxlength="20" required>
    </div>
    <input name="act" type="hidden" value="login">
    <button type="submit" class="w3-button w3-block w3-padding-large w3-<?PHP echo $theme;?> w3-wide w3-margin-bottom w3-round">Login</button>
  </form>
  <div class="w3-center">Forgot Password? <a href="#" onclick="document.getElementById('id01').style.display='none';
  document.getElementById('idReset').style.display='block';" class="w3-text-<?PHP echo $theme;?>">Reset Here</a></div>
  <div class="w3-padding-small"></div>
  <div class="w3-center">Don't have an account yet? <a href="#" onclick="document.getElementById('id01').style.display='none';
  document.getElementById('id02').style.display='block';" class="w3-text-<?PHP echo $theme;?>">Register Now!</a></div>
</div>

```

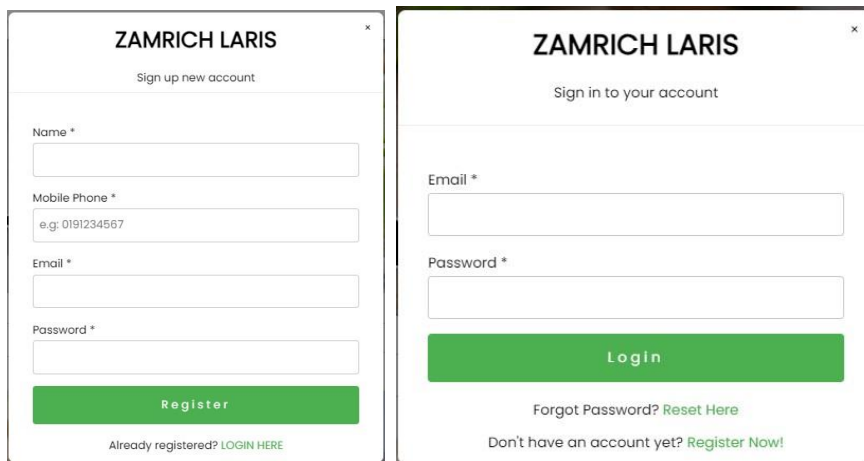
Figure 6 (a) Coding for registration

```

<h2><?PHP echo $SHOP_NAME;?></h2>
Sign up new account
</header>
<hr style="margin : 5px 0 5px 0">
<div class="w3-container w3-padding w3-margin">
  <form action="" method="post">
    <div class="w3-section">
      Name *
      <input class="w3-input w3-border w3-round" type="text" name="name" required>
    </div>
    <div class="w3-section">
      Mobile Phone *
      <input class="w3-input w3-border w3-round" type="tel" name="phone" pattern="^(\\+?6701)[01-46-9]-*[0-9]{7}$|^((\\+?6701)[1]-*[0-9]{8})$" placeholder="e.g: 0191234567">
    </div>
    <div class="w3-section">
      Email *
      <input class="w3-input w3-border w3-round" type="email" name="email" required>
    </div>
    <div class="w3-section">
      Password *
      <input class="w3-input w3-border w3-round" type="password" name="password" maxlength="28" required>
    </div>
    <input name="act" type="hidden" value="SignUp">
    <button type="submit" class="w3-button w3-block w3-padding-large w3-<?PHP echo $theme;?> w3-wide w3-margin-bottom w3-round">Register</button>
  </form>
  <div class="w3-center">Already registered? <a href="#" onclick="document.getElementById('id01').style.display='block'; document.getElementById('id02').style.display='none'" class="w3-text-<?PHP echo $theme;?>">LOGIN HERE</a></div>
</div>

```

Figure 6 (b) Coding for login



(a)

(b)

Figure 7 (a) Registration page interface; (b) Login page interface

The ordering module is utilized by customers to place orders. The order coding is displayed in Figure 8. Figure 9 will appear once users have successfully logged into the website. Figure 9 displays the order page interface, which allows the customer to peruse, choose, and place an order prior to proceeding to the payment process.

```

<div class="w3-col m3 w3-center ">
  <a href="item-detail.php?id_product=<?PHP echo $id_product;?>">
    <div class="w3-padding ">
      <div class="w3-card w3-white w3-round-large w3-hover-light-gray w3-display-container">
        <?PHP if($popular) { ?>
          <div class="w3-display-topright w3-tag w3-red w3-small"><i class="fa fa-fw fa-thumbs-up"></i> Popular</div>
          <?PHP } ?>
          
          <div class="w3-padding-16"><b class="w3-medium"><?PHP echo substrwords($product, 30, '...'); ?></b><br>
          <div class="w3-tag w3-<?PHP echo $theme;?>"><?PHP echo $data["category"]; ?></div>
        </div>
      </div>
    </a>
  </div>

```

Figure 8 Coding for order

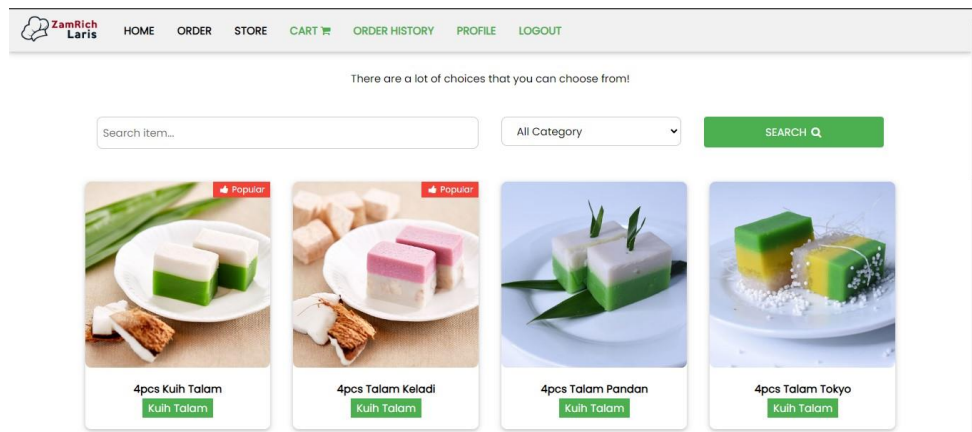


Figure 9 Order page interface

The payment module allows users to conduct financial transactions. The payment module's coding is displayed in Figure 10. Customer can visit cart page as in figure 11 to update or amend cart before paying. Customer browses, selects, and adds to cart. Additionally, figure 11 illustrates that, before to clicking the submit payment approval button, the customer may select the delivery type and payment method that best suits their needs.

```

<div class="w3-section" >
  Total Amount (RM)*
  <input class="w3-input w3-border w3-round" type="text" name="total" value="<?PHP echo $total?>" required>
</div>

<div class="w3-section" >
  Delivery *
  <select class="w3-input w3-border w3-round" name="delivery" id = "ddlDelivery" onchange = "ShowHideDiv1()" required>
    <option value="Deliver To Address">Deliver To Address</option>
    <option value="Pickup">Pickup</option>
  </select>
</div>

<div id="dvDelivery" style="display: block" class="w3-border w3-padding">
  <div class="w3-section" >
    Delivery Date *
    <input class="w3-input w3-border w3-round" type="date" name="delivery_date" min="<?PHP echo date("Y-m-d"); ?>" value="" >
  </div>

  <div class="w3-section" >
    Delivery Time *
    <input class="w3-input w3-border w3-round" type="time" step="any" min="9:00" max="17:00" name="delivery_time" value="" >
    <small>last delivery time : 5.00pm</small>
  </div>
</div>

<div id="dvPickup" style="display: none" class="w3-border w3-padding">
  <div class="w3-section" >
    Pickup Date *
    <input class="w3-input w3-border w3-round" type="date" name="pickup_date" min="<?PHP echo date("Y-m-d"); ?>" value="" >
  </div>

  <div class="w3-section" >
    Pickup Time *
    <input class="w3-input w3-border w3-round" type="time" step="any" min="9:00" max="17:00" name="pickup_time" value="" >
    <small>last pickup time : 5.00pm</small>
  </div>
</div>

```

Figure 10 Coding for payment

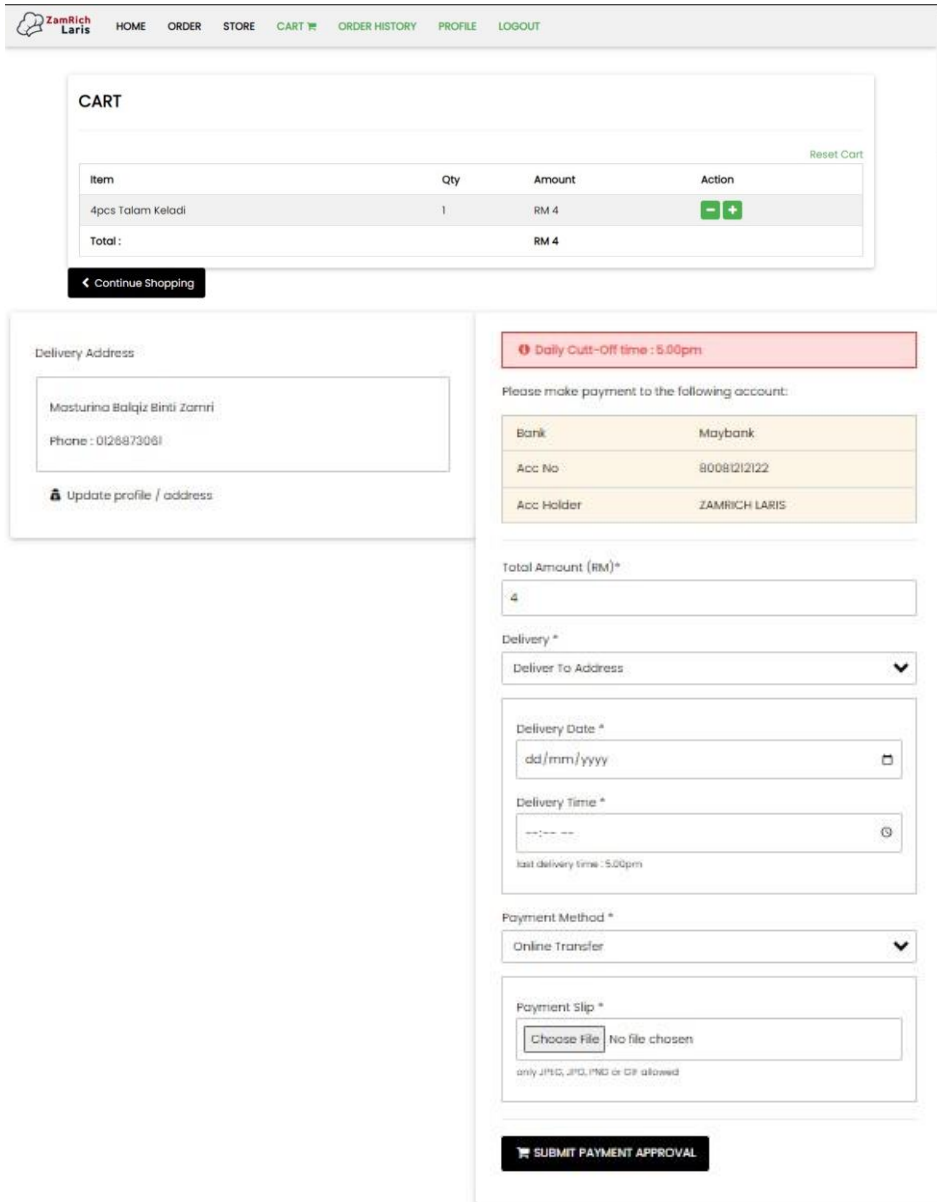


Figure 11 Payment page interface

The vendor module is specific for admin. The vendor module's coding is displayed in Figure 12. The vendor page interface for the admin to manually enter the daily sales for the store, to which the admin delivers Kuih Talam each day for the purpose of reporting sales is depicted in Figure 13.

```
<div class="w3-row w3-margin ">
<div class="table-responsive">
<table class="table table-bordered" id="dataTable" width="100%" cellpadding="0">
  <thead>
    <tr>
      <th>#</th>
      <th>Vendor Name</th>
      <th>Date</th>
      <th>Product</th>
      <th>Category</th>
      <th>Quantity</th>
      <th>Amount (RM)</th>
    </tr>
  </thead>
```

Figure 12 Coding for vendor

#	Vendor Name	Date	Product	Category	Quantity	Amount (RM)
1	Melewar Kitchen	2024-06-09	4pcs Talam Pandan	Kuih Talam	4	16

Figure 13 Vendor page interface

The reporting sales module is the final module. The coding for the report module may be seen in Figure 14. The administrator can access this module, which displays the total monthly sales and provides references to identify the best-selling Kuih Talam for that month, as shown in figure 15.

```

<span class="w3-xlarge"><b>MONTHLY SUMMARY : <?PHP echo date("M Y");?></b></span><br>
</div>
<div class="w3-container w3-padding" id="contact">
  <div class="w3-content w3-container" style="max-width:1200px">
    <div class="w3-row w3-large">
      <div class="w3-padding">
        <div class="w3-card w3-padding w3-round w3-white">
          <div class="w3-row w3-padding-24">
            <div class="w3-col m3 w3-padding">
              <div class="w3-card w3-?PHP echo $theme;?> w3-round w3-padding-16">
                <div class="w3-container w3-large">
                  Product <i class="fa fa-cube fa-lg w3-right"></i>
                  <hr style="border-top: 1px dashed; margin: 1px 0 15px !important;">
                  <h2 class="w3-center"><?PHP echo $tot_product;?></h2>
                </div>
              </div>
            </div>
            <div class="w3-col m3 w3-padding">
              <div class="w3-card w3-?PHP echo $theme;?> w3-round w3-padding-16">
                <div class="w3-container w3-large">
                  Category <i class="fa fa-list fa-lg w3-right"></i>
                  <hr style="border-top: 1px dashed; margin: 1px 0 15px !important;">
                  <h2 class="w3-center"><?PHP echo $tot_category;?></h2>
                </div>
              </div>
            </div>
            <div class="w3-col m3 w3-padding">
              <div class="w3-card w3-?PHP echo $theme;?> w3-round w3-padding-16">
                <div class="w3-container w3-large">
                  Customer <i class="fa fa-users fa-lg w3-right"></i>
                  <hr style="border-top: 1px dashed; margin: 1px 0 15px !important;">
                  <h2 class="w3-center"><?PHP echo $tot_customer;?></h2>
                </div>
              </div>
            </div>
            <div class="w3-col m3 w3-padding">
              <div class="w3-card w3-?PHP echo $theme;?> w3-round w3-padding-16">
                <div class="w3-container w3-large">
                  Vendor <i class="fa fa-user fa-lg w3-right"></i>
                  <hr style="border-top: 1px dashed; margin: 1px 0 15px !important;">
                  <h2 class="w3-center"><?PHP echo $tot_vendor;?></h2>
                </div>
              </div>
            </div>
          </div>
        </div>
      </div>
    </div>
  </div>
</div>

```

Figure 14 Coding for report

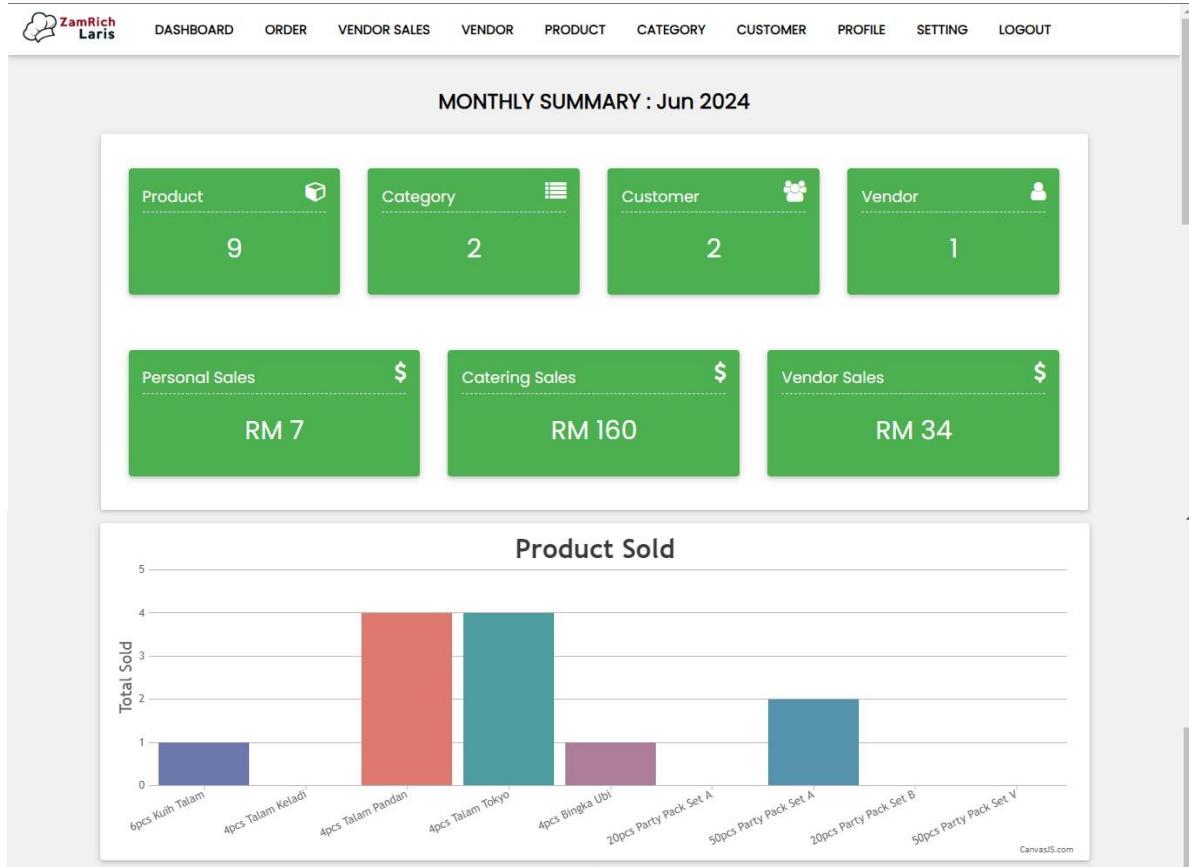


Figure 15 Report page interface

5.2 Functional Testing System

This section, a test will be carried out to assess the functionality of each module. A User Acceptance Test (UAT) method is utilized to perform testing. The results of the Functional Testing of each module in the User Acceptance Test are summarized in Table 3.

Table 3 Functional Test

No.	Function Testing	Expected Result	Result
1.	Registration and Login Module		
i.	System displays registration and login form	Customer can see the registration and login form.	Success
ii.	Customer leave field	Error message shown	Success
iii.	Customers enter the wrong input	Error message shown.	Success
iv.	Customers enter all the correct input	User can proceed to login	Success
v.	Customers enter a valid email and password	Successful message shown	Success
2.	Product Catalogue and Ordering Module		
i.	System display the Kuih Talam	Customer can view the Kuih Talam	Success
ii.	Customer can add to cart the Kuih Talam	Ensure customer can add to cart the Kuih Talam	Success
iii.	Customer can view the cart	Ensure customer can view the cart	Success
v.	Customer can edit the cart	Ensure customer can edit the cart	Success
vi.	Administrator is able to manage product	Administrator can add, edit or delete product	Success

No.	Function Testing	Expected Result	Result
3.	Payment Module		
i.	System displays order summary	Customer can view the total amount of order.	Success
ii.	Allow customer choose delivery type	Customer can choose delivery type	Success
iii.	Allow customer select payment method	Customer can select payment method	Success
v.	Customer click submit payment button	Display order summary page	Success
4.	Vendor Management Module		
i.	Administrator can add new vendor	The data will store in the database	Success
ii.	Allow administrator add vendor sales every day	Administrator can add vendor sale every day	Success
5.	Reporting Sales Module		
i.	System displays sales dashboard	Administrator can view the sales dashboard	Success

Overall, every module and function in this system performed as expected. Table 4 presents the comprehensive results for all modules.

Table 4 *Functional test result*

No	Module Testing	Result	(%)
1.	Registration and Login Module	Successful	100
2.	Product and Ordering Module	Successful	100
3.	Payment Module	Successful	100
4.	Vendor Management Module	Successful	100
5.	Reporting Sales Module	Successful	100

5.3 User Acceptance Testing

Testing the system with actual users is a way to gauge how effectively the system has been designed. The purpose of user acceptance testing was to find out how satisfied users would be with the system. Administrators, Mr. Zamri Zakaria (owner), and other testers evaluated the system during testing. Table 5 displays the comments from the system testing form regarding the user testing outcomes. Ten users were found to be satisfied with the system's functioning and content during the testing phase.

Table 5 *User Acceptance Testing Result*

No	Content	Scale					Total Result
		1	2	3	4	5	
1	Login Module					10	10
2	Product Management				8	2	10
3	Vendor Management					10	10
4	Order Function				1	9	10
5	Payment Function				2	8	10
6	Report Function					10	10
7	System Design					10	10

6. Conclusion

In conclusion, the implementation of the Talam Cake Ordering System for administrators represents a transformative shift in the way administrative tasks are managed. This system provides administrators with a user-friendly and efficient platform for overseeing product management, order processing, and generating reports. It successfully addresses challenges associated with manual processes, such as data inaccuracies and disorganization, by introducing technology to streamline these tasks. The integration of the Talam Cake Ordering System not only improves the overall efficiency of administrative functions but also ensures accurate record-keeping, financial accountability, and enhanced service delivery. The system contributes to a more organized, accessible, and effective administrative experience, aligning with contemporary expectations for streamlined operations and productivity.

It is planned that further capabilities can be added to this system in the future, similar to the majority of the features found in the most recent version of the Talam Cake Ordering System. By adding new payment channels for digital wallets, the Talam Cake Ordering System may be improved and give users more options for how to pay. Incorporating a loyalty program that gives discounts or exclusive deals to loyal consumers can also promote customer retention.

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Conflict of Interest

Authors declare that there is no conflict of interests regarding the publication of the paper.

Author Contribution

This journal requires that all authors take public responsibility for the content of the work submitted for review. The contributions of all authors must be described in the following manner:

*The authors confirm contribution to the paper as follows: **study conception and design:** Masturina Balqiz Zamri, Muhaini Othman; **data collection:** Masturina Balqiz Zamri; **analysis and interpretation of results:** Masturina Balqiz Zamri, Muhaini Othman; **draft manuscript preparation:** Masturina Balqiz Zamri. All authors reviewed the results and approved the final version of the manuscript.*

An author name can appear multiple times, and each author name must appear at least once. For single authors, use the following wording:

The author confirms sole responsibility for the following: study conception and design, data collection, analysis and interpretation of results, and manuscript preparation.

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