

# FEASIBILITY REPORT

**Project:** **E-commerce website for Caramels and Almonds**

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## PRINCE2

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# **1. Introduction**

## **1.1 Overview of the Project**

The project aims to create an e-commerce website for 'Caramels and Almonds,' an online cake business that is located in Sri Lanka. It is owned by Miss. Senuthi Wijesinghe. The primary goal is to create an attractive and user-friendly website that allows customers to browse cake categories, view cake details, and place orders. The website will also include features such as user login and registration, a shopping cart, a secure payment gateway, a chatbot for customer assistance, a spinning wheel for customers to win gifts, and a search functionality.

The project aims to expand the customer base of 'Caramels and Almonds' by providing a convenient online platform for customers to buy cakes. By implementing secure payment gateways, customers can make online payments with confidence. The website will also have an admin panel to manage cake categories and customer orders efficiently.

The successful implementation of the e-commerce website will bring convenience to customers, allowing them to order cakes easily. It will also benefit 'Caramels and Almonds' by expanding their customer reach and enhancing their online presence, ultimately boosting their cake business.

## **1.2 Objectives of the Project**

- To create an attractive and user-friendly e-commerce website.
- Give customers the option of customizing their cakes.
- Provide a search bar.
- Provide an AI-based chatbot.
- A spinning wheel that allows customers to win gifts.
- Provide a payment gateway.
- Provide user manuals for the client.

- Provide all functions as the client requested.

### **1.3 Problem Statement**

'Caramels and Almonds' doesn't have a website. Currently, orders are placed through their Instagram account. Also, customers can place orders by contacting them through WhatsApp. Their operations have become more complicated due to receiving a large number of orders. With a website, the client will be able to expand the customer base, enhance customer convenience, improve operational efficiency, and establish a strong online presence in order to thrive in the digital marketplace. Placing orders through the website will empower them to deal with peak business hours. This proposed e-commerce website enables customers to get rid of the waiting process. It enables the business to increase its market share and focus on the rising number of customers.

### **1.4 Scope of the Project**

This project aims to develop an e-commerce website for 'Caramels and Almonds,' which is an online cake business. User-friendly interfaces will increase the customer's screen time. More screen time will result in more sales. It involves building a dynamic home page with eye-catching visuals, a product page with details and images of the cakes, a shopping cart for the customers to add cakes, and a search bar for the customers to search for what they want. Also, the website will include a product detail page that includes details of each cake separately. This includes the price of the cake, availability of the cake, quantity, weight, description of the cake, etc. The website will have a list of cakes the shop sells. All the cakes will be categorized into sections so that it will be easy for the customer to find what they want. The website will have an AI-based chatbot that can offer real-time support, respond to questions asked by customers, and make specific suggestions. Also, a spinning wheel will be included in the system for registered customers so that they can win gifts. Furthermore, some other pages that a basic website includes will be designed along with a secure payment

gateway. The system will include an admin panel, where the admin can perform add, update, and delete functions, manage the availability of cakes, manage orders, etc. The project will follow a timeline, allocate a budget, and address potential risks. The successful implementation of the website will bring convenience to customers and benefit the cake business. The website should be designed to be responsive and compatible with various devices to ensure a consistent and optimal user experience. Maintenance and updates to this system will be released depending on client requirements in the future.

## **2. Feasibility Study**

### **2.1 Financial Feasibility**

The system created for 'Caramel and Almonds' will be a web-based application, and hosting is required. The website will be hosted on a free platform for demonstration purposes. After the client's approval of the final product, it will be switched to a premium service. In addition, development and maintenance costs can vary based on the e-commerce functionality and AI-powered chatbot feature.

### **2.3 Technical Feasibility**

The system created for 'Caramels and Almonds' is a complete online web-based application. The below-mentioned technologies are planned to be used for the development of the system.

- Programming languages: HTML, CSS, PHP, and JavaScript
- Database: MYSQL
- Tools used to create diagrams: draw.io, Instagantt

Although each technology is open source, developing the system requires technical knowledge. In order to handle customer details and product details (cakes), database

management is crucial. This involves organizing the database schema to provide effective data management, storage, and retrieval. Technical knowledge is needed for the integration of AI chatbot functionality. This entails choosing the best chatbot platforms or creating unique solutions and making sure that they work with the website's architecture. All the user credentials must be sufficiently safeguarded from any threats; therefore, security consideration is necessary.

## **2.3 Resource Feasibility**

### **2.3.1 Required devices and tools**

1. Computers/Laptops
2. Hosting Space and Domain
3. Development Tools
4. Testing Tools
5. Quality assurance tools

### **2.3.2 Human Resources**

The project team is in charge of ensuring that the appropriate people with the required skills are assigned and managed successfully throughout the project lifecycle. The project team consists of a project manager, a quality manager, a risk manager, a scheduling manager, and a start-up manager. The project manager is responsible for keeping the website development process on track, making sure deadlines are met, and meeting the project's objectives. Managing the project's resources and budget while coordinating with the team and client is also important. The quality manager is responsible for ensuring that standards are followed and the overall quality of the website development process is maintained. The risk manager is responsible for analyzing the possible risks and uncertainties that could affect the project and creating mitigation plans. The scheduling manager is responsible for preparing necessary documents related to the project, setting up the project timeline, and

keeping it up-to-date. The start-up manager is responsible for scheduling client meetings and gathering the necessary requirements to implement the proposed project.

### **2.3.3 Financial Resources**

The team should evaluate the resources available and the financial requirements for creating, launching, and maintaining the website. This covers costs associated with the implementation of the system, hosting the website, maintaining the system, and marketing.

### **2.3.4 Technical Resources**

The team should also evaluate the technical skills needed for the development, implementation, and maintenance of the website. This involves expertise in programming languages, database management, risk management, quality management, etc.

## **2.4 Risk Feasibility**

### **2.4.1 Risks in the development environment**

1. The suitable software development tool available for use: Visual Studio Code
2. The suitable tool for designing the diagrams: Draw.io
3. The suitable project management tool: Wrike

There is a possibility of compatibility issues with other operating systems or particular program setups, which could affect how well Visual Studio Code works. Data loss or code file corruption might result from technical problems or power outages, which could delay or disrupt the development process. The design process may be affected by technical faults or connectivity issues that result in data loss or missing diagrams. There is a possibility that

information will be compromised or improper access will be made to project-related data while utilizing a cloud-based project management platform like Wrike.

#### **2.4.2 Technical issues**

The development process and version control will be managed using Git version control. Repository corruption carries the danger of causing the loss of code history or the inability to retrieve earlier versions. Hardware failures, software failures, or problems with repository synchronization can cause this. This risk can be reduced by implementing redundant storage and regularly backing up the repositories.

#### **2.4.3 Database Environment**

In order to address security issues, strong security measures such as encryption, access controls, and security audits are planned to protect data and mitigate risks. Also, to address data integrity, validation checks, backups, and recovery mechanisms are planned to be used to mitigate risks.

### **3. Consideration**

- Security
  - Authentication
  - Authorization
  - Sessions will be used in the website
- User friendliness
  - User manuals will be provided for the client



