Online Karinderya (Project Proposal)

1. Executive Summary

1.1. Problems

There are several problems, whether big or small, present in small eatery businesses. For example, customers, especially students, are unaware of the current food served and available in a small eatery before getting there. Another problem is the marketing of these businesses so that they have lots of customers.

1.2. Solutions

To solve the problems above, we will develop a web application, an IoT-based online karinderya (small eatery business). This web application will help business owners promote their small businesses while allowing customers to view the available foods that are being served. This application also makes it possible for the users to make online payments (e.g. via GCash) and pre-order food before they arrive at the eatery.

2. Market Analysis

2.1. Target Market

This project primarily targets **Students, Office workers, and Local Residents. Students**, especially those living in dormitories or boarding houses with limited cooking facilities, often seek affordable, convenient, and readily available meals to save their time. **Office Workers,** working in nearby offices and commercial areas who need quick and accessible lunch options or meals to take home after work. **Residents** in the surrounding community may be looking for home-cooked meals at reasonable prices, especially during busy weekdays or when they prefer not to cook.

2.2. Competitor Landscape:

The main competitor of this is the existing karinderya in the area but it does not propose a new competitive business rather it will help all karinderya businesses to grow even if they are starting small.

2.3. Industry trends:

The convenience of online food ordering and delivery has seen a significant rise in popularity. This is one of the factors that can ensure we join in with these trends. Digital payment methods like GCash and Maya app is becoming increasingly common in the Philippines. Offering these kinds of payment options helps this growing preference.

3. Technical Description

3.1. Features

This online karinderya platform will be a web application designed for accessibility on various devices (computers, tablets, and smartphones). It will utilize a user-friendly interface with the following key features:

For Customers

➢ **Menu Browsing:** Customers can easily browse menus from various partner karinderyas, with clear displays of available dishes, prices, and photos.

➢ **Real-time food availability**: This shows updates on food availability, preventing customers from being disappointed due to sold-out foods when they go to the eatery later.

➢ **Advance Search and Filtering:** Customers can search for specific dishes they want and show the karinderya offering that kind of dish if it is available.

➢ **Online Preordering:** Customers can pre-order if they want to reserve food before they go to the karinderya location.

➢ **Rating and Reviews:** They can leave a rating or reviews for the karinderya. This can help improve the reliability of each karinderya.

For Business Owners:

➢ **Menu Management:** An easy-to-use dashboard for managing menus, adding/removing dishes, updating prices, and uploading photos.

➢ **Inventory Management:** The IoT system will assist with inventory tracking, automatically updating menu availability based on stock levels.

➢ **Order Management:** Receive and manage orders efficiently, with options to confirm, prepare, and mark orders as ready for reservation.

➢ **Sales and Analytics:** Access to sales data, customer insights, and analytics to track business performance and identify trends.

➢ **Promotional Tools:** Ability to offer discounts, promotions, and create combo meals to attract customers.

3.2. Emerging Technologies Integration:

❖ **Machine Learning (ML):** Potentially integrate ML algorithms to personalize recommendations for customers based on their order history and preferences.

❖ **Data Analytics:** Utilize data analytics to provide insights to karinderya owners on sales trends, popular dishes, and customer behavior.

4. Development Plan

4.1. Development Process

This project will mostly follow a phased approach to ensure a structured and efficient development process:

Phase 1: Planning and Design (Estimated Duration: 4 weeks)

➢ **Requirements Gathering:** Conduct thorough research and analysis to finalize the app's features, functionalities, and technical specifications.

➢ **UI/UX Design:** Design an intuitive and user-friendly interface for both customers and karinderya owners, focusing on ease of navigation and visual appeal.

➢ **Database Design:** Design a robust database schema to efficiently store and manage user data, menus, orders, and other relevant information.

➢ **Technology Stack Selection:** Finalize the choice of programming languages, frameworks, and tools for development (e.g., React for front-end, Node.js for back-end, MongoDB for database).

Phase 2: Development (Estimated Duration: 8 weeks)

➢ **Front-end Development:** Develop the user interface of the web application, including menu browsing, ordering, payment integration, and user account management.

➢ **Back-end Development:** Build the server-side logic, APIs, and database integration to handle user requests, order processing, and data management.

- ➢ **IoT Integration:** Develop integration with IoT sensors for real-time inventory tracking and menu updates.
- ➢ **Testing and Quality Assurance:** Conduct rigorous testing to identify and fix bugs, ensure functionality, and optimize performance.

Phase 3: Deployment and Launch (Estimated Duration: 2 weeks)

- ➢ **Deployment:** Deploy the web application to a suitable hosting environment (e.g., AWS, Google Cloud).
- ➢ **Data Migration:** If applicable, migrate any existing data from previous systems to the new platform.
- ➢ **Launch:** Officially launch the online karinderya platform, making it accessible to customers and karinderya owners.

Phase 4: Post-launch and Maintenance (Ongoing)

- ➢ **Monitoring and Support:** Continuously monitor the app's performance, address user feedback, and provide technical support.
- ➢ **Updates and Enhancements:** Regularly release updates to add new features, improve functionality, and address any issues.
- ➢ **Marketing and Promotion:** Implement the marketing and promotion strategy to attract users and increase adoption.

4.2. Resource Requirements:

- ❖ **Development Team:** A team of skilled developers with expertise in front-end, back-end, and database technologies.
- ❖ **IoT Hardware:** Procure the necessary IoT sensors and devices for inventory tracking.
- ❖ **Hosting and Infrastructure:** Secure reliable hosting services and infrastructure to support the application.

5. Financial Projections

This is a projected financial performance of online karinderya over some time. These are estimated only and may vary based on actual market conditions and customers or users.

5.1. Revenue:
The project will generate revenue through different services:

- ❖ **Commission per Order:** If the customer uses the reservation feature when they are not yet in the karinderya location, they may charge a little based on the karinderya administration if they implement charging the customers. This will only apply to the karinderyas that have a monthly subscription.
- ❖ **Advertising:** New or small businesses do not mean they have limited spaces for connections. Some food suppliers and beverage companies can advertise their products using those businesses. The revenue comes from the company itself when they choose this feature to advertise for them and the karinderya used will get the right percentage of the amount.
- ❖ **Premium features:** The karinderya may want to purchase a monthly subscription for just a reasonable price and they will get things such as Advance promotions, Customer relationships, Customer connections, and auto-advertising for the users.

6. Marketing and Promotion Strategy

6.1. Target Market
The target customers are the karinderya owners and their customers. Karinderya owners refer to the owners of small eatery businesses. The customers are a variety of students, teachers, other school employees, and nearby residents.

6.2. Promotion Strategies
These are some of the promotional strategies we may use to promote the application and gain customers.

- ❖ **Online Platforms**: Almost everyone is using online platforms like Facebook for example. We can use this platform to promote the application.

- ❖ **Free Trial**: Giving a one-month free trial to new users can business owners a chance to try it without the financial commitment.
- ❖ **Early Access**: Before launching the application to the public, it will be tested first by actual karinderya owners. These owners can be a good way to spread awareness about the application and its impact on their business.
- ❖ **Referrals**: The application can also attract other users through a referral system where the current users will gain something by referring to other people.

7. Legal and Regulatory Considerations

7.1. Intellectual Property:

Operating an online karinderya will involve legal and regulatory considerations to ensure compliance and ethical business practices. It will also be legally registered as a business and comply with the laws regarding online transactions. All the resources such as logos and other design elements will be subjected to the Intellectual Property Code of the Philippines (Republic Act No. 8293).

7.2. Data Privacy:

Since the application will collect sensitive information such as customer names, businesses, and payment details, it will comply with the Data Privacy Act of 2012 (Republic Act No. 10173). The application will also ask the users for consent before collecting any personal data.

7.3. Data Security

The application will implement strong encryption before storing sensitive information to ensure safe user data. The application will also implement proper input validation error handling to avoid unexpected errors. The app will integrate digital payment methods like GCash or Maya. This will require the application to comply with the regulations from the Bangko Sentral ng Pilipinas (BSP) for electronic money issuers (EMIs) and the Anti-Money Laundering Act (AMLA).