Smart Queue Notification System: A Messaging-Based Queue Manager for Barber Shops and Parlors

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I. Introduction

Waiting time is a common problem in barber shops and parlors, especially when customers are unsure of their schedule or queue position. Customers often ask questions like “Anong oras ako?” or “Ilang tao pa ang mauuna?” which can interrupt operations and cause inconvenience. This project proposes a Smart Queue Notification System that uses messaging platforms to automatically inform customers of their queue status in real time.

II. Purpose of the Study

The study aims to reduce manual inquiries and improve customer experience by automating queue updates. It also focuses on providing an affordable solution for small businesses by minimizing costs related to SMS APIs.

III. Problem Statement

Customers frequently ask about their queue status, causing delays and interruptions. There is no automated system to manage and notify customers about their position. SMS-based solutions can be costly due to API fees, making them impractical for small businesses.

IV. Proposed Solution

The system will use a messaging-based approach (Messenger) combined with automation tools and a backend system.

It will manage customer queues and send automatic updates about their position without requiring manual responses from staff.

The system uses C++ for backend processing, n8n for automation, and MySQL for data storage, providing a cost-efficient alternative to SMS-based systems.

V. Key Features

Automated queue tracking system
Real-time customer notifications via Messenger
Reduced manual customer inquiries
Cost-efficient messaging (avoids SMS API fees)
Queue position updates (e.g., “You are #12”)

VI. Expected Outcome

Customers will have clear visibility of their queue status without needing to ask staff. Barber shops and parlors will experience fewer interruptions and smoother operations. The system will provide a low-cost, efficient solution for managing customer queues using modern automation tools.