

1. Project Title: Government Regulated Price Hike Control Application

1.1 Background to the Problem

Bangladesh, a country rich in agricultural resources, relies heavily on agriculture as the backbone of its economy. Given this context, one would expect stability and abundance in the market, particularly for food-related products. However, this is far from reality as severe price hikes are a common issue in daily life. Despite the government providing statistical data showing ample domestic food production, these figures do not align with market conditions, often due to internal manipulations leading to price inflation.

A primary cause of these price hikes is the presence of syndicates. These groups hoard essential goods, artificially inflating demand, and then release the products at elevated prices. This manipulation allows them to control prices arbitrarily, bypassing government oversight. This volatility in prices creates significant challenges for consumers, making it difficult for them to plan their purchases. The hardest hit are the lower and middle-class populations, as well as students who are striving to balance their education and living expenses. As an underdeveloped country, Bangladesh's economic stability heavily depends on these segments of the population. Therefore, government intervention is crucial to regulate and stabilize prices, ensuring the economic well-being of the majority and preventing further economic decline.

1.2 Solution to the Problem

Our project aims to develop a technology-based solution to mitigate price hikes in the market. We propose a government-regulated web application to monitor and control the prices of essential commodities.

Leveraging widespread internet access in Bangladesh, this web-based application will provide real-time updates on government-approved prices. This allows consumers to plan their purchases based on accurate cost information, while the government can monitor market trends and identify anomalies, such as syndicate activities. The lightweight application will utilize existing government infrastructure, making it a cost-effective solution.

Literature Review:

Government intervention and dynamic monitoring systems are essential for controlling price hikes of essential commodities, emphasizing the need for real-time data and collaborative efforts to maintain market stability [1]. Government intervention and market mechanisms play crucial roles in regulating commodity prices, as highlighted in studies on floating pricing policies and web-based applications for price monitoring [2]. Government involvement and market mechanisms play crucial roles in regulating commodity prices, as highlighted in studies on floating pricing policies and web-based applications for price monitoring [3]. In the agricultural sector of Bangladesh, the implementation of e-governance aims to address issues such as price hikes, where farmers often lose out on profits due to intermediary involvement. This parallels the goal of a government-regulated price hike control application, which aligns with efforts to ensure fair pricing and better governance in agricultural markets, ultimately benefiting both

farmers and consumers [4]. Analysis of food price hikes in Bangladesh underscores the pivotal role of government intervention and market mechanisms in regulating commodity prices, echoing findings from studies on floating pricing policies and web-based applications for price monitoring [5].

Functionalities:

Real-Time Price Monitoring

- Users can access real-time updates on the prices of essential commodities.
- Government-regulated prices are displayed to ensure transparency.

Price Comparison

- Users can compare prices of commodities across different regions and retailers.
- Visual representation of price trends over time to help consumers make informed decisions.

User Reports and Complaints

- Consumers can report price gouging or discrepancies through the app.
- Users can attach receipts or photos as evidence for their complaints.

Government Alerts and Notifications

- Users receive alerts about sudden price changes or shortages in the market.
- Notifications about government interventions or policy changes affecting prices.

Data Analytics and Insights:

- The app analyzes price data to detect unusual patterns or potential syndicates.
- Insights are provided to the government for proactive measures.

Licensing and Trade Number Verification

- The app verifies the license or trade number of shops and retailers.
- Ensures that only registered entities can list their prices.

Consumer Education

- Provides information on fair pricing and consumer rights.
- Educational content on how to use the app and report issues.

Market Trend Visualization

- Graphs and charts to visualize market trends and price fluctuations.
- Helps users understand the broader market context and seasonal variations.

Inventory and Stock Updates

- Retailers can update their inventory status to reflect stock availability.
- Users can see which items are in stock and their current prices.

Feedback and Suggestions

- Consumers can provide feedback on the app's functionality and usability.
- Suggestions for improving the system are collected and reviewed.

Secure Data Handling

- Ensures that all user data is securely stored and transmitted.
- Compliance with data privacy regulations to protect consumer information.

User-Friendly Interface

- Intuitive and easy-to-navigate interface for both mobile and desktop users.
- Multilingual support to cater to diverse user demographics.

Integration with Other Government Services

- Seamless integration with other e-governance platforms for comprehensive service delivery.
- Cross-referencing with agricultural and consumer protection databases.

Predictive Modeling and Alerts

- Uses predictive analytics to forecast potential price hikes or shortages.
- Alerts are sent to the government and consumers in advance to prepare accordingly.

Retailer and Producer Registration

- Allows retailers and producers to register and list their products.
- Ensures a broad and diverse database of prices for accurate monitoring.

Compliance and Regulatory Reporting

- Generates reports for government agencies to track compliance and market health.
- Provides data-driven insights to support regulatory decisions.

Target User:

1. **Low-Income Families:** The application helps low-income families access accurate and up-to-date information on essential commodity prices. This ensures they can make informed purchasing decisions and avoid being overcharged, thereby managing their limited budgets effectively.
2. **Middle-Class Consumers:** Middle-class consumers benefit from the app's price comparison and trend analysis features, which allow them to find the best prices for their needs. This helps them save money and manage their household expenses more efficiently.

3. **Students:** Students, often on tight budgets, can use the app to monitor price changes and find the most affordable options for their everyday necessities. The app also educates them on consumer rights and market practices.
4. **Farmers and Small Producers:** Farmers and small producers can use the app to track market prices for their products, ensuring they receive fair compensation. The app also provides them with information on government policies and support programs.
5. **Retailers and Shop Owners:** Retailers and shop owners can update their inventory and price information through the app, ensuring transparency and compliance with government regulations. This helps build trust with consumers and avoids legal issues related to price gouging.
6. **Government Officials and Regulators:** Government officials and regulators use the app to monitor market prices and detect irregularities or price manipulation. The app provides them with data analytics and reporting tools to make informed decisions and enforce regulations effectively.
7. **Consumer Rights Organizations:** Consumer rights organizations leverage the app to gather data on price trends and consumer complaints. This helps them advocate for fair pricing policies and protect consumer interests more effectively.
8. **General Public:** The general public benefits from the app by gaining access to reliable price information and educational resources on market practices. This empowers them to make better purchasing decisions and be more vigilant against price gouging.

These target users reflect the diverse range of stakeholders who would benefit from the Government Regulated Price Hike Control Application, ensuring fair pricing and better market practices for all.

Conclusion: The Government Regulated Price Hike Control Application revolutionizes market transparency and fairness by providing a comprehensive solution for diverse consumer needs. With features like real-time price monitoring, consumer feedback mechanisms, government collaboration, and educational resources, it addresses the challenges faced by low-income families, middle-class consumers, students, and farmers. By facilitating secure data sharing, ensuring price transparency, and offering tailored features for market analysis and consumer protection, the application promotes equitable market practices. It empowers users to make informed purchasing decisions, ensuring fair pricing and protecting consumer interests. As technology advances, this application exemplifies innovation, enhancing market fairness and promoting economic justice. It represents a new era of accessible market regulation, empowering individuals to navigate their purchasing decisions confidently and effectively.

Reference:

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4. V. Tsap, "IMPLEMENTATION OF E-GOVERNANCE IN THE AGRICULTURAL SECTOR OF BANGLADESH."
5. M. M. Rahman, "Food price hike in Bangladesh: A supply side approach to its determinants and solutions," *Asian Journal of Humanities and Social Sciences (AJHSS)*, vol. 3, no. 1, pp. 120-141, 2015.