Functional Requirements:

1.Login Function

- The software will provide a secure login function that supports distinct login processes for Shop Owners, Customers, Security Personnel, Police, and Admins, with unique input parameters based on role.

  - o For **Shop Owners** and **Customers**: - Email - Password

  - o For **Security Personnel and Police**: - Employee ID - Password

  - o For **Admins**: - Admin ID - Password

- The software will validate user credentials against the database.

- Users exceeding three incorrect login attempts will be locked out for one hour.

- Upon successful login, the software will present a CAPTCHA for additional verification.

- Completing the CAPTCHA successfully will grant access to the user's designated home page based on role:

  - o **Shop Owners**: Shop Owner Home Page

  - o **Customers**: Customer Home Page

  - o **Security Personnel**: Security Personnel Home Page

  - o **Police**: Police Home Page

  - o **Admin**: Admin Dashboard

- A failed CAPTCHA attempt will require the user to restart the login process.

- The software will provide specific error messages for login issues, including incorrect credentials, exceeded attempts, or CAPTCHA failure.

Priority Level: High
Precondition: User must have valid login credentials.

2.Incident Reporting Function for Shop Owners

1. Shop owners will be able to report illegal fee collections or extortion directly to authorities.

2. Reports will require selecting a problem sector, such as "Illegal Fee Collection" or "Extortion."

3. After choosing a sector, shop owners will select a specific issue category and provide a description.

4. The location of the incident must be provided for precise reporting.

5. Optional fields for uploading evidence, such as photos or videos, will be available.

6. Shop owners must enter a valid contact number for potential follow-up.

Priority Level: High

3.Price Verification and Reporting Function for Customers

1. Customers will be able to view government-approved prices for products.

2. If customers observe overpricing, they can report it by selecting the product and specifying shop location.

3. Optional evidence (e.g., photo of product or receipt) may be uploaded for verification purposes.

Priority Level: Medium

4.Community Voting and Rating Software

1. Users can "upvote" reports on recurring issues, allowing authorities to prioritize serious incidents.

2. Frequent upvotes on specific reports will indicate high-priority issues, helping track syndicate activities.

Priority Level: Medium

5.Witness Testimony Option

1. Users can provide supporting testimony for existing reports, enhancing credibility.

2. Testimonies will allow users to describe what they observed and add supporting photos or videos.

Priority Level: High

6.Incident Heatmap

1. The app will feature a live map showing locations with frequent incidents.

2. Authorities can use heatmaps to identify high-risk areas and respond accordingly.

Priority Level: Medium

7.Transparency Reports

1. The app will generate weekly or monthly reports summarizing trends in illegal fee collections and price violations.

2. Users will have access to these reports, enhancing transparency and encouraging accountability.

Priority Level: Medium

8.Shop Verification Badge Software

1. Shops following government price guidelines will be assigned verification badges.

2. Customers can easily identify compliant shops, encouraging fair practices across the market.

Priority Level: Low

9.Multi-Language Support

1. The app will support local dialects to ensure accessibility for a wider user base.

2. Language settings will include commonly spoken dialects across Bangladesh.

Priority Level: Medium

10.Safety Features for Reporters

1. A "quick exit" feature will allow reporters to quickly hide the app screen if needed.

2. This feature will help protect reporters from retaliation in potentially dangerous situations.

Priority Level: High

11.Community News Bulletin

1. The app will feature a news section with verified updates about market conditions.

2. News updates will keep users informed and aware of relevant issues affecting the market.

Priority Level: Low

12.Real-Time Incident Escalation

1. Users can label incidents as "urgent," notifying authorities for rapid response.

2. Urgent incident details, such as location and evidence, will be highlighted for quick review by responders.

Priority Level: High

13.Reward Points for Reporting Violations

1. Users earn rewards for accurate reporting of illegal activities or price violations.

2. Rewards can be accumulated over time, encouraging more users to report issues.

Priority Level: Medium

14.Anonymous Community Feedback Surveys

1. Monthly surveys will collect anonymous feedback from users regarding the app and market conditions.

2. Survey results will inform future app updates and help identify areas for improvement.

Priority Level: Low