



AMERICAN INTERNATIONAL UNIVERSITY–BANGLADESH (AIUB)

FACULTY OF SCIENCE & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE

SOFTWARE ENGINEERING

PROJECT PROPOSAL ON

Smart City Corporation with Civic Credit System

Supervised By

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Submitted By

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1. Background / Problem Domain

City Corporations in many developing countries, including Bangladesh, face growing challenges such as inefficient service delivery, poor waste management, and lack of citizen involvement. Most existing digital platforms handle only limited tasks like bill payments or complaints, but they do not actively involve citizens in improving city conditions. This creates a communication gap between citizens and city authorities, reducing transparency, accountability, and public satisfaction.

The proposed Civic Smart City Corporation System aims to solve these issues by building a unified and intelligent digital platform that connects citizens, officers, and administrators under one smart ecosystem.

2. Root Cause of the Problem

The main reason behind these persistent urban problems is the lack of a comprehensive and interactive system that combines public participation with digital management. Citizens often remain passive because there is no recognition or reward for contributing to city improvement. On the other hand, city officers depend on manual record-keeping and outdated communication methods, causing delays and inefficiencies. This system aims to close that gap by introducing civic rewards and smart automation to encourage active participation and better governance.

3. Importance of the Problem

This problem is important because cities are expanding rapidly, and traditional management systems cannot handle the rising demand for services. Without digital tools and citizen engagement, urban areas will face higher pollution, slower service response, and greater management costs.

A smart civic system can improve efficiency, promote eco-friendly habits, and ensure more transparent governance. It also supports government initiatives like Digital Bangladesh and contributes to the goal of sustainable smart cities.

4. Project Objective

The main objective of this project is to create a smart and civic-based city corporation system that enhances urban management and encourages citizen engagement through a Civic Credit model.

Specific Objectives:

1. Motivate citizens to perform responsible civic actions such as recycling and cleanliness.
2. Enable city officers to assign, track, and manage public tasks digitally.
3. Automate payments, licensing, and complaints to save time and reduce costs.
4. Provide administrators with data analytics for performance tracking and decision-making.

5. Proposed Solution

The proposed Civic Smart City Corporation System will connect citizens, officers, and administrators through a centralized platform. Citizens can register, submit complaints, pay bills, or participate in civic programs.

Each positive action, such as waste recycling or community volunteering, will earn Civic Credits that can be used to get discounts on services or permits. City officers will have tools to monitor real-time progress, assign work, and evaluate performance. Administrators will access dashboards and analytics for better resource allocation, budgeting, and transparency.

This system transforms city management into a collaborative process between citizens and authorities.

6. Target Users / Audience

- Citizens: Report issues, participate in activities, and earn Civic Credits.
- City Officers: Manage field operations, tasks, and service requests.
- Administrators: Oversee all activities, budgets, and analytics.
- Local Vendors: Partner with the city to accept Civic Credits and promote community engagement.

7. Benefits of the System

- Builds stronger communication and trust between citizens and authorities.
- Encourages responsible behavior through a reward-based Civic Credit model.
- Reduces the time and cost of service delivery.
- Creates new income sources through digital services and data insights.
- Promotes transparency, sustainability, and efficient governance.

8. Basic Functionalities

1. User Registration & Login: Separate roles for citizens, officers, and administrators.
2. Civic Credit Management: Tracks earned and redeemed credits for civic activities.
3. Complaint & Task Reporting: Citizens can report issues and see progress updates.
4. Payment & Licensing System: Automates bills, taxes, and permits.
5. Officer Dashboard: Manage field staff, monitor reports, and approve work.
6. Admin Analytics Panel: Visualize performance metrics and generate reports.
7. Reward Redemption System: Allows users to redeem credits for service benefits.

9. Conclusion

The Civic Smart City Corporation System provides a modern solution for city management by combining civic engagement, automation, and transparency. It encourages citizens to take part in developing a cleaner and more efficient city, while helping authorities make faster and smarter decisions. This system will contribute to sustainable urban growth and create a foundation for future smart city development.