

NAGORIK-Web Application for Complain Management

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This Report Presented in Partial Fulfillment of the Requirements for the
Degree of Bachelor of Science in Computer Science and Engineering

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APPROVAL

This Project titled “NAGORIK-Web Application for Complain Management”, submitted by Md. Nazmul Hossain and Md. Shahnur Faisal Khan and Farjilul Alom Rony to the Department of Computer Science and Engineering, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 04-01-2022.

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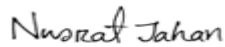
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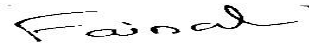
We hereby declare that, this project has been done by us under the supervision of Shah Md. Tanvir Siddiquee, Assistant Professor in the department of CSE at Daffodil International University, has been in charge of this project. It was done by us with his help. We also say that this project or any part of this project has not been submitted to anyone else for a degree or diploma from another school or college.

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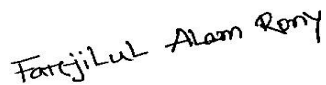
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ABSTRACT

In contemporary civilization, there is no efficient direct connection between the state and the citizens for problem solutions. This online application is presented as a solution to their problems by conveying complaints to the state. It will allow ordinary citizens to submit their concerns and problems to municipal officials, as well as municipal authorities to resolve the matter in a timely manner. It serves as the interface for filing a complaint and following up on it, and it also includes a complaint module for uploading text material including the complaint. This system has a feature that is if the councilor will not respond then the issue will be forwarded to the state governor. In the common scenario of a developing country, most of the state governments are corrupt, they don't provide the basic facilities to their civilians. Civilians are trying to communicate with municipalities by physical application or letter but most of the time the corrupt authorities don't care about their attempts. This system can reduce the issue. It will be a pair to pair blind process, and the mayor and councilor will be responsible for that. Through this system, higher authorities will be monitoring local government activities. We think this management system will be changing our conventional path.

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CHAPTER 1

Introduction

Civilians are the most vital component of every state. The state must fulfill the preferences and wants of the people in order to establish civilian loyalty, which will keep civilian support for the country. When a citizen receives a delayed service from the state and is unsure where to make a complaint, he or she may become dissatisfied with the service; moreover, current complaint processing in organizations still has flaws. As a consequence, we, the project's developers, created the Smart Complaint Management System (SCMS), which is a web application that addresses the public's dissatisfaction. Furthermore, the SCMS offers a service for classifying complaints and automatically forwarding them to the right department, as well as recognizing a similar issue to avoid filing a repeat complaint.

Civilian relationship management (CRM) is a public relations technique for relationship management between both the state and the people, in which the state learns about the people by employing these instruments, which are aimed to enhance people happiness. The efficacy of CRM is based on people loyalty, and the state would result in increased popularity and production. According to the statistics of implementing CRM in firms, clients are likely to spend 20-40% more the next time they make a transaction with the specific company, and revenue is enhanced by 41% per individual sales person. Furthermore, one of the CRM is the people's service in the state, which is responsible for taking care of a civilian, listening to people's opinions, and receiving complaints. As a result, the state is able to develop the economy, standard of living, and culture.

Complaint Procedural Issues:

- People are unaware of the complaint route or how to make a complaint from a citizen.
- People devote a lot of time to complaining.
- Common peoples do not have a way to trace their complaints.
- Complaints from organizations are being duplicated.
- The corporation lacks a route for requesting further information about a complaint and offering comments.

- Complaints are unrelated to the department in question.

The goal of 'Nagorik-Web application for Complain Management ' would be to manage complaints. Maintenance of classrooms, laboratories, and restrooms, for example. We developed this system as a prototype.

1.2 Motivation:

The web application Online Complaint Platform supports the interaction of numerous individuals that access the website. For improved usability, a decent complaint platform should include the following options to users:

1. Always keep the authority's name up to date.
2. All security alerts and communications should be sent.
3. Make it simple for the user to find what they're looking for.
4. When writing text and headlines, always indicate what is required.

1.3 Objectives

The following are the project's primary goals:

- i. Secure, complaint will be anonymous.
- ii. Accessibility, have easy to use.
- iii. Fast and reliable.
- iv. Provide a standard user interface.
- v. Higher authority will get mail if working authority is not work properly.
- vi. User can see the previous complaint history.

1.4 Expected Outcomes

Nagorik- Web application for Complain Management is a municipal complaint management system. This management system can be used in several purpose like for evaluation process, popularity selection, voting system, performance opinion etc. This project has the ability to break the conventional system and introduce a digital sophisticated management system. With the launch of this project, ordinary people will get a taste of technology and their suffering will be reduced.

1.5 Project Management and Finance

In our proposed system user can send his complaint municipal authority regarding his or her civil problems. This complaint will receive the corresponding person from municipality end. If the corresponding person response it will send to the used or if corresponding ignore or refuse this complain it will send to the higher authority. The whole process will be pair to pair blind. Also user and authority can check the complaint history.

1.6 Report Layout

The following modules can be used to describe "Nagorik- Web application for Complain Management." Each of the modules below has its own set of capabilities.

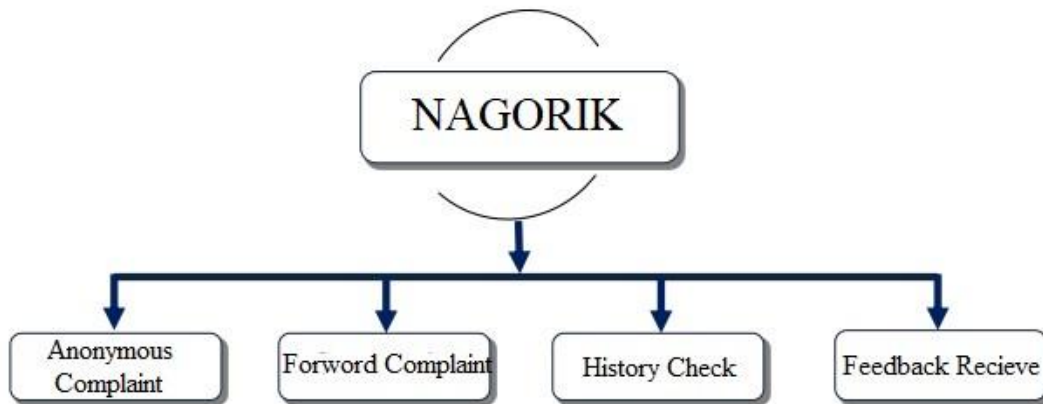


Figure 1 : Project Overview

CHAPTER 2

Requirement Analysis

2.1 Preliminaries

Through our benchmarking research findings, we look at a variety of complaint management websites under the guise of good or service and configurability information.

Here is the list of websites we'll be comparing in this assessment.

- ZenDesk
- LiveAgent
- HelpDesk
- Freshdesk
- TeamSupport

2.2 Related Works

Zendesk

Zendesk is a customer service software startup based in San Francisco, California. It offers software-as-a-service solutions for customer support, sales, and other customer interactions. In 2007, the firm was created in Copenhagen, Denmark.

Customer support portals, knowledge bases, and online forums can all be created using Zendesk, a virtualized help desk management system. Live chat, Salesforce integration, and Google Analytics integration are all included in the solution.

Overview of Zendesk

Pricing \$19 (monthly), Customer base size 2326+, Market Value \$2.1 billion.

Key Features

This website is jam-packed with useful features and information. Some of the key features are as follows.

- Authorization & Authentication
- Email
- Status Checking
- Live Chat

- Extract Data
- Analysis Graph

Limitations

Despite the fact that this site has an abundance of information regarding customer service, we have identified several flows and limits, which are as follows:

- User can't send message anonymously.
- Complex UI

LiveAgent

As a customer support software, LiveAgent is a complete solution that allows you to personalize your customer interactions. Customers can use LiveAgent as an omnichannel universal inbox with real-time chat, a built-in phone center, and a comprehensive customer care site.

Overview of LiveAgent

Monthly charge is \$15, total client 1899+, they covered 0.32% market.

Key Features

- System universal inbox massaging.
- Customer ticketing system.
- Hybrid ticket stream.
- Automated ticket distribution.
- Time base individual rules.
- Responsibility handling.
- Departments wise task.

Limitations

- Calls don't always work
- Creating tickets from phone calls is difficult.

Help Desk

Help desk software is used by customer service and IT teams to deliver services to employees and/or customers. Its primary goals are to help service teams manage support requests methodically, provide self-service options, monitor and report performance, and, in an ideal world, much more.

Overview of LiveAgent

Monthly pricing \$4, total customer 1899, market revenue 8.9 Million

Key Features

- Points of contact.
- Ticketing management □ A knowledge base or self-service.
- Automation.
- User Dashboard

Limitations

There have been some drawbacks to help desk software as well. For example, many help desk software systems have high upfront expenditures as well as lengthy deployment times that might deplete corporate resources.

TeamSupport

TeamSupport delivers an omnichannel experience that allows teams to continuously deliver great service by facilitating internal team communication and streamlining customer support concerns.

Teamsupport Overview

Monthly \$50, total client 782+, 0.14% Market Covered.

Key Features

- Log in
- Status Checking
- Live Chat
- Extract Data

2.3 Challenges

We looked at various benchmarks on different online travel sites (Section: 2.1) and found some really cool and helpful features that might be very valuable to users. We also discover several defects and limitations that can be addressed. Eventually, we met our project's characteristics, which include certain key elements from our benchmark research, and we attempted to overcome their constraints. The essential aspects of our project are listed below.

2.3.1 Features We Selected

- Authorization & Authentication
- Status Checking
- Extract Data
- Blind Messaging
- Auto Forward to Higher Authority
- History

2.3.2 Development Steps/Method

In this instance, the Waterfall Model is the best option for development. As a result of this model's complex method, errors are minimized to an absolute minimum. This diagram represents the waterfall paradigm with feedback as the foundation for the development of our system.

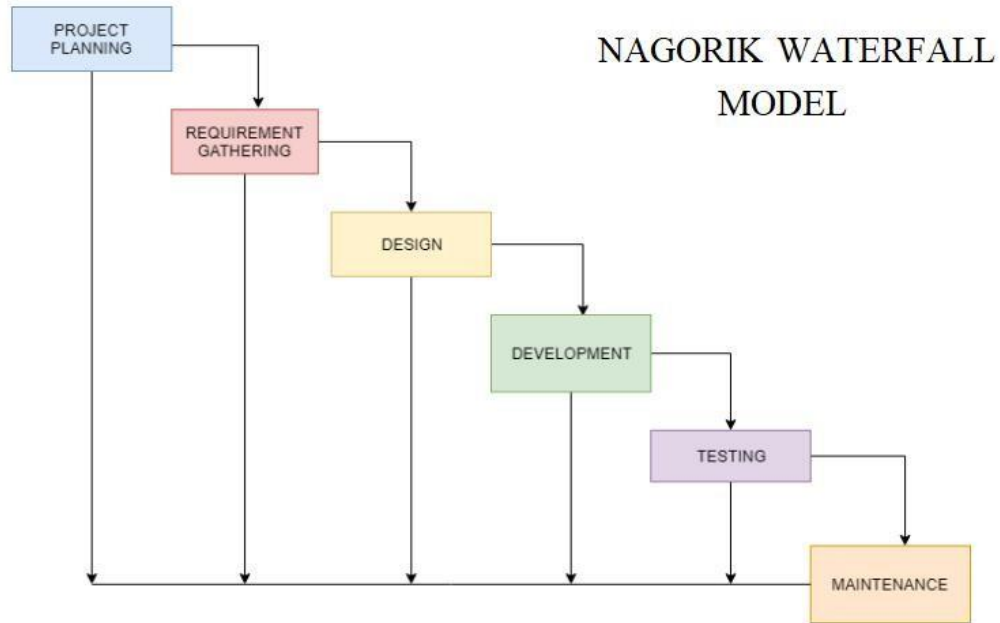


Figure 2 : Water Fall Model

2.4 Scope of the Problem

Having discovered a few quasi requirements that could help us provide an exceptional user experience. Our Non-Functional requirements are as follows.

- Traffic Limit
- Submit button
- Button for forward
- Feedback Button
- Formal UI

2.4 Comparative Analysis

In this picture [Figure 3], we compare the primary aspects of our proposed system to those of benchmark websites.

Benchmark study

Feature	ZenDesk	Live Agent	Helpdesk	Teamsupport	Nagorik
Authorization & Authentication	Y	Y	Y	Y	Y
Complaint Box	N	N	N	N	Y
Status Checking	Y	N	Y	Y	Y
Live Chat	Y	Y	Y	Y	N
Extract Data	Y	N	N	Y	N
Blind Messaging	N	N	N	N	Y
Analysis Graph	Y	N	N	Y	Y

Figure 3: Benchmark Analysis and Findings VS Our Proposed System

Chapter 3

Requirement Specification

3.1 Business process Modeling

❖ Admin of Nagorik

- Handle all users
- Handle Authorities
- Can Manage all Complaint
- Can Forward the complaint
- Can give permission
- Can Update Design □ Handle User

❖ Visitor

- Welcome Page Only.

❖ User

- Can Registration
- Can Sign In
- Can Complaint
- Get Feedback
- Can Check his/her Complaints History

3.2 Requirement Collection and Analysis

This use case aids in the interpretation of functional requirements by serving as a link between needs and technological design. In a use case, a character element may be incorporated using the use case and all of its components. Here, we break down our system use case into its component parts and discuss them in detail.

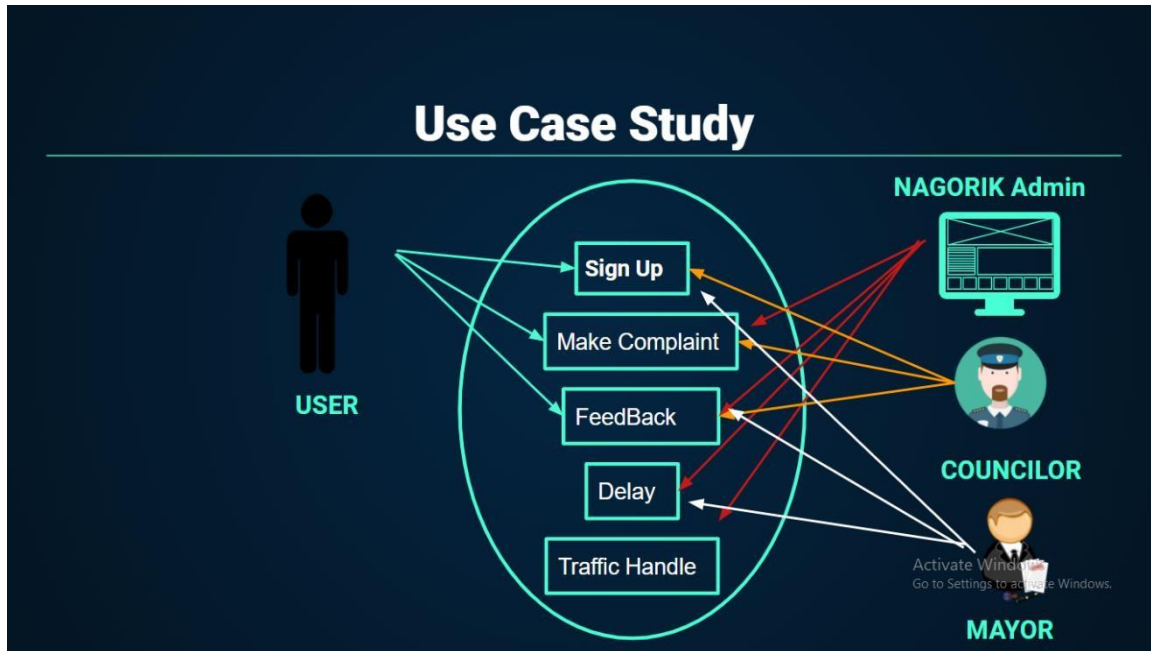


Figure 4 : Use Case Analysis of Nagorik

Listed below are all of the modules that make up a use case. Our system's core modules are demonstrated in this use case. This example serves as a high-level introduction to our product. Five major components make up this system. The Login or Register Module, the Online Order Subsystem, the Payment Plugin, the Online Viewing Module, and the Update Database Module are all examples of these types of components.

3.3 Logical Data Model

Our login system and its varied functions are the subject of this lesson. There's a figure 5 here. Login to the system is demonstrated here. Users and administrators can both log in using the login module.

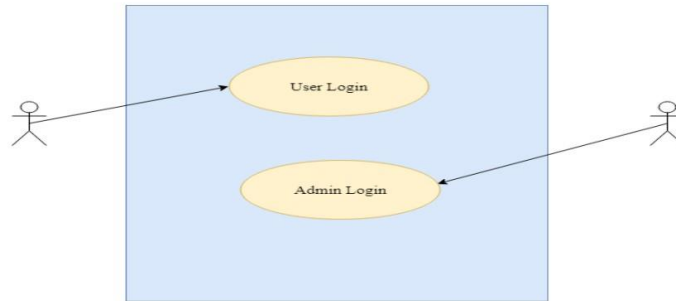


Figure 5: Use Case Analysis of Nagorik's Log In

3.4 Use Case Modeling and Description

The exploratory approach for our platform can be shown in this figure [Figure 3.4]. This graphic shows all of the activities that can be performed by clients in our platform.

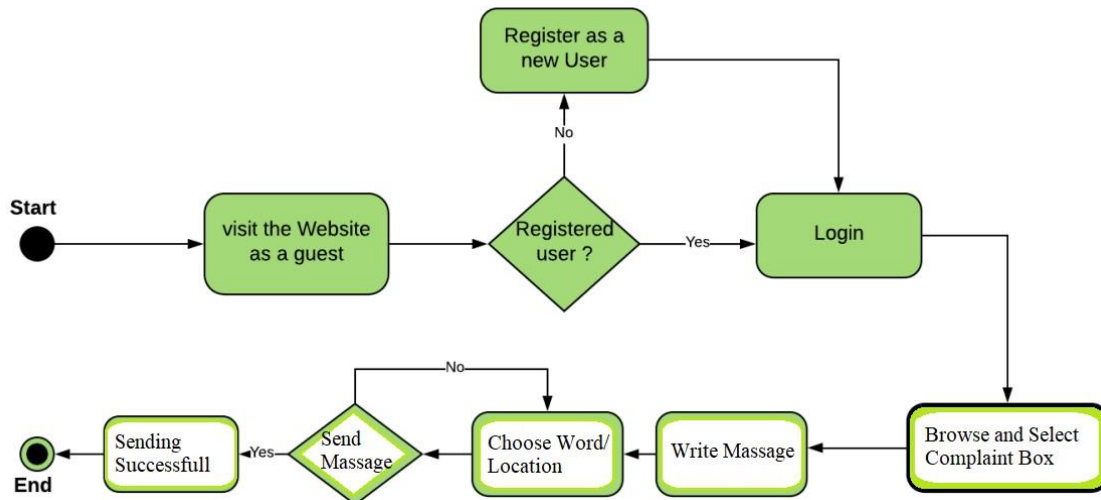


Figure 6 : Activity Diagram of Nagorik

3.5 Design Requirement

As a development platform in our system environment, we have chosen the Laravel framework. The platform aids in the development of MVC-based apps. Pluggable elements, attribute-based database validation, HTML Helpers, Inconspicuous validators, and dependency injection are just a few of the many cool features into this system to make it easier to test. Entity Framework is also used in our project (EF). ORM frameworks, like the EF framework, allow participants to develop with datasets in relational form. Object oriented programming is made possible thanks to this framework.

Chapter 4

Design Specification

4.1 Front-end Design

Framework used in Nagorik

We used Laravel 5.7 for Framework.

For front end we used HTML, CSS, Bootstrap etc.

4.2 Back-end Design

Language we used in Nagorik

For back end we used PHP to develop our project Nagorik.

Database we used in Nagorik

MySQL

4.3 Interaction Design and User Experience

login page:

User have to insert here mail and password. [Figure 7]

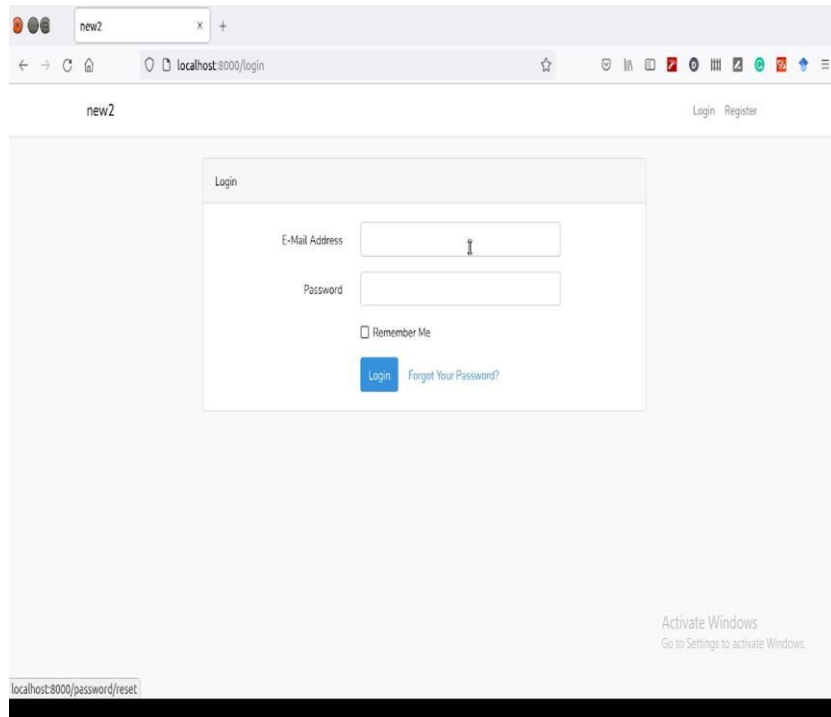


Figure 7: User Log In page User

Registration Page:

If user don't have account then have to insert here regarding information. [Figure 8]

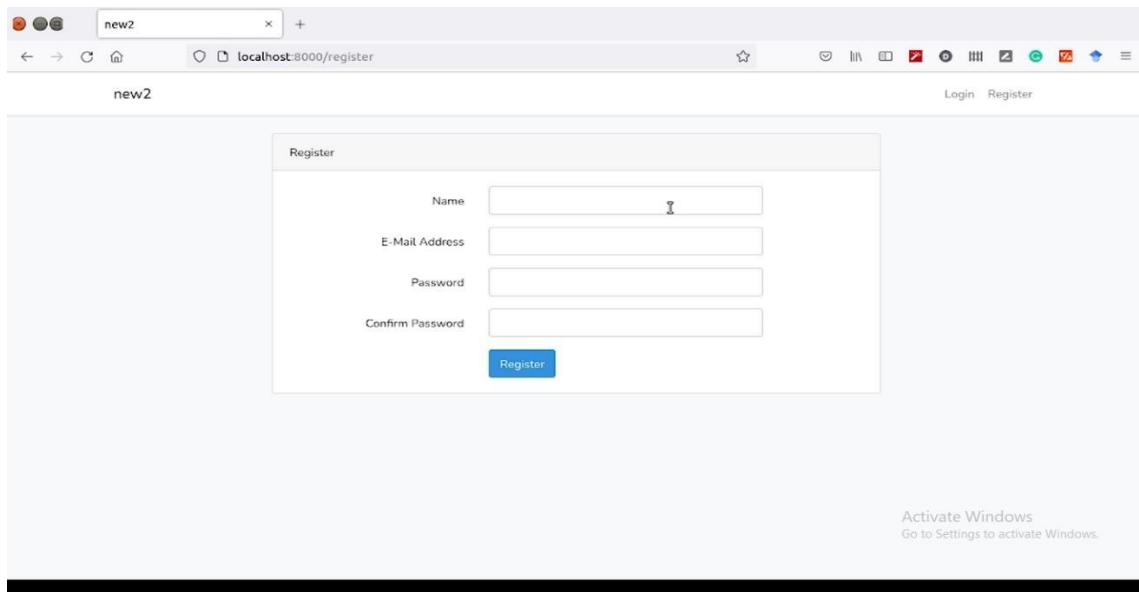


Figure 8: User Registration

Mayor/Higher Authority End

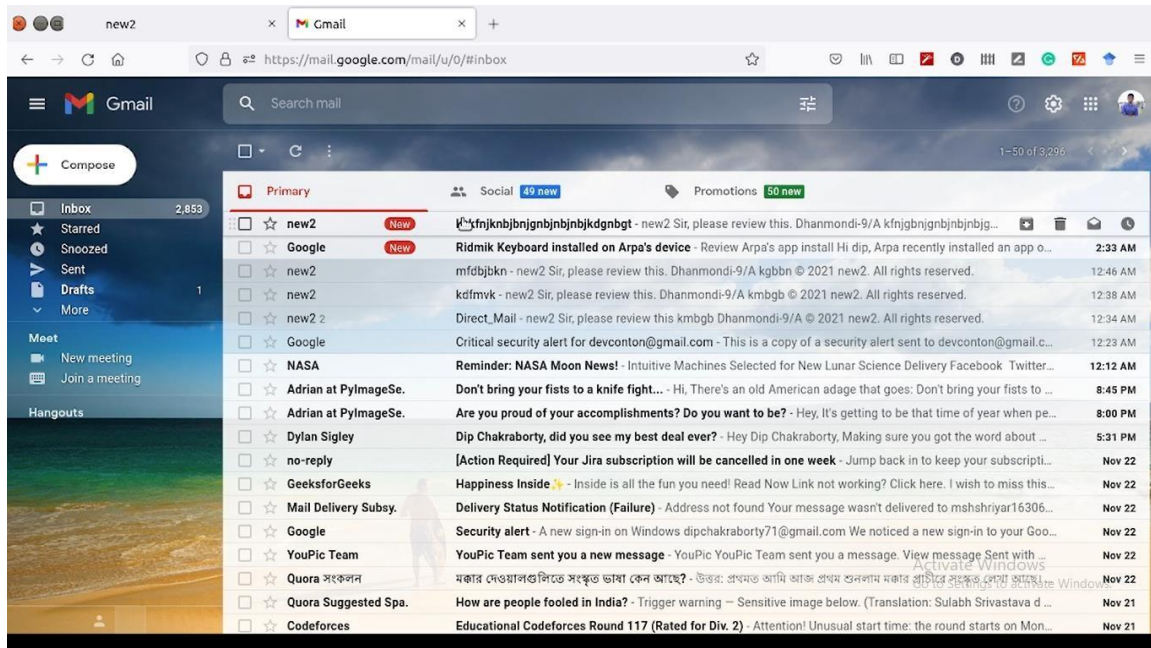


Figure 15: Mayor End (mail)

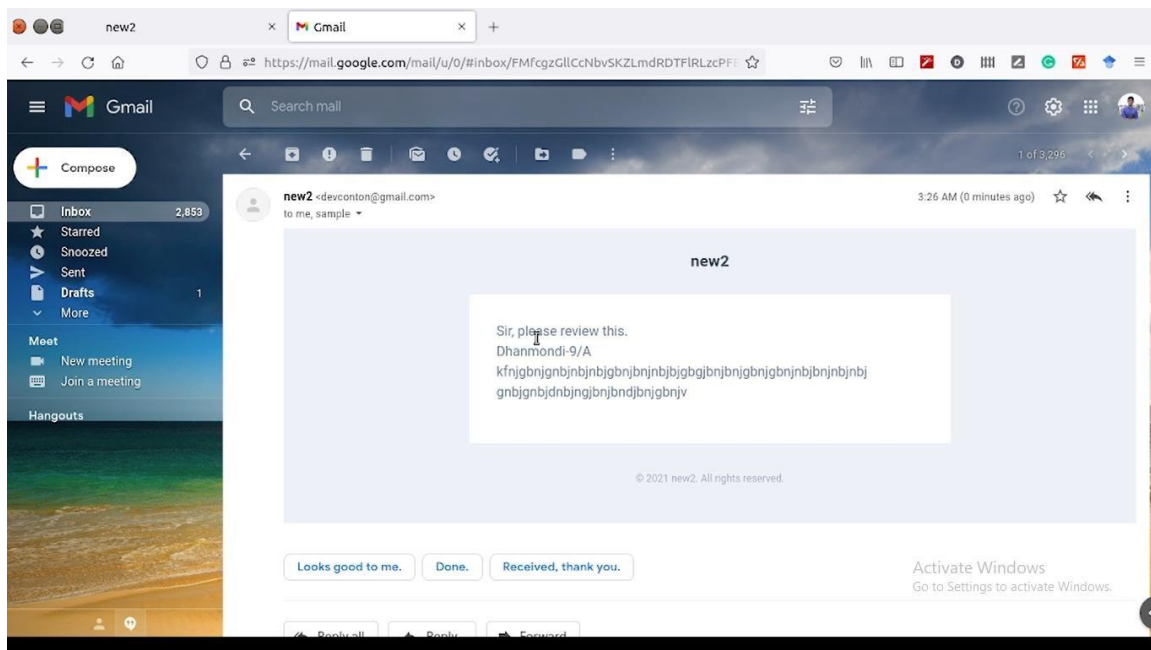


Figure 16: Mayor End (Details)

4.4 Implementation Requirements

Tools we used in Nagorik

□ Atom, Notepad++, CMD, visual Studio code **Version**

Control System for Nagorik

□ Git

Chapter 5

Implementation and Testing

5.1 Implementation of Database

For the purpose of producing high-quality software, software testing is evaluating how well an application works to see if it meets the specified standards and to look for any faults. It is necessary to do an ANSI/IEEE 1059 software assessment in order to identify discrepancies between the actual and required circumstances (i.e., errors) as well as to assess the software's features.

5.1.1 Objectives of Testing

Testing process has a wide range of goals and purposes. To achieve these objectives, software testing is primarily concerned with the following:

- Discovering weaknesses that the coder may very well have committed while creating the application.
- Creating confidence and providing idea of the level of excellence □ To avoid errors.
- Make sure the finished product meets the requirements of the business and its customers.
- To ensure that it complies with the BRS and SRS requirements.

5.2 Implementation of Front-end Design

- Unit Testing of software
- Integration examination of software
- System examination of software
- Acceptance examination of software

5.2.1 Unit Testing

Unit testing is performed to determine whether the individual parts of the code are functioning right. Specifically, the programmer tests each additional component of the software in the developer's environment. It is sometimes referred to as Early Testing or Unit Testing.

5.2.2 Integration Testing

Two or more unit-tested components can only connect and send data if their unification has been tested. The term "string testing" is often used to refer to this type of testing. Top-down, bottom-up, and sandwich approaches are all included (Combination of Top Down and Bottom Up). This process is carried out with the use of fictitious programs known as stubs and drivers. In contrast to actual software modules, stubs and drivers just simulate the caller module's data connection.

5.3 Testing Implementation

It's a black box testing. End-to-end scenario testing is the process of testing a fully integrated application. To guarantee that the program is compatible with all of the target platforms. Check for intended results by thoroughly checking each input in the program. The application's user experience is being tested.

5.4 Test Results and Reports

The process of putting a product through its paces is known as "Alpha Testing." Software's in-house developers frequently conduct alpha tests to ensure the app's functionality. During alpha testing, consumers or outsiders can work with developers or testers. End users participate in public beta before the product is released, and if they find any bugs or provide any comments, the proposed change will be addressed. As soon as a program is ready for public distribution and has passed the necessary standards, it undergoes gamma testing, which is conducted outside of the company's control.

Chapter 6

Impact on Society, Environment, sustainability

6.1 Impact on Society

By NAGORIK people can reach their administration easily. A good relation between people and Councilor, that's result always turns to beneficial for that society. Crime rate would be reduced, Tax section would be richer, women's security also would be enhanced.

6.2 Impact on Environment

By benefit of NAGORIK we will get a conscious community. If NAGORIK perform duly hence citizen will acquire a norm tribe.

6.3 Ethical Aspects

- Over time NAGORIK can onward people cognition
- NAGORIK can assuage clutter
- NAGORIK can raise regime accountability

6.4 Sustainability Plan

- Main accent should be on unraveling crucial problems.
- Consecrate iota of distinction.
- Receptacle on design scalability.
- Rapid renovate and salvation.
- Receptacle on user assessment.

Chapter 7

Conclusion and Future Scope

7.1 Discussion and Conclusion

Nagorik was built in such a way that future changes are simple to implement. The following conclusions may be drawn from the project's progress.

- Sophisticated Authorization and Authentication.
- Complete Complaint Box.
- Complaint Status Checking.
- Pair to Pair Blind Massaging.
- Councilor and Mayor Working Analysis based on Problem Solving.

7.1.1 Limitations

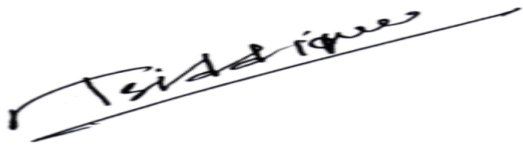
Due to time restrictions, the project produced solely addresses the element of User travels in the Bangladesh local region. Does not have a foreign vacation planned and is taking advantage of this website's offer.

7.2 Scope for Future Development

- Use all of our system features to build a mobile app.
- Make our app available to all users for the first time.
- Our database was moved to the cloud.
- Use the voter identification card to determine who the user is.

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