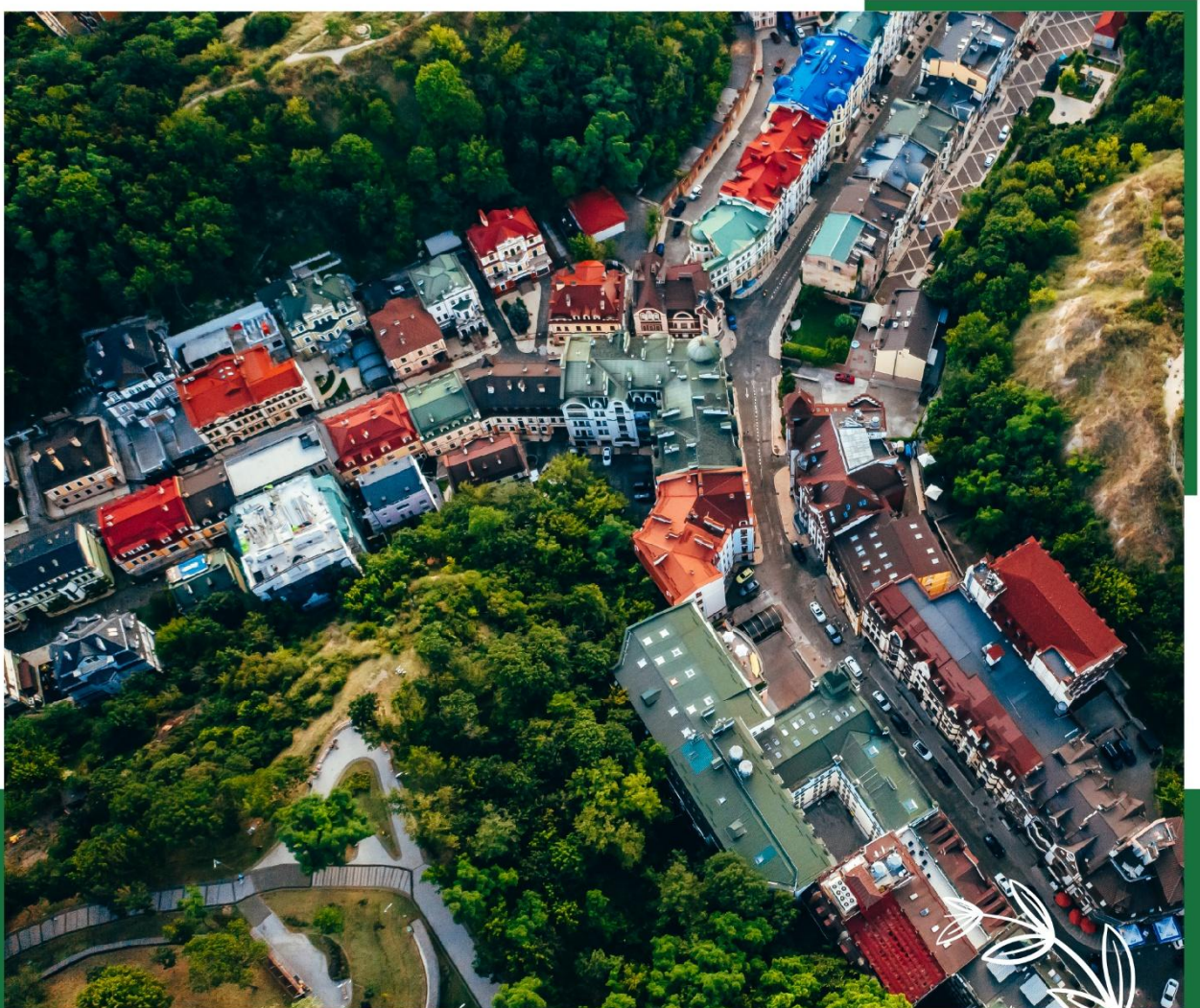




VILLAGE CONNECT

A Localized Social & Administrative Mobile Platform



Project Proposal
SE303.3-Mobile Application Development
Group No 16





NSBM Green University

Faculty of Computing

BSc in Management Information System (Special), BSc (Hons) in
Software Engineering, BSc (Hons) in Computer Science

Module Code & Name: SE303.3-Mobile Application Development

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Project Proposal

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1. Problem Definition

The Grama Niladhari (GN) still provides administrative services in many Sri Lankan villages via in-person visits and manual paperwork. For services like these, residents must travel to the GN office:

- Making a character certificate request
- Getting proof of residency
- Getting official notifications
- Reporting misplaced objects or neighborhood issues

There are various problems with this conventional system:

- **Time waste** - Locals travel and wait in line for hours.
- **Inefficiency** - Manual records are hard to track and take a long time to process.
- **Lack of Communication** - Not everyone gets important village notifications on time.
- **Poor Transparency** - Can't monitor the progress of their requests for certificates.

A mobile-based digital solution can greatly enhance local governance and communication, especially as smartphone usage rises. In order to improve resident engagement and digitize crucial GN tasks, a localized village social and administrative mobile application is suggested.

2.Scope of the Project

a. Objectives

The primary goal of the project is to come up with an app that:

- Relates the village inhabitants with their Grama Niladhari.
- Automates rudimentary services.
- Offers a focal point of community information.

b. Included in Scope

- **Registration and login of residents:** Gives the user the right to safely open their accounts and view customized services.
- **Online application in GN certificates:** Provides residents with an opportunity to request character and residence certificates online.
- **Official GN notice board:** Gives a certified online platform on which the GN officer can post official announcements.
- **Lost and Found section of the community:** Enables villagers to leave and read the information regarding the lost or found objects in the village.
- **Village employment/work opportunity board:** Allows distribution of local jobs and temporary jobs.
- **Request for status tracking:** Enables residents to watch the development of their certificate requests.

c. Excluded from Scope

- Connection with the national-level government databases. In this version the system will not be associated with centralized government systems.
- Certificates payment processing online. No digital payment gateway would be installed in certificate services.
- High-performance systems of identity validation (e.g. biometric validation). Fingerprint or facial recognition, or other biometric technologies will not be a part of system.
- Expansion at the multi-village or district level. The program will be scaled down to one village and will not be able to scale regionally at this stage.

This initiative is limited to local village-based communication between the inhabitants and the GN office.

3. Features of the Application

a. Rural Residents (Citizens)

- **Voice Assistance:** Navigate the app and report incidents using voice commands in local language.
- **Offline Mode/SMS Sync:** Fill out forms and view saved data offline, syncing once online.
- **Real-Time Status Tracker:** Visual timeline to track document request progress.
- **One-Tap Emergency Alert:** Quick access to report critical community threats.

b. Government Officials (Grama Niladhari)

- **Digital Signature & e-Verification:** Instant digital certification of documents.
- **Incident Dashboard:** Categorize and prioritize reported incidents for task management.
- **Mass Broadcast Tool:** Bulk SMS/push notifications to all registered residents.
- **Secure Database Access:** Instant access to verified citizen data.

c. Village Committees

- **Task Assignment & Workflow:** Assign and track tasks for reported issues.
- **Digital Meeting Minutes & Calendar:** Schedule meetings, send reminders, record decisions.
- **Community Polling:** Collect feedback on village projects.
- **Resource Tracker:** Manage shared resources like equipment and water pumps.

d. System Administrators (Super Admin)

- **Role-Based Access:** Manage user roles and permissions with strict access control.
- **System Analytics:** Track app usage and identify system bottlenecks.
- **Audit Logs:** Maintain secure records of every user action for accountability.
- **CMS:** Update app content without code changes (e.g., templates, announcements).

4. System Users

User Type	Responsibilities
Resident	Submit requests, view notices, post community information
Grama Niladhari (GN)	Review requests, update status, and publish official notices

5. Wireframe Diagrams

a. Login Screen

- Enables residents to obtain access to the system safely.
- Fields for NIC and password
- Registration and password-recovering options.

The wireframe diagram shows a login screen for 'VillageConnect'. At the top center is the title 'VillageConnect'. Below it are two input fields: the first is labeled 'NIC Number' and the second is labeled 'Password'. Below these fields is a dark rectangular button with the text 'LOGIN' in white. At the bottom of the screen, there are two links: 'Register' on the left and 'Forgot Password' on the right, both underlined.

b. User Dashboard

- Easy access to core services.
- Shows shortcuts to the certificate requests, notices and community features.
- Displays an overview of the current request of the user.



c. GN Certificate Request Form

- Allow residents to electronically submit applications to GN certificates.
- Adds a section of personal information and reason of request.
- Enables upload of documents to be verified.

☐

Certificate Request

Certificate Type

Select certificate type <

Full Name

NIC

Address

Reason

Upload Document

Document placeholder

SUBMIT

[Cancel](#)

d. Request Tracking Screen

- Shows a list of the requests that have been submitted certificates.
- Displays the status of every request in processing.

Request Tracking

Character Certificate

Submitted: 2026-02-05

Approved

Residence Certificate

Submitted: 2026-02-03

Pending

Income Certificate

Submitted: 2026-01-28

In Review

Home

Requests

Community

Profile

e. Request Detail View

- Gives all details of a request that is selected.
- Shows GN comments and approving status.

Request Details

Status: Approved

Certificate Type
Character Certificate

Full Name
Nimal Perera

NIC
123456789V

Address
123, Main Street, Colombo

Reason
Employment purpose

GN Remarks

Request has been verified and approved.
Certificate is ready for download.

Download Certificate

f. Official Notice Board

- Displays confirmed announcements made by the GN.
- Gives current local and administrative news.

Official Notice Board

Filter notices

Water Supply Disruption Notice

Description line 1

Description line 2

2026-02-07

Verified

Read More

Community Meeting Announcement

Description line 1

Description line 2

2026-02-06

Verified

Read More

Waste Collection Schedule Change

Description line 1

Description line 2

2026-02-05

Verified

Read More

Home

Requests

Community

Profile

g. Notice Detail Screen

- Shows all the details of a notice chosen.
- Assures the residents of the ability to read official information in a clear manner.

Water Supply Disruption Notice

This is to inform all residents that there will be a temporary water supply disruption on February 10, 2026, from 9:00 AM to 3:00 PM due to scheduled maintenance work on the main water line.

We apologize for any inconvenience caused and request residents to store adequate water for the day.

For urgent inquiries, please contact the Grama Niladhari office.

Date: 2026-02-07

Verified by GN

Home

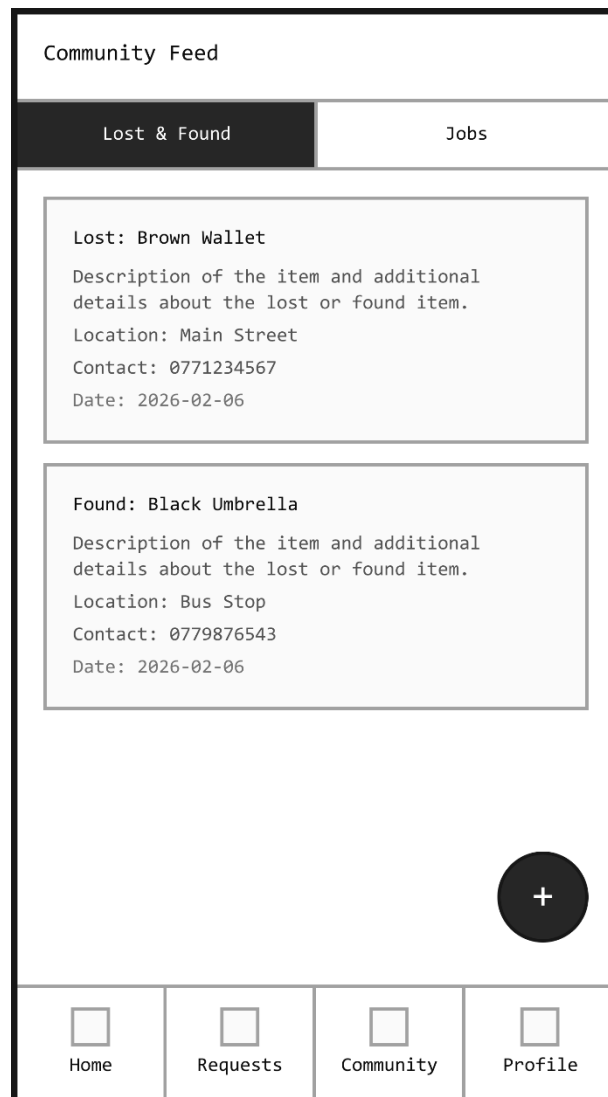
Requests

Community

Profile

h. Community Feed Screen

- Posts community content (posts and advertisements) in relation to Lost & Found and job opportunities.
- Promotes local communication and cooperation.



i. Add Community Post Screen

- Enables residents to post Lost and Found or work-related posts.
- It has fields of title, description, location and contact information.

☐

Add Post

Category

Lost & Found / Jobs

Title

Description

Location

Contact

SUBMIT

☐Home

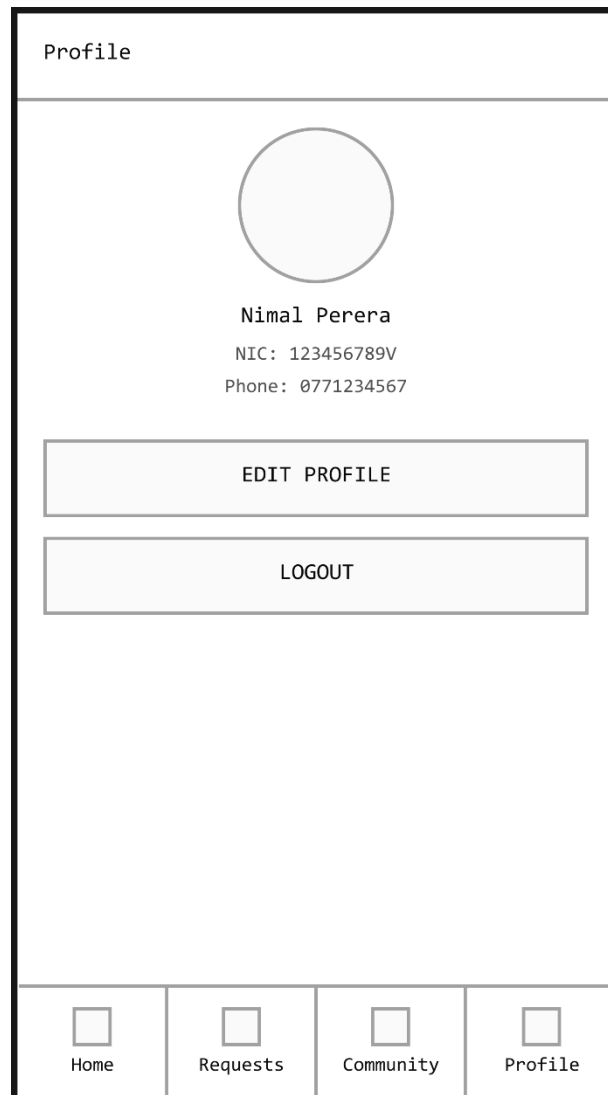
☐Requests

☐Community

☐Profile

j. Profile Screen

- Shows personal details of the user.
- It gives the choice of editing profile and leaving.



k. GN Officer Dashboard

- Enables the GN to take care of pending certificate requests.
- Offers means to place official postings and track the community postings.

GN Officer Dashboard

Pending Requests

Sunil Kumar
Character Certificate

Priya Silva
Residence Certificate

Post Notice

Notice Title

Notice Description

POST NOTICE

Manage Community Posts

Lost: Mobile Phone

Approve

Remove

I. Help / Chatbot Interface

- Improves user experience
- Serves those who are not so tech savvy.
- Reduces GN office workload
- Offers 24/7 information facilities.

Help / Chatbot

Hello! How can I help you today?

How do I request a certificate?

To request a certificate:

1. Go to Dashboard
2. Tap "Request Certificate"
3. Fill in the form
4. Submit

Quick Actions:

Track my requests

Contact GN office

View notices

Home Requests Community Profile

- ❖ The application design enables the addition of new interface screens during the development process.

6. Expected Benefits

- Lowers the GN offices' congestion.
- Saves time for residents
- Enhances the village communication.
- Promotes mutual aid in society.
- Brings in local level governance digitalization.

7. Conclusion

The **VillageConnect** mobile app is intended to revolutionize the administration of villages by computerizing the key GN services and enhance communication between communities. Among this project are localized communication and straightforward digital processes, which can be a practical and effective solution to a real-life village setting.

8. Group Members

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