CODEGALAXYITES

One Stop Digital Solution

PREPARED BY:

KAUSHIK BHATTACHARJEE
Business Head

[CODE GALAXY ITES]
10/11Bengal Ambuja, CityCenter,
Durgapur-713216
[959-341-6943]
info@codegalaxy.co.in
www.codegalaxy.co.in

BUSINESS PROPOSAL

Subject: Proposal for developing a web application and a desktop application.

Scope of work:

Web Application:

The platform Should provide the following functionalities:

1 Introduction.

The purpose of this document is to outline the requirements for the development of a platform thatfacilitates the connection and management of LoRaWAN gateways and sensors. The platform will include features for gateway management, sensor attachment, and client-specific dashboards for monitoring transmitted sensor data.

2 Scope.

The scope of this project encompasses the development of a web-based platform that enables the following functionalities:

- Gateway Management: Provisioning, configuration, and monitoring of LoRaWANgateways.
- Sensor Attachment: Seamless integration and management of various types ofsensors with the LoRaWAN network.
- Client-Specific Dashboards: Customizable dashboards tailored to individual client requirements for real-time monitoring of sensor data.

3 Functional Requirements.

3.1 Gateway Management: -

- Registration: Users should be able to register new gateways on the platform byproviding necessary details such as gateway ID, SR, and description.
- Configuration: The platform should allow users to configure gateway settings
- Monitoring: Real-time monitoring of gateway status. (Connection status, signalstrength, and packet transfer statistics.)
- Alerting: Automatic generation of alerts for issues such as gateway downtime orabnormal performance.

3.2 Sensor Attachment: -

- Integration: Support for integrating various types of sensors with the LoRaWANnetwork and gateway
- Configuration: Users should be able to configure sensor parameters (transmissionintervals, data encoding formats, and sensor-specific thresholds).
- Authentication: Secure authentication mechanisms to ensure only authorized sensorscan connect to the network.
- Management: Ability to manage sensor devices, including adding, removing, andupdating sensor configurations.

3.3 Client-Specific Dashboards: -

- Customization: The platform should allow clients to create customized dashboards tailored to their specific monitoring requirements.
- Data Visualization: Real-time visualization of sensor data through charts, graphs, and other graphical representations.
- Alerts and Notifications: Configurable alerts and notifications based on predefined thresholds or abnormal data patterns.
- Data Export: Capability to export sensor data in various formats for further analysis orintegration with external systems.

3.4 User Management: -

- Access Control: The platform shall provide administrative users with the capability tomanage user accounts, including the ability to add, remove, and modify user access.
- Role-Based Permissions: Administrative users shall have the authority to assign specific permissions to individual users based on their roles and responsibilities withinthe organization.
- Permission Visibility: Administrative users should have visibility into the permissions assigned to each user, enabling them to oversee and manage access rights effectively.
- Audit Trail: The platform shall maintain an audit trail of user management activities, documenting changes made to user accounts and permissions for accountability andsecurity purposes.

Desktop Application:

1. Introduction

This Document outlines the specifications and requirements for the development of a desktop software solution aimed at configuring and connecting gateway sensors in environments where internet connectivity is unavailable, and data transmission is facilitated through cable connections.

2. Background

In scenarios where internet connectivity is limited or unavailable, the need for a robust desktop software solution arises to configure and manage gateway sensors. This software will facilitate the configuration of sensors and enable data transmission via cable connections, ensuring reliable and secure communication in offline environments.

3. Objectives

3.1. Develop a user-friendly desktop software application.
3.2. Enable configuration and management of gateway sensors.
3.3. Facilitate data transmission through cable connections.
3.4. Ensure robustness, reliability, and security of data transmission.

4. Functional Requirements

4.1. Configuration Interface
4.1.1. Intuitive user interface for configuring gateway sensors.
4.1.2. Ability to set up sensor parameters such as network settings, data transmission intervals, and sensor thresholds.
4.1.3. Support for configuring multiple sensors simultaneously.
4.2. Sensor Management:
4.2.1. Dashboard to view and manage connected sensors.

4.2.2. Option to add, remove, or modify sensors.
4.2.3. Real-time status monitoring of sensors.
4.3. Data Transmission:
4.3.1. Support for data transmission via cable connections.
4.3.2. Encryption and authentication mechanisms to ensure data security.
4.4. Offline Operation:
4.4.1. Ability to operate in environments with no internet connectivity.
4.4.2. Local storage of sensor data in case of transmission failures.
4.4.3. Synchronization of data once internet connectivity is restored.

5. Non-functional Requirements
5.1. Performance:
5.1.1. Responsiveness: Software should respond promptly to user actions.
5.1.2. Scalability: Support for a large number of sensors without compromising performance.
5.2. Reliability:

5.2.1. Minimize downtime through robust error handling and recovery mechanisms.
5.2.2. Ensure data integrity during transmission and storage.
5.3. Security:
5.3.1. Implementation of encryption algorithms to secure data transmission.
5.3.2. Prevent Unauthorised Access to software with key mechanism
6. Technical Specifications
6.1. Platform: Desktop application compatible with Windows, macOS, and Linux operating systems.
7. Revision History:
7.1. Maintain a log of revisions made to the document for future reference.

❖ Timeline: 70working days

❖ Technology:

Front-end: Bootstrap
Back-end: PHP Codeigniter
Database: MySQL

❖ Project Deliverables

a. Web-application design
b. Desktop application design
c. Admin Panel
d. Project testing
e. Project manual

❖ Client Deliverables

a. Domain, Hosting, SSL
b. Logo
c. API

❖ Project Milestone

Milestones	Deliverables
Milestone I	Design of database architecture Admin panel design Admin panel secure login Admin dashboard All sensor parameter entry and management All sensor user entry and management
Milestone II	User panel (front end) design of layout User panel login and signup (With device id or API) User dashboard creation User panel all data of sensor and related data listing with API
Milestone III	All sensor data and related data management and monitor by admin

	If any data updates or new data added the admin will get notified in dashboard (only) Development of stand alone interface from web interface Deployment to stand alone interface Final testing and delivery

❖ Project Costing

Particular	**Amount**
Design and development of the web application and desktop application	**₹1,20,000**

❖ Payment Structure

Instalments	**Amount**
1st instalment as an advance payment	₹30,000
2ndinstalment after completion of millstone I	₹30,000
3rd instalment after completion of milestone II	₹30,000
4th instalment after completion of milestone III	₹30,000

❖ Banking Details:

COMPANY NAME	**A/C NO**	**IFSC CODE**	**BANK NAME**	**SWIFT CODE**
Code Galaxy	10200005548983	BDBL0001320	Bandhan Bank	BNDNINCC

Please NOTE: For the developing purposes we have to use third party CDN Extensions. These are completely open source.

TERMS & CONDITIONS

- Code Galaxy will provide one full year maintenance which includes cosmetic changes and server maintenance.
- Modules beyond scope will be treated as a new scope & will be subjected toextra charges & time. [Scope means what is exactly written in the documentfor thesame.]
- Client will have to read the total documents & give approval in written forinitiating the projects.
- Once both party (Client & Code Galaxy) agreed upon the agreement, CodeGalaxy will start the initiation of project.
- Code Galaxy will show the project work in their own server and once the payment is cleared from client end, then Code Galaxy will be liable to providethe source code and database of the developed project.
- Code Galaxy will be responsible for timely delivery & Client will have to makesure of timely payment as mentioned in the Scope.
- Both the party (Code Galaxy & client) will have to provide individual identity foracceptance of agreement.
- Both the party (Code Galaxy & client) will have to signed the document.
- Before initiating the project, Client will have to provide Code Galaxy with thewritten approval stating, "**I have carefully read and clearly understood theterms & conditions mentioned in the Scope and I approve of its entirety**", via email.

DEVELOPMENT COMPANY
CODE GALAXY
Authorized Signature

Kled Iot Sensing Pvt.Ltd
Authorized Signature