/37100/2024

KERALA STATE ELECTRICITY BOARD LIMITED

KSEB TELEPHONE DIRECTORY WEB & MOBILE APP

Functional Requirements and Specifications

Version 02

April, 2024

Office of the Chief Engineer (IT, CR & CAPs)
Kerala State Electricity Board Ltd.,
Vydyuthi Bhavanam, Pattom
Thiruvananthapuram

1. Introduction

The objective of this document is to provide a description of the KSEBL Telephone Directory Web and mobile application software. The document explains the owner's requirements for the software. The mobile application intended for the public shall work on Android & iOS based smartphones and tablets. A web application is also envisaged to carry out the Administrator roles.

2. Background

KSEBL is currently printing the Closed User Group (CUG)/ Fixed Cellular Terminal (FCT)/ Landline directory. Since it is a hard copy, frequent changes are not possible once it is printed. Hence a software based application for the directory is envisioned. Smartphone applications enable a technological opportunity to explore new approaches to data presentation and handling. It is proposed to replace the paper directory with a mobile application that will save time for searching and finding a contact to communicate and will reduce the paper consumption (save earth approach).

3. Scope of work

The scope of work envisaged as per this document shall be to develop a mobile app (Android & iOS based) for public use along with a web application for Administrator level roles.

The software shall contain functional & non-functional requirements which are taken together to form a complete description of the system.

4. Functionalities in scope

The following shall be the various processes of the KSEBL Telephone Directory App.

4.1 The mobile app shall be accessible to the public in the Android and iOS platforms and shall be available in the official Android and iOS stores for download.

4.2 The web application shall be available via intranet & internet and to be hosted in KSEB Data Centre (DC) server.

4.3 Office details, Designation, Name of officer, CUG/ Landline number details, e-mail address & office address of existing CUG/ Landline for the Telephone Directory app have been attached as Annexure, which are to be made available in the mobile and web application with the functionalities mentioned below. Provision to include additional office wise/ designation wise details shall be provided along with bulk data import facility.

4.4 There shall be an Administrator (Admin) for the software application. All other information regarding the telephone directory (like plan details, processing of monthly bills/ recharges, etc.) shall be entered in the software by this Admin/ employees assigned by Admin and errors if any detected on a later date shall be corrected only by Admin based on requests placed by responsible officers/ users. The Admin shall be able to assign 2 other users under his/ her control for adding/ removing/ modifying data.

4.5 The Admin as well as two other users (assigned by the admin) shall have username

(employee·code) & password (SSO password). Assigned users, whose privileges shall be set by the Admin (such as which field of database he/ she can add/ edit etc.). Any data edited or added by the assigned user must be approved by Admin.

4.6 Functional Requirements

Module	Process	Functionality
Mobile app (Android & iOS devices)	Offline mode	User office, office phone no. (landline & CUG), user designation, CUG phone no., office email id, employee name & office address shall be available in the offline mode with search facility
	Online Sync	Since the realtime data is not available in offline mode, the online sync periodicity shall be 2 weeks. This shall be made available automatically with an Admin's click in the web app. An update available message shall be displayed to the users of the mobile app when they open it.
	Home page	To display the Customer Care numbers of KSEBL and a call facility.
		Search bar in Homepage with contact list
		Tab for favourite contacts (with remove favourite facility)
		Tab for most contacted contacts
		Tab for recent calls list
	Search	Searching suggestions based on text input by user and voice search
	Search result	When selected, additional options for Calling, sending SMS, e-mailing, WhatsApp, copying and sharing contact details, Call history
		Option to add to favourite contacts
Web App	Login page	1. Admin: Executive Engineer, Communication Division, Thiruvananthapuram. Admin shall be able to assign 2 other Users in this office for adding/ removing/ editing data. 2. Access via intranet and internet via SSO credentials
	Homepage	1. Dashboard shall be provided 2. Reminders for remitting bills

		should be displayed on the dashboard. 3. Admin/ Assigned users can create different Groups, for grouping different numbers into a single category. For eg. – An account number group can be created by Admin to group different phone numbers having a single account number. Later this group can be set to enable reminders in the dashboard for bill due dates, etc.
	Screens	1. Option to search/ view/ edit the existing directory database. 2. The changes in database to be synchronized with the mobile app database. 3. List view of phone numbers 4. Option to capture the plan details (prepaid/ postpaid), plan code or plan name, plan type (recharge date, payable/ recharge amount, service provider, plan charge, payment details (amount, date, transaction details) CUG/ FCT/ Landline via data entry. 5. Facility to add SIMs other than CUG/ FCT/ Landline under the respective heads. 6. Facility to upload monthly bills on to the database. 7. Facility to add, remove and edit features- when new offices are formed, when existing offices are abolished, when CUG transferred to other officers etc required.
	Reports	Customized query needed for report generation from the main database, like type of SIM, name of office, designation, district, payment due date, category wise monthly expenditure etc.

5. Assumptions & constraints

This section lists the factors that could affect the requirements stated in the requirement specification document. These factors are not design constraints of the software, but are rather, any change to them may affect the overall requirements. The following are the major assumptions and dependencies.

5.1 It is ·assumed that the system architecture with respect to hardware, software, connectivity and other infrastructure would be available as envisaged for the proper function of the software.

5.2 Interfaces to KSEBL's other web applications will be provided as web services based on the formats devised by the KSEBL IT team. Your requirement of such data from other apps of KSEBL to complete CUG app development shall be clearly given by you as a document to KSEBL at the initial stages itself so that KSEBL IT wing can take steps to provide you the same intime.

5.3 The external interfaces would be dependent on service provided by other government agencies or service providers.

5.4 All legal/ regulatory/ administrative approvals/ changes, if any, would be undertaken by KSEBL to enable the functionality covered in this document. Such instances shall be informed well in advance to KSEBL in writing by the developer as and when required in order to avoid the delay.

6. Non Functional Requirements

This section identifies non-functional requirements to be supported by the Mobile & Web Application. It also includes the non-functional requirements for the support & management service, Design,development and testing of the service.

6.1 Application Requirement description

Development platform of mobile applications should support iOS & Android platforms. The Web Application shall be developed in PHP/ JAVA and DB in Open Source platform (Preferably PostgreSQL). The application shall be platform independent. Web applications shall be compatible with all major browsers. Latest versions of software shall be used for development. During the agreed period any updations in software shall be done free of cost.

6.2 Scalability Requirement description
The mobile/ web application must be scalable.
6.3 Change requirement Management

During the support period, any enhancement/ customization requirement having development work of up to 14 man days shall be done without additional charges to KSEBL. Error correction (debugging) for software with existing functionality shall be done free of cost during the support period as defined in Clause 6.13.

6.4 User Manual
The firm should prepare detailed video-based user manuals covering "step-by-step" and "how to use" concepts for the mobile/ web application.
6.5 Training

End-User Training:
Needs training to the Trainers of KSEBL for arranging training sessions for individuals or groups who will be using the software. This includes guidance on how to navigate the

interface, perform specific tasks, and make the most of the software's features.

Application knowledge Transfer:

This training (Knowledge Transfer) shall be provided to the KSEBL's Core IT Team members (minimum 10 employees) at Thiruvananthapuram/ Ernakulam, Kerala. It includes Software Architecture, Design Pattern, Documentation, Deployment Process, Configuration Management, Data Model and Database Schema, API & Integrations, Security Considerations, De-Bugging and error handling etc..

6.6 Training Materials

The firm shall be responsible for preparation of the training materials, handouts covering "step-by-step" and "how to use" concepts for the mobile/ web application.

6.7 Project Inception

The firm should prepare a detailed Project Plan detailing all tasks at micro and macro levels including the persons in charge, application development platform details, allocated resources, timelines for each activity, milestones, and deliverables within 14 days of receipt of Letter of Award. In the plan the additional requirements for integration to KSEBL softwares like HRIS, Samagra, etc. if any from the KSEBL part shall be clearly mentioned at appropriate position in the activity chart.

6.8 Requirement study

The firm should review and finalize proposed SRS in discussion with KSEBL within a reasonable time (preferably two weeks).

6.9 System Design

Based on the approved SRS the firm should perform detailed system design. As part of this phase the firm should submit design documents, flow charts, etc.

6.10 User Acceptance Tests (UAT)

The firm should conduct User Acceptance Tests (UATs) to ascertain whether the application and its sub-system is capable of meeting the functional requirement as per the specification. Conducting such tests will be the responsibility of the vendor. KSEBL will provide full cooperation to the vendor in conducting the tests.

6.11 Timelines

The selected firm shall complete the development and commissioning of the application with in 3 months from the date of issue of Letter of Award.

6.12 Documentation

The design document contents of the application should cover all the required technical information. The complete documentation of the project shall be delivered as one set with a cover letter mentioning its contents to IT Wing and Executive Engineer, Communication Division, Thiruvananthapuram in soft copy.

6.13 Product Support

The entire source code should-be transferred to KSEBL. A detailed documentation explaining the structure of code should be submitted along with source code. Source code training shall be imparted to the IT team. The software shall be supported by the Contractor for a period of one year-after rollout.

6.14 Security

The design of the application shall follow the latest NCIIPC, CERT-In guidelines. The security auditing of the mobile app is also included in the scope of the work. Vendor also must obtain a certificate from CERT-In empaneled agency.

6.15 Version Control System

The application development shall follow version control system.

PRAVEEN M A

CHIEF ENGINEER (IT, CR & CAPs)

25-04-2024