# Project Name:

Web Application for Account Management

## Purpose:

This requirement document provides a detailed overview of the requirements for designing and developing a web application for a telecom service provider to enable customers to manage their accounts, view billing statements, make payments, update personal information, and track data usage on their devices. This document will serve as a guide for developers to ensure the project meets its aims and user needs.

## Summary:

The web application aims to provide customers with a user-friendly platform for managing their accounts. It will include features like authentication, account overview, billing statements, payment processing, personal information management, data usage tracking, plan management, notifications, customer support, and app settings customization.

## Objectives:

* Improve customer satisfaction by providing easy access to account management tools.
* Reduce customer service inquiries by enabling self-service options.
* Enhance security and privacy of customer data.
* Streamline payment processing and billing management.
* Provide data usage tracking to help customers manage their plans effectively.

# Functional Requirements:

**FR-1:** Users will be able to log in to their accounts by entering their mobile number/email address and password.

**FR-2:** The system facilitates user registration for new users, requiring their details (mobile number, email address, full name, password and security question).

**FR-3:** Users will be able to reset their password by providing their mobile number and security question’s answer.

**FR-4:** The system provides a dashboard for users to view their account information which includes:

* Account Details
  + Mobile Number
  + Account Status
  + Full Name
  + Plan Type
* Plan Details
  + Plan Name
  + Plan Validity Date
  + Remaining Data
  + Remaining SMS
  + Remaining Talktime

**FR-5:** The user will get the required information for its billing cycle including a breakdown of charges, payments, and due dates for each billing cycle.

**FR-6:** Users will be able to view their transaction history where each transaction includes:

* Transaction status
* Plan Details
* Payment Mode
* Transaction timestamp

**FR-7:** Users will be able to download the statements for record-keeping purposes as a PDF file.

**FR-8:** Users will be able to make payments to their accounts based on prepaid and postpaid plans.

**FR-9:** The system will enable users to select between credit card, debit card or UPI for making the payment.

**FR-10:** Users will be able to view their personal information (mobile number, email address, full name, address, alternate mobile number) and can edit alternate mobile number and address.

**FR-11:** The system will display data usage statistics for user devices, providing consumption breakdowns for Data, SMS & Voice calls.

**FR-12:** System Offers Prepaid and Postpaid Plans

* Provides information on plans details and pricing of each plan.
* Allows users to choose and change between Unlimited Packs, Talktime, Data & International Roaming Packs for Prepaid users.
* Offers users with diverse plan options to choose plans based on their number of connections and benefits for Postpaid users.

**FR-13:** The system will send users in-app notifications for account-related events (payments, data usage and password updates).

**FR-14:** Users will be able to generate, check status and view support tickets.

**FR-15:** The system is integrated with a FAQ chatbot, allowing users to interact with the chatbot for queries.

**FR-16:** Users will be able to customize account related settings (email preferences, app theme, account status, change password and account deletion).

# Non-Functional Requirements:

* User passwords will be encrypted and stored in the database.
* The application will be designed using modular architecture to facilitate the addition of new features.
* New features or updates will be deployable without significant refactoring of existing code.

# Architectural Constraints:

* Microservices will be implemented for modules like Authentication & Setting, Personal Information, Support, Data Usage & Plan Management, Payment & Transactions, promoting modularity and service independence.
* The system will include a comprehensive suite of unit tests covering at least 80% of the codebase.
* The codebase will follow the industry’s best practices for coding standards, code smells and security.

# Scope:

### In Scope:

* Enables secure login, account registration and password recovery.
* Provides the user with a view of their plan details, contract end date, data usage, support, settings, and recharge links.
* Enables payments for pre-paid and post-paid plans using various payment methods.
* Allows tracking of billing cycle, past statements, costs, payments, and deadlines.
* Displays data usage statistics for user devices.
* Allows personal information updates on the Profile page.
* Enables plan upgrades for postpaid and prepaid customers.
* Sends in-app alerts for account-related events.
* Implements security measures for user data protection.
* Supports multiple payment methods for bill payments and recharges.
* Offers customer support resources and customizable account settings and themes.

### Out of Scope:

* Support for multiple languages.
* Integrating payment gateways.
* Support for queued recharges.
* Support for International Mobile Numbers.