

"Telecom Customer Veritel Portal"

Project Overview:

Develop a full-stack web application where telecom customers can manage their accounts, plans(Data,VoiceCombo), complaints, and payments.

The system will also have an admin panel for telecom employees to manage customer records, plans, and analytics.

Target Users:

Customer (User)

Admin (Telecom Employee/Support Staff)

Core Modules & Features:

Authentication & Authorization

Register/Login (JWT-based)

Role-based access (User, Admin)

Password reset

Customer Module

View/Update Profile

Browse available plans (Data, Voice, Combo)

Recharge / Make Payments

View Usage (data/minutes)

Raise Service Requests or Complaints

View Complaint Status

Admin Module

Manage Users (CRUD)

Manage Plans (CRUD)

View Complaints

Resolve Complaints / Change Status

Analytics Dashboard:

Daily recharges

Active users

Top complaints/issues

Revenue report

Technology Stack

Backend (Java):

Spring Boot (REST API)

Spring Security (JWT authentication)

JPA + Hibernate

MySQL / PostgreSQL (DB)

Frontend:

React

HTML, CSS, Bootstrap / Tailwind

Chart.js or Recharts (for dashboard graphs)

Tools & DevOps:

Maven

Postman (API Testing)

Swagger (API Documentation)

Git + GitHub (Version Control)

Docker (optional) for containerization

Jenkins (optional) for CI/CD pipeline

Testing:

JUnit for unit testing

Mockito for mocking

Postman API testing

Project Structure

Backend (Spring Boot)

com.telecom.portal

├

+-- controller

+-- service

+-- repository

+-- dto

+-- model

+-- config

Frontend (React)

css

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src/

+-- components/

+-- services/

+-- pages/

+-- auth/

Requirements

Functional Requirements:

User should register and login securely.

Users can view, search, and recharge telecom plans.

Complaint module to log and track service issues.

Admin can manage customers, plans, and handle complaints.

Dashboard with KPIs and visual insights.

Non-Functional Requirements:

Secure (JWT, role-based access)

Responsive UI

RESTful API design

Modular and maintainable code

Exception handling

Logging

Optional Enhancements

OTP-based login

Payment gateway simulation

PDF invoice generation

Chatbot for help section