BCITS

Use case Document

for

JSpider Training

Discom Consumer and Officer Application

Version:- 1.0

Problem Statement:

Electricity Distribution Company(Example BESCOM) 'XYZ Ltd' is one of the leading electricity company(DISCOM) in India with more then 10 million customer billed every month for their electricity consumption. Currently company does not have any consumer portal and employee(officers) portal. All the billing sent to customer in their door step.

Here are list of few challenges company facing currently:

- Consumer portal is not their so customers are not able to track their consumption on monthly basis.
- Generating Manual Billing taking a lots of time and effort.
- Consumers complaining that they are not receiving their bill due to miss placement or damage/loss of bill copy.
- As officer portal is not available, they are not able to track how much bill their own region is Generating each month and how much actual revenue getting collected.

To address above challenges, Mr X CEO of company came with below mentioned requirements to be developed so that they can manage things more efficiently.

Before actual implementation of the solution throughout whole region and for all consumers, Mr X wants a POC to be developed so that he can evaluate and decide for the implementation for all of the region.

POC Detail:

There will be two region named 'Bangalore South' and 'Bangalore North' under which there are 12 and 8 consumers are there respectively.

Each regions comes under an employee(Officer) named Mr. Nagesh S(Bangalore South) and Mr Rajesh S(Bangalore North)

There will be three major component of the application:

1. Portal for consumers and employee(Front End)

2. Database design and Implementation

3. Business Logic implementation for Billing and Others

1. Portal for consumers and employee(Front End)

Create an enterprise level portal with required securities and validations in place for consumers and employee(Officer) of the company.

Consumers Login:

- Consumers should be able to signup into online portal using their valid meter number/rr number.
- Once signed up, they should be able to login into portal and portal should reflect respective consumer and meter detail.
- Once consumers login into portal they should be able to see their each month electricity consumption, bill history, current bill, due date.
- They should be able to pay online(For now create a dummy payment page)
- They should be able to raise support ticket if they need any support with respect to their account.

Employee Login:

- Employee Login should be created by Admin using employee id and Designation.
- Once Employee login created and activated employee should be able to login.
- Once login, respective officer should be able to see only his region details such as number of consumers, this month bill generated, this month bill collected, Bill history, month on month revenue.
- If consumer created any support request,officer of that region should be able to see the request.
- Provide a page for bill collection.(A drop down list should show for only consumers who have positive due amount, once an account selected, officer should be able to update as amount received and it should clear the respective consumers due.)

2. Database design and Implementation

- Create proper database design with tables with required constraints and its relationship with other tables.
- Create ER Diagram for the tables.
- Put proper security and validation in place so that, application will not take wrong value. For example, Bill Amount should not take string.
- Create Backup Database where backup should happen based on configurable hour. (24 hr or 12 hr)

3. Business Logic Implementation:

- Create back end logic for bill generation for each consumer for every month.
- Once total consumption reading submitted, application should compute this month bill. For this one bill generation page can be built where consumer can be selected and then current reading should be selected. This should update Database.
- Current Month bill should be sent to respective email of consumers.
- They should be able to pay online(Dummy) or office should be able to update from bill payment page.

List of Tables:

Consumers master

Monthly consumption

Employee Master

Current Bill

Bill History

Payment Detail

Tariff Master

Tariff to be completed.

Type of consumers

Residential consumers

Commercial consumers

Industries

Tariff

Residential consumers

0-100 Units (kwh) – 4 Rs (PerUnit)

100-200 Units (kwh) – 5 Rs (PerUnit)

Above 200 Units (kwh) – 8 Rs (PerUnit)

Commercial consumers

0-1000 Units (kwh) – 10 Rs (PerUnit)

1000-2000 Units (kwh) – 15 Rs (PerUnit)

Above 2000 Units (kwh) – 18 Rs (PerUnit)

Industries consumers

0-10,000 Units (kwh) – 15 Rs (PerUnit)

10,000 -20,000 Units (kwh) – 20 Rs (PerUnit)

Above 20,000 Units (kwh) – 25 Rs (PerUnit)

Phase wise assignment

Module 1 – Table Design, Tariff Logic Implementation in core Java (without Tables)

Module 2 – Design UI Screens for Customer Portal, Employee Portal

Module 3 - Implementation of the Logic using Spring with tables

Module 4 – End to end implementation and Demonstration.