# Project outline: -

# ABC Telecom Ltd. is one of India’s major telecommunication service providers offering landline, mobile phone and Fiber optic broadband services across the country. Their customer services group is interested in providing a set of customer redressal services through the development of a new application using the state-of-art technologies such as Spring-boot for the development of java-based services, and UI using Angular and integrate them suitably, so that all the necessary services are taken care of through this application. They want to have an online complaint management system where the customers can raise complaints regarding their landlines and broadband services. Data Structures where sorting, Collection, Exception Handling and searching techniques are used. HTML, Bootstrap, javascript with angluar and CSS is used for Front-End. Mysql, springboot Database is used for backend management of data.

# Application capabilities: -

**Product Features:**

1. Admin user is the super user of the system. The admin user creates other categories of user like customer, manager, and engineers. The admin user has the privilege to create, update and delete the records through the web interface and can access the entire system.
2. Customer users can perform tasks like creating a complaint, view complaints, tracking the complaint and providing feedback on the resolution of the complaint through the web UI. The feedback provision is an optional feature. Customers should provide the following minimal details such as name, address (with PIN Code), telephone / mobile number, type of problem (cannot make a call, but receive a call or can make calls, but cannot receive calls, or neither make nor receive calls). Once successfully submit the complaint, a ticket is raised and shared it with the customer. At that time, the status of the ticket will be ‘RAISED’
3. Managers can pick the tickets from the active ticket list and assign them to the engineers based on the PIN code of the customer (where the service is installed). There should be different managers to take care of different PIN codes. You are expected to use at least about 5 – 10 different PIN codes, and there should be as many managers for assignment. Managers should also be able to see the status of all the tickets in all the areas.
4. Engineers can log in and view all the tickets assigned to him/her and can pick the tickets assigned to them and assign it the status of ‘WIP”, (work on the case, which is dependent on the type of problem and resolve) and update the status as ‘RESOLVED’. In case they are not able to resolve the issue at their end, they can remark that this needs to be reassigned to Field Workers in case of a cable fault or at the customers’ site, and flag it as ‘ESCALATED”
5. All the activities of all the use cases should be appropriately bound by session or other alternatives. Appropriate time-out to be provided for each user.

Login Screen

The login screen will have the username and password fields. The usernames and passwords and roles are stored in the user table. The system should show those screens that are allowed for each category of users.

Admin Activities through UI

There has to be only one admin, and he/she can login/logout. Once logged-in, he/she should be able to maintain the lifecycles of Customer, Manager and Engineer

Manager Activities through UI

Managers should be able to login and logout. Once logged in he/she should be able to do the following, at a minimum:

* View all the tickets and status
* Assign Complaints to different Engineers
* Should be able to view of Customer feedback

Engineers Activities through UI

Engineers should be able to login and logout. Once logged in he/she should be able to do the following, at a minimum:

* View the complaints,
* View complaints based on individual customer
* Work on complaints (Off line activities) and assign the new status
* Mark the ticket status appropriately
* View the Customer feedback

Customer Activities through UI

A customer should be able to login/logout. Once logged in, he/she can view the status of the tickets raised by him/her. The customer also should be able to provide a feedback on the status RESOLVED or ESCALATED. In case there is a problem, the customer can raise a ticket on the complaint, through say, Register Complaint. Once successfully submitted, the customer should get the ticket number as the acknowledgement.

Access Levels

Appropriate users of the use cases defined in the Requirements section should have appropriate access levels. For example, Admin screens can take care of the CRUD operations on Customer, Manager and Engineer Use cases. Each of them should be able to do appropriate activities as defined above, using their UIs.

# Project development model:

*we have used Agile Project Management approach, with 3 sprints.* The duration of each sprint is (1 weeks). The total delivery time would be (3 weeks).

**Set Up and Installation (Angular): -**

To run the code, System must be equipped with following.

1. HTML5
2. CSS3
3. Bootstrap5

Angular Front-End

1. VScode(Editor)
2. JavaScript
3. ng server
4. json
5. Git

Database Management

1. MySQL

1. SpringBoot

Backend Management

**Source code management and version control: -**

**As agreed, we use (**Set up) Git and GitHub account to store and track enhancements of the prototype.

# features of the application:

1. Registration
2. Login
3. View all ticket
4. Assign complaints
5. View customer feedback