

CUSTOMER CARE REGISTRY

PROJECT REPORT

Submitted by

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1. INTRODUCTION

Today's development cycles for web-applications such as Portals and Marketplaces are short, and getting shorter with continuous improvements and enhancements as new requirements and features become apparent. On the other side, most of user's complaints are apparent when a system has inappropriate communication between the organizations, their employees and customers (Citizens). Poor communication can result in poor services or products being provided by the organization. Whilst concentrating on the topic of complaint handling, organizations can achieve an efficient success factor by increasing their user satisfaction and their loyalty. Therefore each organization needs to develop its internal and external communication towards its staff and customers to achieve success. Although appropriate communication can reduce user dissatisfaction; it cannot eliminate complaint. For a Social Solidarity, there is a need for a Customer care registry in order to deal with complaints. Every day Citizens complaint to staff of the service department because of feeling dissatisfied. No matter direct or indirect accusation to any staff, such as face to face complaint, telephone complaint, complaint letter, and message on the web, all the complaints should be accepted and properly cared for. The resolution of the complaint might be economic compensation, improving service and so on. Also it should weight this complaints i.e., weak complaint or strong complaint and take respective measures in order to prioritize handling of complaint. However, many investigations have been done on the topic of recent Researches in Computer Science ISBN: 9781-61804-019-0 291 complaint system, only one researcher focused on in eComplaints System to improve relation between Citizens and Organizations. The Researcher believes in e-Complaint Systems can bring more flexibility for complaint

departments to change their complaint services. In this paper the concept of e-CRM, e-complaint were explored first then a new model was presented afterwards the implementation of the new model was discussed.

1.1 Project Overview

This Web Application has been developed to help the customer in processing their complaints. The customers can raise the ticket with a detailed description of the issue. An Agent will be assigned to the Customer to solve the problem. Whenever the agent is assigned to a customer they will be notified with an email alert. Customers can view the status of the ticket till the service is provided.

ADMIN: The main role and responsibility of the admin are to take care of the whole process. Starting from Admin login followed by the agent creation and assigning the customer's complaints. Finally, He will be able to track the work assigned to the agent and a notification will be sent to the customer.

USER: They can register for an account. After the login, they can create the complaint with a description of the problem they are facing. Each user will be assigned with an agent. They can view the status of their complaint.

ADMIN: After the user successfully logged in, then the admin can assign the agents and respond them through mail.

1.2 Purpose

The purpose of the customer care registry project is to develop a centralized database of customer service information that can be accessed by companies in order to improve customer service.

The registry will contain customer service records from a variety of companies, including contact information, customer service ratings, and comments. This information will be used to help companies improve their customer service practices and make informed decisions about customer service policies.

The purpose of this project is to develop a customer care registry for a company. This registry will help the company to track and manage customer care related information. It will also help the company to improve customer care services by providing better and more efficient care to customers.

2. LITERATURE SURVEY

A literature survey was conducted on customer care registry projects. The following is a summary of the findings: It was found that customer care registry projects are typically implemented to improve customer service and/or to reduce costs. In many cases, the registry project is used to streamline customer service processes and/or to reduce the number of customer service calls. In some cases, the registry project is used to improve customer satisfaction scores. It was also found that customer care registry projects can be implemented using a variety of different technologies, including web-based applications, customer relationship management (CRM) systems, and enterprise resource planning (ERP) systems. In some cases, the registry project is implemented using a

combination of different technologies. Finally, it was found that customer care registry projects can be successful if they are properly planned and implemented. However, if the project is not properly planned or implemented, it is likely to fail.

S.NO	PAPER	AUTHOR	YEAR	METHOD AND ALGORITHM	ACCURACY
1	Theory and practice of customer-related improvements	Daniel Gyllenhammar, et al	2022	The study ensures the Customer satisfactions and reliable on customer improvements, it uses PRISMA Model for customer relations	92%
2	Improving Customer Service in Healthcare	Muhammad Anshari, et al	2021	The study involves the focus on individual relationship and limited view of the customer & his community preferences, habits, etc It uses CRM 2.0 Model	89%
3	A machine learning approach to analyze customer satisfaction from airline tweets	Sachin Kumar and Mikhail Zymbler	2019	Features were extracted from the tweets. SVM and several ANN architectures were considered to develop classification model that maps the tweet into positive and negative category	92.3%
4	Cybercrime Case As Impact Development Of Communication Technology That Troubling Society	M Chairul Basrun Umanailo, et al	2020	This analysis will be the process of selecting, comparing, combining and sorting various information and data. It uses a method of content analysis	90%

5	Customer Experience modelling from customer experience to service design	Jorge Teixeira, Lia Patrício, et al	2019	It uses CEM method and models to synthesize and communicate knowledge between members of a multidisciplinary service design.	90%
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2.1 Existing problem

The existing system for the customer care registry project is a paper-based system. This system is used to track customer service requests and complaints. The system is cumbersome and time-consuming, and it is difficult to track and report on customer service issues. The customer care registry project is designed to replace the existing system with a new, web-based system. The new system will be easier to use and will provide more accurate and timely information on customer service issues. Out of the previous related work done concerning customer complaint, the most recent research was: Razali et al. (2011) [6] develop a new complaint management system called (e-

Aduan) as a platform for UiTM Pahang's customers to complaint and comment regarding the services and facilities provided by the university. The researcher found out that the most appropriate to the research topic handling customer complaint using SOA was: Najar et al. (2010) [5] tried to improve relation between Citizens and Government by presenting a new model based on Service Oriented Architecture (SOA). With utilizing the presented model in Government body on one hand Governments will have the ability to minimize Citizens' dissatisfaction and on the other hand it can encourage Citizens to participate in controlling Government body such as Governments' staffs and organizations.

2.2 References

[1] Cho Y., Hiltz R., & Fjermestad J., “An Analysis of Online Customer Complaints:

Implications for Web Complaint Management.” in Proceedings of the 35th Hawaii International Conference on System Sciences, Hawaii, (2002).

[5] Najar, A. S., Al-Sukhni, H. A., & Aghakhani, N., “The Application of Service-

Oriented Architecture in E-complaint System.” Paper presented at (ICCSN '10) the Second International Conference on Communication Software and Networks, (2010, 2628 Feb. 2010).

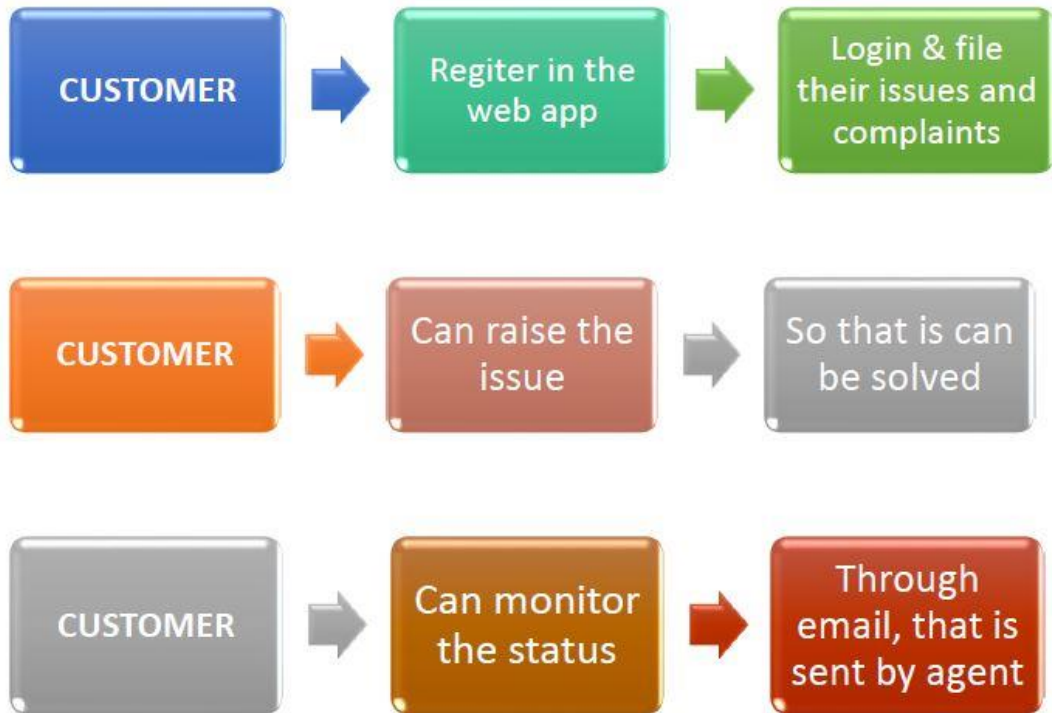
[6] Razali R., Abd Halim K. N., & Jusoff K., “Quality Improvement of Services in

Universiti Teknologi Mara Pahang from a Management Perspective.” Management Science & Engineering Vol.5, No.1, (2011), pp. 71-80.

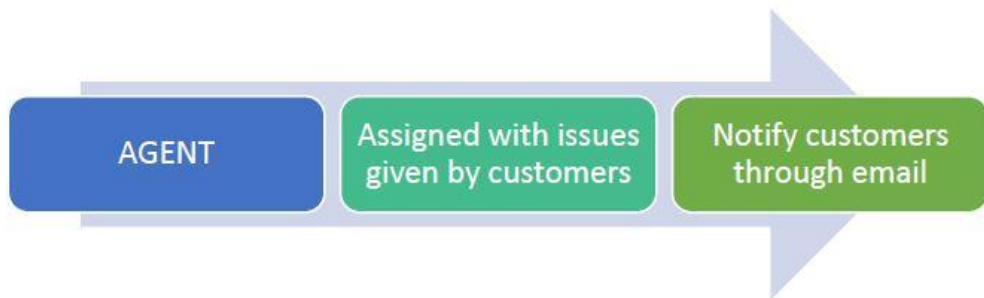
2.3 Problem Statement Definition

A problem statement is a clear and concise description of the problem or issue a team aims to address in a project. It identifies a problem's current state, desired future state, and the gaps that lie between the two. It doesn't define the solution to the problem or provide a road map for solving the problem; it only gives an outline of what the problem is.

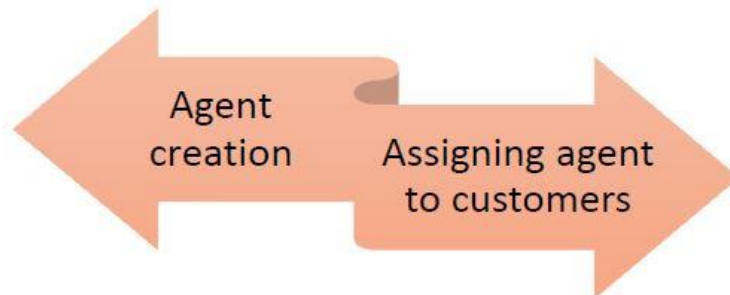
CUSTOMER



AGENT

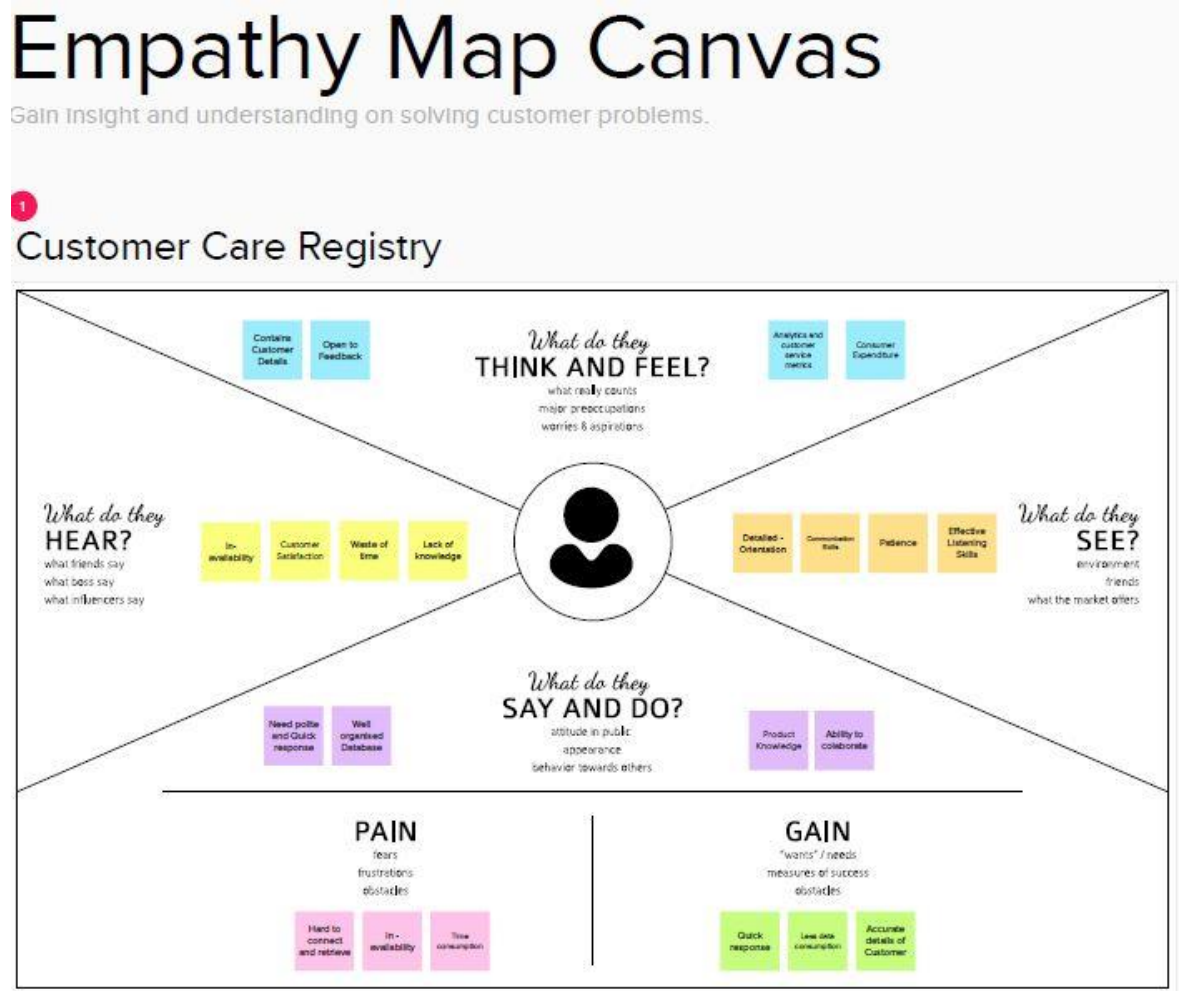


ADMIN



3. IDEATION & PROPOSED SOLUTION

3.1 Empathy Map Canvas



3.2 Ideation & Brainstorming

Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome and built upon, and all participants are encouraged to collaborate, helping each other develop a rich amount of creative solutions.



Brainstorm & idea prioritization

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

🕒 10 minutes to prepare

🕒 1 hour to collaborate

👤 2-8 people recommended



Before you collaborate

A little bit of preparation goes a long way with this session. Here's what you need to do to get going.

🕒 10 minutes

A Team gathering

Define who should participate in the session and send an Invite. Share relevant information or pre-work ahead.

B Set the goal

Think about the problem you'll be focusing on solving in the brainstorming session.

C Learn how to use the facilitation tools

Use the Facilitation Superpowers to run a happy and productive session.

[Open article](#)



2

Brainstorm

Write down any ideas that come to mind that address your problem statement.

🕒 10 minutes

TIP



You can select a sticky note and hit the pencil [switch to sketch] icon to start drawing!

SURUTHI SHRI P

User Feedback	Customer Privacy	Providing Chatbox
Providing services	Solution to customer	Asking for rating
Filtering based on services	Satisfaction	

SUJITHA K

Tracking of services	Allocating agents	Deals with problem quickly
Listen their queries	Customer satisfaction	Facilitation on details
Security	Privacy	

SRIMATHI S

Deals with problem quickly	Email notification	Live chatbox
Agent details	queries of customers	Management of database
Behaviour towards customer	Rating	

SUBAHARINI V

Live chat	Meeting customer needs	Security
Privacy	Notify customer via email	Solution for issues
Satisfaction		

3 Group Ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you can break it up into smaller sub-groups.

20 minutes

4 Prioritize

Your team should sit on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

20 minutes

After you collaborate

You can export the mind as an image or pdf to share with members of your company who might find it helpful.

Quick add-ons

- Show the mind**
Share a view file to the mind with stakeholders to be shown in the loop about the outcomes of the session.
- Export the mind**
Export a copy of the mind as a PNG or PDF to attach to emails, include in slides, or save to your drive.

Keep moving forward

- Strategy blueprint**
Define the components of a new line or strategy.
[Open the template](#)
- Customer experience journey map**
Understand customer needs, motivations, and obstacles for an experience.
[Open the template](#)
- Strengths, weaknesses, opportunities & threats (SWOT)**
Identify strengths, weaknesses, opportunities and threats (SWOT) to develop a plan.
[Open the template](#)

[Share template feedback](#)

3.3 Proposed Solution

S.no	Parameter	Description
1.	Problem Statement (Problem to be solved)	To solve customers queries using cloud application
2.	Idea / Solution description	<ul style="list-style-type: none"> ➤ Direct routing of issues can be solved by sending emails. ➤ Automated ticket closure by daily sync of daily database. ➤ Regular data retrieval. ➤ Showing up the status to customers
3.	Novelty / Uniqueness	Assigned Agent Routing, automated ticket closure, customer status display, and data backup in case of failures.
4.	Social Impact / Customer Satisfaction	<ul style="list-style-type: none"> • Customer Satisfaction • Customer can track their status • Agent communication.
5.	Business Model (Revenue Model)	<ol style="list-style-type: none"> 1. Key Partners are Third-party applications, agents, and customers. 2. Activities held as Customer Services, System maintenance. 3. Key Resources support Engineers, Multi-channels. 4. Customer Relationship have 24/7 Email Support, Knowledge-based Channel. 5. Cost Structure expresses cloud platform, offices.

3.4 Problem Solution Fit

Problem-Solution Fit canvas		Purpose / Vision	Version:
Define CS, fit into CL	1. CUSTOMER SEGMENT(S) CS Who is your customer? eg. working parents of 0-5 yrs. kids <div>Who are unable to solve their own complaints & who do not know their solution</div>	6. CUSTOMER LIMITATIONS CL <small>eg. BUDGET, DEVICES</small> What limits your customers to act when problem occurs? Spending power, budget, no cash in the pocket? Network connection? Available devices? <div>Application supported by all devices Alerting via email is also a part of this. A graphical representation also provided.</div>	5. AVAILABLE SOLUTIONS AS <small>PLUSSES & MINUSES</small> Which solutions are available to the customer when he/she is facing the problem? What had he/she tried in the past? (Pluses & minuses)? <div>1. Reading guidelines 2. Offering solutions and guidance 3. Proper communication.</div>
	2. PROBLEMS / PAINS PR <small>+ ITS FREQUENCY</small> Which problem do you solve for your customer? There could be more than one, explore different sides eg. existing solar solutions for private houses are not considered a good investment (1.1). How often does this problem occur? <div> <ul style="list-style-type: none"> The application allow the customer to find the solution for their queries. They can categorise their expenses. Post general questions Free solutions </div>	9. PROBLEM ROOT / CAUSE RC What is the root of every problem from the list? eg. People think that solar panels are bad investment right now, because they are too expensive (1.1), and possible changes to the law might influence the return of investment significantly and diminish the benefits (1.2) <div> <ul style="list-style-type: none"> Lot of them are unaware of problems Lack of knowledge Unable to find solution Not understanding the guidelines </div>	7. BEHAVIOR BE <small>+ ITS INTENSITY</small> What does your customer do about / around / directly or indirectly related to the problem? eg. directly related: tries different "green energy" calculators in search for the best deal (1.1), usually chooses for 100% green provider (1.2). Indirectly related: volunteering work (Greenspace etc) How often does this related behavior happen? <div>Make sure they read the guidelines properly and they find a appropriate solution.</div>
3. TRIGGERS TO ACT TR What triggers customer to act? eg. seeing their neighbor installing solar panels (1.1), reading about innovative, more beautiful and efficient solution (1.2) <div>Customers can solve their own problems</div>	10. YOUR SOLUTION SL If you are working on an existing business - write down existing solution first, fill in the canvas and check how much does it fit reality. If you are working on a new business proposition then keep it blank until you fill in the canvas and come up with a solution that fits within customer limitations, solves a problem and matches customer behaviour. <div> 1. Design help desk using flask 2. Represent the insights in graphical way </div>	8. CHANNELS of BEHAVIOR CH ONLINE Extract channels from Behavior block <div>Data is secured and updated to cloud</div> OFFLINE Extract channels from Behavior block and use for customer development <div>Make sure they find best solutions</div>	
4. EMOTIONS EM <small>BEFORE / AFTER</small> Which emotions do people feel before/after this problem is solved? Use it in your communication strategy eg. frustration, blocking (can't afford it) > boost, feeling smart, be an example for others (made a smart purchase) <div>They can get help from help desk anytime</div>			

4. REQUIREMENT ANALYSIS

Requirements analysis, also called requirements engineering, is the process of determining user expectations for a new or modified product. These features, called requirements, must be quantifiable, relevant and detailed. In software engineering, such requirements are often called functional specifications. The main types of requirements analysis include business, customer, product, functional, and nonfunctional requirements. Each one represents a stakeholder or stage of the project and communicates the project needs.

4.1 Functional Requirements

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
1.	User Registration	Registration through Form Registration through Gmail Register with valid mobile number
2.	User Confirmation	Confirmation via Email Confirmation via OTP Two step verification for new device login.
3.	Agent Registration	Registration through Form Registration through Gmail Register with valid mobile number
4.	Agent Confirmation	Confirmation via Email Confirmation via OTP Two step verification for new device login.
5.	Admin	Admin have both user details and agent detail. Admin maintain agent allotment to the user based on problem's category.

4.2 Non-functional Requirements

Non-functional Requirements:

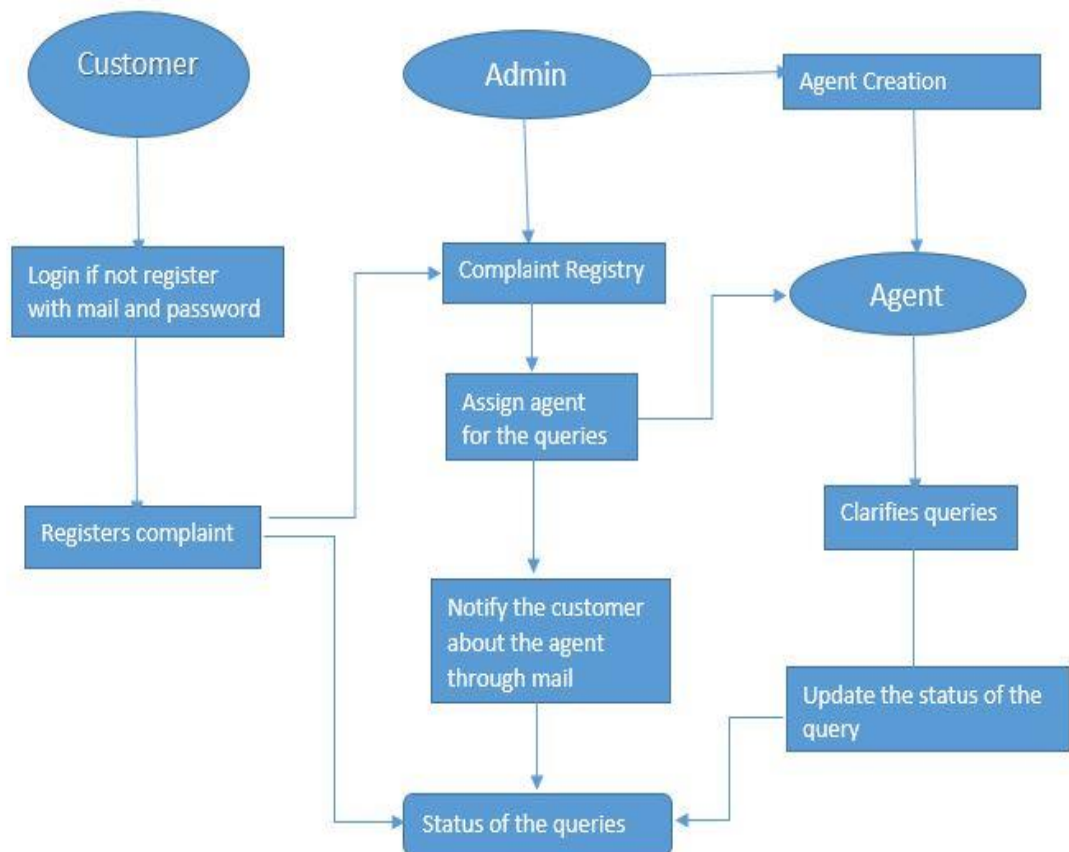
FR No.	Non-Functional Requirement	Description
1.	Usability	We have primarily focused on making our website easy to navigate in order to deliver the best usability for our suggested solution. Users may quickly log in using existing credentials, and if they don't already have an account, they can also register on their own by providing a unique, valid email address or a mobile number. Following effective navigation, we focused on visual clarity and created a web application that looks nice and is straightforward, making it easier for any elderly person to utilise. In order

		to improve user happiness, a Guide tour will also be offered to first-time visitors.
2.	Security	Everyone will have a protected account, as they login through their mail and their information will be kept securely on the admin side.
3.	Reliability	Since we had split the agents into categories, system's response time for each and every individual will be lesser. Thus making our web application more reliable.
4.	Performance	We have focused on the overwhelming number of user requests in order to deliver the greatest performance. We have added more agents to the service to reduce overloads and speed up system response. Agents will be divided and classed in accordance with the requirements of the user. For instance, some agents will be assigned to handle the missing product category and some agents would be assigned to handle the damaged product category
5.	Availability	Customer care registry will be made available even in the weekends and our agents will also be allotted at anytime to any individual user. User can interact with their respective agents 24*7 by following proper user-agent guidelines.
6.	Scalability	The allocation will be increased in response to an increase in user requests. This will result in more data storage. Rescaling can always be modified.

5. PROJECT DESIGN

5.1 Data Flow Diagrams:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.

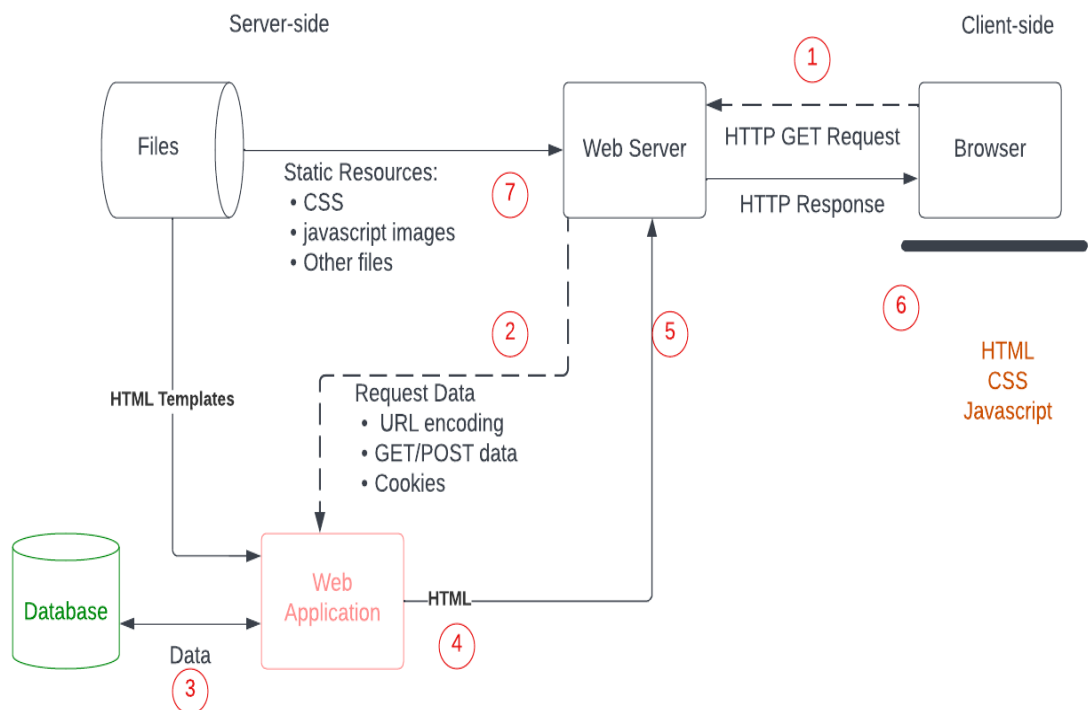


5.2 Solution and Technical Architecture

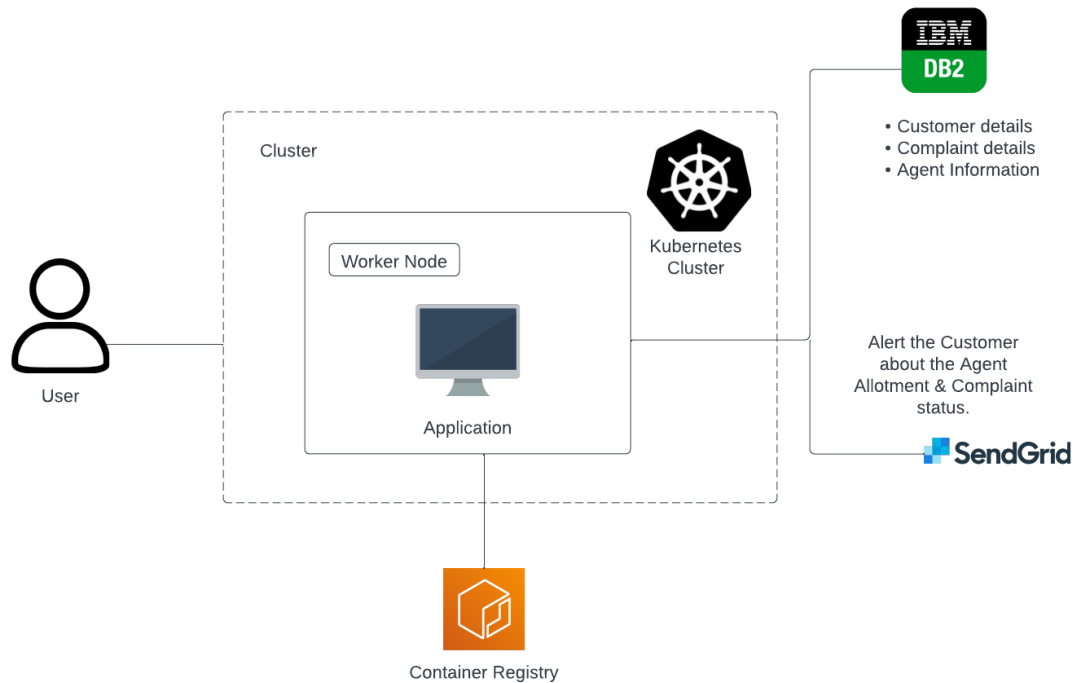
Assigned Agent routing can be solved by directly routing to the specific agent about the issue using the specific E-mail. Automated Ticket closure by using daily sync of the daily database. Status Shown to the Customer can display the status of the ticket to the customer.

Regular data retrieval in the form of retrieving lost data.

Solution Architecture:



Technical Architecture:



5.3 User Stories

USER STORIES

User Stories

Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Web user)	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Sprint-1
	Login	USN-2	As a user, I will receive confirmation email once I have registered for the application	I can access my account / dashboard	High	Sprint-1
	Dashboard	USN-3	As a customer, I can view all queries.	I can get all the info needed in the dashboard	Low	Sprint-2
	Address Column	USN-4	As a user, I can get in touch with the agent.	My queries are clarified	Medium	Sprint-3
	Forget Password	USN-5	As a user, I can reset my password	I can get access to my account again.	Medium	Sprint-4
	Queries details	USN-6	I can see the current status of the queries	I get to know the status of the queries	Medium	Sprint-4
Customer Care Executive	Login	USN-1	As an agent, I can login to the application by entering my email and confirming my password.	I can assess my account/ dashboard	High	Sprint-3
	Dashboard	USN-2	I can see the queries and its details by the admin	I can get all the info needed in the dashboard	High	Sprint-3
	Address column	USN-3	As an agent, I can chat with the customers and clarify the queries.	I can clarify the issues	High	Sprint-3
	Forget Password	USN-4	I can reset my password.	I can get access to my account again.	Medium	Sprint-4
Admin	Login	USN-1	As an admin, I can login to the application by entering my email and confirming my password.	I can assess my account/ dashboard	High	Sprint-1
	Dashboard	USN-2	I can see all the issues raised.	I get to assign agents	High	Sprint-1
	Agent creation	USN-3	As an admin, I can create agent for clarifying queries.	I can create agents.	High	Sprint-2
	Agent assignment	USN-4	As an admin, I can assign agent for each user	I enable agents to clarify the query.	High	Sprint-1
	Forget Password	USN-5	I can reset my password.	I can get access to my account again.	High	Sprint-1

6 PROJECT PLANNING & SCHEDULING

6.1 Sprint Planning & Estimation

Product Backlog, Sprint Schedule, and Estimation (4 Marks)

Use the below template to create product backlog and sprint schedule

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration	USN-1	As a user, I can register for the application by entering my email, password, name and confirming my password.	2	High	Suruthi Shri P
Sprint-1	Account Activation	USN-2	As a user, I will receive confirmation email once I have registered for the application	1	High	Suruthi Shri P
Sprint-1	Login	USN-3	The user will log into the website and go through the services available on the page	2	High	Sujitha K

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint- 2	Admin panel	USN-4	The role of the admin is to check out the database about the availability and have a track of all the things that the users are going to service	2	High	Sujitha K Srimathi S
Sprint- 3	ChatBot	USN-5	The user can directly talk to Chatbot regarding the services. Get the recommendations based on information provided by the user	2	High	Subaharini V
Sprint- 4	Final delivery	USN-6	Container of applications using docker kubernetes and deployment the application. Create the documentation and final submit the application	1	High	Sujitha K Srimathi S Subaharini V

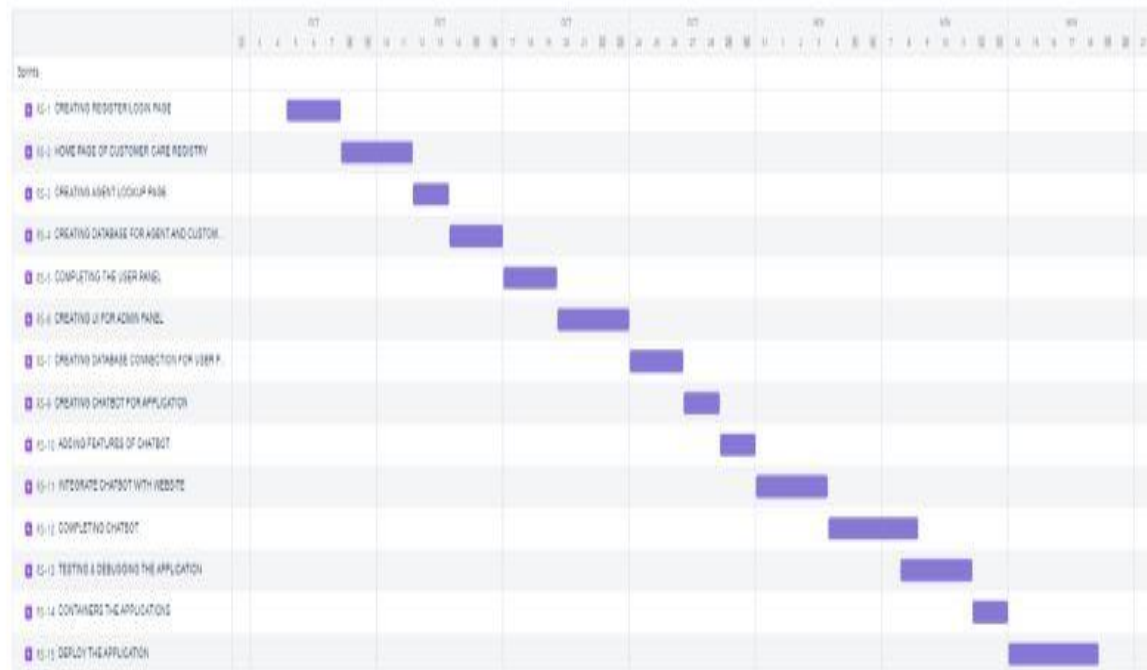
6.2 Sprint Delivery Schedule

Project Tracker, Velocity & Burndown Chart: (4 Marks)

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	20	6 Days	24 Oct 2022	29 Oct 2022	20	29 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022	20	05 Nov 2022
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022	20	12 Nov 2022
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022	20	19 Nov 2022

6.3 Reports from JIRA

BURNDOWN CHART



7. CODING & SOLUTIONING

Register.html

```
<!DOCTYPE html>
<html>
<head>
  <link rel="stylesheet" href="styles/styles.css" />
  <link
    rel="stylesheet"
    href="https://use.fontawesome.com/releases/v5.15.4/css/all.css"
  />
  <link
```

```
    rel="stylesheet"
    href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/6.0.0-beta2/css/all.min.css"
  />
  <link
    rel="stylesheet"
    href="https://cdn.jsdelivr.net/npm/cooltipz-css/cooltipz.css"
  />
  <link
    rel="stylesheet"
    href="https://cdn.jsdelivr.net/npm/bootstrap-icons@1.3.0/font/bootstrap-icons.css"
  />
  <link rel="icon" type="image/x-icon" href="./assets/favicon-icon.png" />
  <title>Customer registry</title>
</head>

<body>
  <h1 class="sign-up">Sign Up</h1>
  <h4 class="sign-up slogan">
    It's completely free and takes only a minute
  </h4>
  <div class="signup-form">
    <label for="username" class="user-details">Name</label>
    <input
      type="text"
      placeholder=""
      id="username"
      class="form-input"
      minlength="5"
      maxlength="15"
      spellcheck="false"
    />
    <label for="user-email" class="user-details">E-Mail </label>
    <input
      type="email"
      placeholder=""
      id="user-email"
      class="form-input"
      spellcheck="false"
    />
    <label for="user-types" class="user-details user-type">
      >User Type</label>
    >
    <div class="user-type-box">
      <div class="form-input custom-select" id="user-types-box">
        <p id="user-types">Select User Type...</p>
      </div>
    </div>
  </div>
</body>
</html>
```

```

        <p>
            <i class="fa fa-sharp fa-solid fa-sort-down"></i>
        </p>
    </div>
    <div>
        <ul class="user-type-options" id="user-type-options">
            <li class="options" onclick="writeToSelect('Student')">
                Student
            </li>
            <li class="options" onclick="writeToSelect('Professional')">
                Professional
            </li>
        </ul>
    </div>
</div>
<label for="password" class="user-details">Password </label>
<div class="password-container">
    <input
        type="password"
        placeholder=""
        id="password"
        class="form-input password-field"
        minlength="8"
        maxlength="15"
        autocomplete="off"
        onclick="passwordValidation()"
    /><i class="fa fa-eye eye-button" id="password-eye"></i>
</div>
<div class="password-requirement">
    Password Requirements :
    <ul>
        <li>Minimum 8 and Maximum 15 characters</li>
        <li>Atleast 1 special character,1 alphabet,1 number</li>
    </ul>
</div>
<label for="confirm-password" class="user-details">
    >Confirm Password
</label>
<div class="password-container">
    <input
        type="password"
        placeholder=""
        id="confirm-password"
        class="form-input password-field"
        minlength="8"
        maxlength="15"
        autocomplete="off"
        onclick="passwordValidation()"
    >

```



```

        />
        <i
            class="fa fa-eye eye-button"
            id="confirm-password-eye"
            aria-hidden="true"
        ></i>
    </div>
</div>
<div class="mandatory-message">* Mandatory fields</div>
<input
    type="Submit"
    value="Sign Up"
    class="signup-button"
    id="signup-button"
    onclick="signupValidation()"
/>
<p class="user-login">
    Already have an account ?
    <a class="user-login-redirect" onclick="redirectLoginPage()"
        >Login Here</a>
    >
</p>
</body>
</html>

```

Login.html

```

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link rel="stylesheet" href="styles/styles.css" />
    <link
        rel="stylesheet"
        href="https://use.fontawesome.com/releases/v5.15.4/css/all.css"
    />
    <link
        rel="stylesheet"
        href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/6.0.0-beta2/css/all.min.css"
    />
    <link
        rel="stylesheet"
        href="https://cdn.jsdelivr.net/npm/cooltipz-css/cooltipz.css"
    />

```

```

    <link
      rel="stylesheet"
      href="https://cdn.jsdelivr.net/npm/bootstrap-
icons@1.3.0/font/bootstrap-icons.css"
    />
    <link rel="icon" type="image/x-icon" href="./assets/favicon-icon.png" />
    <title>Customer registry</title>
  </head>
  <body>
    <div class="signup-page" id="logo-section">
      <div class="logo-section">
        <div class="logo">
          <i class="fa fa-light fa-clipboard-list logo-icon"></i>
          Customer care registry App
        </div>
      </div>
      <div class="signup-box hide-signup" id="signup-page">
        <div id="snackbar" class="snackbar">
          User Already Exists.. Try Signingup with another E-Mail
          <button class="snackbar-close" id="snackbar-close">X</button>
        </div>
        <h1 class="sign-up">Sign Up</h1>
        <h4 class="sign-up slogan">
          It's completely free and takes only a minute
        </h4>
        <div class="signup-form">
          <label for="username" class="user-details">Name</label>
          <input
            type="text"
            placeholder=""
            id="username"
            class="form-input"
            minlength="5"
            maxlength="15"
            spellcheck="false"
          />
          <label for="user-email" class="user-details">E-Mail </label>
          <input
            type="email"
            placeholder=""
            id="user-email"
            class="form-input"
            spellcheck="false"
          />
          <label for="user-types" class="user-details user-type">
            >User Type</label>
          >
          <div class="user-type-box">

```

```

<div class="form-input custom-select" id="user-types-box">
  <p id="user-types">Select User Type...</p>
  <p>
    <i class="fa fa-sharp fa-solid fa-sort-down"></i>
  </p>
</div>
<div>
  <ul class="user-type-options" id="user-type-options">
    <li class="options" onclick="writeToSelect('Student')">
      Student
    </li>
    <li class="options"
onclick="writeToSelect('Professional')">
      Professional
    </li>
  </ul>
</div>
</div>
<label for="password" class="user-details">Password </label>
<div class="password-container">
  <input
    type="password"
    placeholder=""
    id="password"
    class="form-input password-field"
    minlength="8"
    maxlength="15"
    autocomplete="off"
    onclick="passwordValidation()"
  /><i class="fa fa-eye eye-button" id="password-eye"></i>
</div>
<div class="password-requirement">
  Password Requirements :
  <ul>
    <li>Minimum 8 and Maximum 15 characters</li>
    <li>Atleast 1 special character,1 alphabet,1 number</li>
  </ul>
</div>
<label for="confirm-password" class="user-details">
  >Confirm Password
</label>
<div class="password-container">
  <input
    type="password"
    placeholder=""
    id="confirm-password"
    class="form-input password-field"
    minlength="8"

```



```

        </div>
</body>
</html>

@import "start-page.css";
@import "dashboard.css";

* {
  margin: 0;
  padding: 0;
}

body {
  font-family: "Segoe UI", Tahoma, Geneva, Verdana, sans-serif;
}

```

Home.html

```

<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Chat bot</title>
  <link rel="stylesheet" href="style.css">
</head>
<body>
  <link href="https://fonts.googleapis.com/css?family=Amatic+SC|Raleway"
rel="stylesheet">
  <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/font-
awesome/4.7.0/css/font-awesome.min.css">
  <link rel="stylesheet" href="assets/css/styles.css">
</head>
<body>
  <!-- Forked from a template on Tutorialzine:
https://tutorialzine.com/2016/06/freebie-landing-page-template-with-flexbox
-->
  <header>
    <h2><a href="#">Customer Care Registry</a></h2>
    <nav>

    </nav>
  </header>

```

```

<section class="hero">
  <div class="background-image"></div>
  <div class="hero-content-area">
    <h1>Customer Care Registry</h1>
    <h3>Tell your problem we will quick solve it</h3>
    <a href="#" class="btn">Contact Us Now</a>
  </div>
</section>

</body>
<script>
  window.watsonAssistantChatOptions = {
    integrationID: "9167fb91-f51e-49bc-9845-d1a925946b54", // The ID of
this integration.
    region: "jp-tok", // The region your integration is hosted in.
    serviceInstanceID: "61644cb2-75a6-49e3-857e-97e947c8c678", // The ID
of your service instance.
    onLoad: function(instance) { instance.render(); }
  };
  setTimeout(function(){
    const t=document.createElement('script');
    t.src="https://web-
chat.global.assistant.watson.appdomain.cloud/versions/" +
(window.watsonAssistantChatOptions.clientVersion || 'latest') +
"/WatsonAssistantChatEntry.js";
    document.head.appendChild(t);
  });
</script>
</html>

```

Form.html

```

<!DOCTYPE html>
<html>
<head>
<meta name="viewport" content="width=device-width, initial-scale=1">
<style>
body {font-family: Arial, Helvetica, sans-serif;}
* {box-sizing: border-box;}

input[type=text], select, textarea {
  width: 100%;
  padding: 12px;
  border: 1px solid #ccc;
  border-radius: 4px;

```

```

    box-sizing: border-box;
    margin-top: 6px;
    margin-bottom: 16px;
    resize: vertical;
}

input[type=submit] {
    background-color: #04AA6D;
    color: white;
    padding: 12px 20px;
    border: none;
    border-radius: 4px;
    cursor: pointer;
}

input[type=submit]:hover {
    background-color: #45a049;
}

.container {
    border-radius: 5px;
    background-color: #f2f2f2;
    padding: 20px;
}
</style>
</head>
<body>

<h3>Contact Form</h3>

<div class="container">
    <div class="msg">{{ msg }}</div>
    <form method="POST" id="myForm" action="{{url_for('form')}}">
        <label for="subject">subject</label>
        <input type="text" id="subject" name="subject" placeholder="Your
Email..">
        <label for="fname"> Name</label>
        <input type="text" id="username" name="name" placeholder="Your name..">

        <label for="lname">Email</label>
        <input type="text" id="email" name="email" placeholder="Your Email..">

        <label for="country">Suppoter</label>
        <select id="suppoter" name="suppoter">
            <option value="tamil">Tamil</option>
            <option value="kaml">kamal</option>
            <option value="john">john</option>
            <option value="hentry">hentry</option>

```

```

    </select>

    <label for="msg">Your Queries</label>
    <textarea id="query" name="query" placeholder="Write something.."
style="height:200px"></textarea>

    <input type="submit" value="Submit">
  </form>
<script type="text/javascript">
  document.forms['suppoter']['suppoter'].value = "New value";
</script>
</div>

</body>
</html>

```

Success.html

```

<h1>Your complaint is send to agent</h1>
<a href="/customer">back</a>

```

Css

```

.signup-page {
  align-items: center;
  background-color: #f7f5f5;
  display: flex;
  flex-direction: column;
  height: 100vh;
  justify-content: center;
}

.signup-box {
  background-color: white;
  border-radius: 5px;
  height: 653px;
  text-align: center;
  width: 360px;
}

.sign-up {
  padding: 8px 0 0 17px;
  text-align: left;
}

.slogan {
  padding-top: 0;
}

```



```
}

.logo-section {
  margin-bottom: 15px;
  width: 250px;
}

.logo {
  align-items: center;
  background-color: #d0d0d0;
  border-radius: 10px;
  color: #00416a;
  display: flex;
  font-size: 30px;
  font-weight: bolder;
  justify-content: center;
  padding: 5px;
}

.logo-icon {
  color: #005a9c;
  margin-right: 10px;
}

.planner-logo {
  height: 40px;
  width: 40px;
}

.hide-cards {
  display: none;
}

.signup-form {
  font-size: 20px;
  margin-left: 20px;
  width: 300px;
}

.user-details {
  display: flex;
  margin-top: 15px;
}

.form-input {
  border: none;
  border: 1px solid grey;
  border-radius: 7px;
```

```
margin-top: 7px;
outline: none;
padding: 7px;
width: 100%;
}

.password-field {
border-radius: 7px 0 0 7px;
border-right: none;
}

.password-requirement {
text-align: start;
font-size: 12px;
}

.password-requirement li {
margin-left: 15px;
}

.password-container {
display: flex;
}

.eye-button {
background: none;
border: 1px solid grey;
border-radius: 0 7px 7px 0;
border-left: none;
cursor: pointer;
font-size: 17px;
margin: 7px -16px 0 0;
padding: 7px;
}

.signup-button {
background-color: #49c1a2;
border: none;
border-radius: 7px;
color: white;
cursor: pointer;
font-size: 18px;
height: 35px;
margin-top: 20px;
width: 320px;
}

.user-login {
```

```
font-size: 18px;
margin-top: 15px;
text-align: center;
}

.user-types {
font-size: 16px;
text-align: center;
width: 315px;
}

.user-details::after {
content: "*";
color: red;
}

.mandatory-message {
color: red;
margin-left: 20px;
text-align: start;
}

#login-page .mandatory-message {
margin-top: 15px;
}

#signup-page .mandatory-message {
margin-top: 5px;
}

.user-type::after {
content: "";
}

.hide-signup {
display: block;
}

.login-box {
display: block;
height: 450px;
}

.login-form {
margin-top: 40px;
}

.login-button {
```

```
margin-top: 25px;
}

.snackbar {
  bottom: 89%;
  border-radius: 10px;
  color: white;
  display: flex;
  font-size: 17px;
  left: 44%;
  min-width: 250px;
  margin-left: -100px;
  padding: 5px;
  position: fixed;
  text-align: center;
  visibility: hidden;
  z-index: 1;
}

.snackbar-close {
  background: none;
  border: none;
  cursor: pointer;
  align-self: start;
  margin-left: 5px;
}

.signup-success {
  animation: fadein 0.5s, fadeout 0.5s 2.5s;
  background-color: #4cbb17;
  bottom: 88%;
  left: 47%;
  visibility: visible;
  -webkit-animation: fadein 0.5s, fadeout 0.5s 2.5s;
}

.login-wrong-snackbar {
  bottom: 93%;
}

.show-snackbar {
  animation: fadein 0.5s, fadeout 0.5s 2.5s;
  background-color: #ff6347;
  visibility: visible;
  -webkit-animation: fadein 0.5s, fadeout 0.5s 2.5s;
}

.show-snackbar-error {
```

```
    animation: fadein 0.5s, fadeout 0.5s 2.5s;
    bottom: 99%;
    background-color: #ff6347;
    left: 38%;
    visibility: visible;
    -webkit-animation: fadein 0.5s, fadeout 0.5s 2.5s;
}

.custom-select {
    align-items: center;
    box-sizing: border-box;
    cursor: pointer;
    display: flex;
    font-size: 14px;
    justify-content: space-between;
    width: 105%;
}

.user-type-options {
    background: #f7f5f5;
    border-radius: 10px;
    display: none;
    overflow: hidden;
    position: absolute;
    text-align: start;
    width: 105%;
}

.options {
    box-sizing: border-box;
    cursor: pointer;
    list-style: none;
    padding: 5px;
}

.hide-display-options {
    display: block;
}

.user-type-box {
    position: relative;
}

.options:hover {
    background-color: aliceblue;
    border: 1px solid grey;
    border-radius: 10px;
}
```

```
.login-snackbar {
  animation: fadein 0.5s, fadeout 0.5s 2.5s;
  background-color: #4cbb17;
  bottom: 80%;
  left: 47%;
  visibility: visible;
  -webkit-animation: fadein 0.5s, fadeout 0.5s 2.5s;
}

.login-failed-snackbar {
  animation: fadein 0.5s, fadeout 0.5s 2.5s;
  background-color: #ff6347;
  bottom: 89%;
  left: 47%;
  visibility: visible;
  -webkit-animation: fadein 0.5s, fadeout 0.5s 2.5s;
}

.user-login-redirect {
  cursor: pointer;
  color: blue;
  text-decoration: underline;
}

/* Media Queries */

@media (max-width: 1060px) {
  .snackbar {
    font-size: 17px;
    left: 40%;
    padding: 7px;
  }
}


@media (max-width: 850px) {
  .snackbar {
    font-size: 15px;
    left: 38%;
    padding: 4px;
  }
}
```

8. TESTING

8.1 Test Cases

A test case is a document, which has a set of test data, preconditions, expected results and post conditions, developed for a particular test scenario in order to verify compliance against a specific requirement. Test Case acts as the starting point for the test execution, and after applying a set of input values.

9. RESULTS



Sign Up

It's completely free and takes only a minute

Name*

E-Mail*

User Type

Select User Type...

Password*


Password Requirements :
Minimum 8 and Maximum 15 characters
Atleast 1 special character,1 alphabet,1 number

Confirm Password*

* Mandatory fields

Sign Up

Already have an account ? [Login Here](#)



Login

User E-Mail*

Password*

* Mandatory fields

Login

New to Registry ? [Signup Here](#)

Login As admin ? [Click here](#)

Customer Care registry

01:11 AM
20-Nov-2022

Search using Complaints

Complaints

+ Raise Issue

✓ Suji

Software

White Screen Error

✓ Srimathi

Hardware

Hanging error

✓ Shruthi shri

Hardware

Admin Customer Care Registry

01:18 AM
20-Nov-2022

search using task name..

New Tickets

✓ Shruthi Shri

Hardware

Black Screen Error

✓ Sujitha

Hardware

Black Screen Error

✓ Shruthi Shri

Assigned Tickets

✓ Srimathi

Hardware

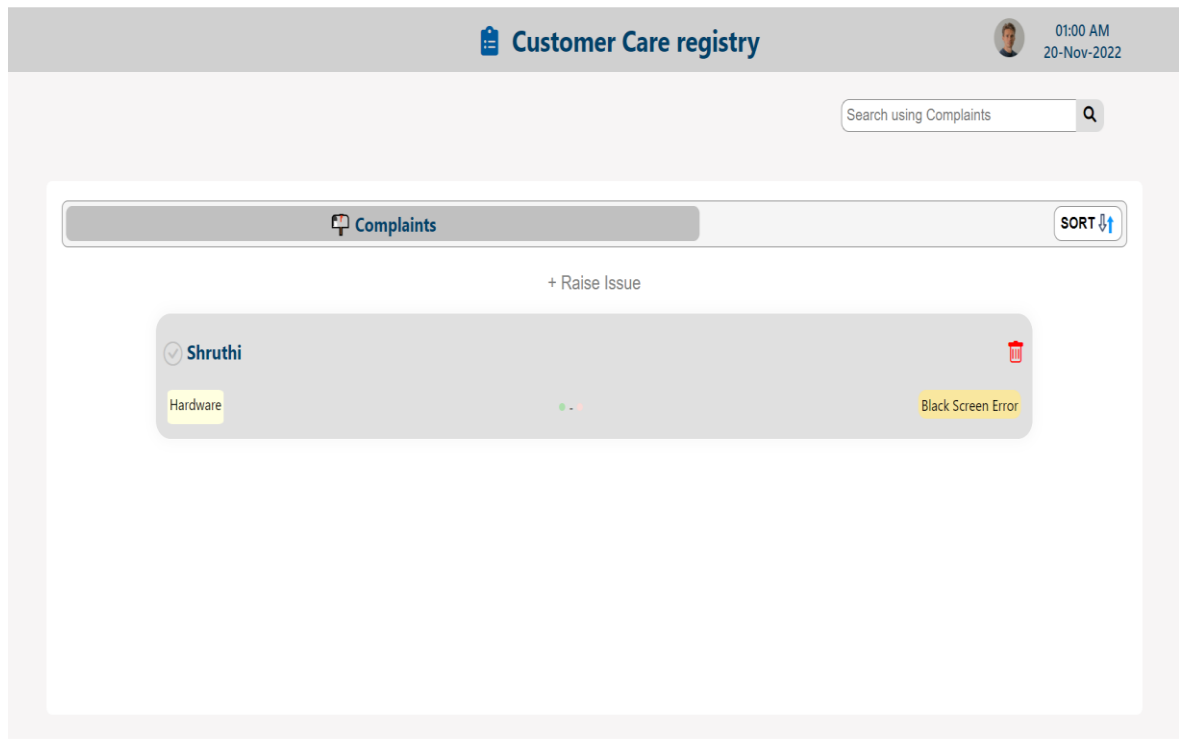
Blocked Issue

Completed Tickets

✓ Suba harini

Software

White Screen 404



10. ADVANTAGES & DISADVANTAGES

Advantages:

1. Enhances Better Customer Service
2. Customer Care Registry systems provide businesses with numerous strategic advantages. One of such is the capability to add a personal touch to existing relationships between the business and the customers. It is possible to treat each client individually rather than as a group, by maintaining a repository on each customer's profiles. This system allows each employee to understand the specific needs of their customers as well as their transaction file.
3. The organization can occasionally adjust the level of service offered to reflect the importance or status of the customer. Improved responsiveness and understanding among the business employees results

in better customer service. This decreases customer agitation and builds on their loyalty to the business. Moreover, the company would benefit more by getting feedback over their products from esteemed customers.

4. The level of customer service offered is the key difference between businesses that lead the charts and those that are surprised with their faulty steps. Customer service efficiency is measured by comparing turnaround time for service issues raised by customers as well as the number of service errors recorded due to misinformation.
5. A good business should always follow – up with customers on the items they buy. This strategy enables a business to rectify possible problems even before they are logged as complaints.

Disadvantages:

1. Only services for which a particular payment has been made are covered under the consumer protection act. However, it does not protect medical professionals, or hospitals, and covers cases when this act does not apply to free medical care.
2. This act does not apply to mandatory services, such as water supply, that are provided by state agencies.
3. Only two clauses related to the supply of hazardous materials are covered by this act. Consumer redress is not given any power by the consumer protection act.

4. The consumer protection act focuses on the supply of ineffective products, but there are no strict regulations for those who produce it.

11. CONCLUSION

The researcher has highlighted how the system works, who are the main users, services and how they can deal with the proposed system. This paper presents an overview of the development and implementation of the Complaint Management System as a web-service based on cloud. The results obtained from the implementation are encouraging and promising for the development of more complex systems in the future as the Complaints Management is a complex and critical problem. Complaints and compliments are a valuable source of information that organizations can use to improve program delivery and service. As regulatory and market pressures continue to mount upon companies, industry leaders will need to develop effective solutions or face the high costs inherent in failed technology implementations and weak customer relationships. The preferred alternative is a customer-focused complaints management solution that works. Finally, the researcher believes that the presented model can be helpful in other fields of e-complaining in terms of Citizen Adaption and Citizen Loyalty.

12. FUTURE SCOPE

It is quite certain that with great precision the new-gen technology of Customer Care Registry solutions will help in the sales and marketing to a great deal. This will be done while calculating the better results attained by the marketing team.

The progression of CUSTOMER CARE REGISTRY in the future would mostly depend on how faster API's redefines cloud platforms. And it is simply the beginning of API's era of integrating CUSTOMER CARE REGISTRY solution with the business application.

Even though the benefits of CUSTOMER CARE REGISTRY sounds quite interesting while its implementation challenges are quite difficult to overcome. And with the advancement of CUSTOMER CARE REGISTRY technology every year, this trend of implementation barriers will keep rising.

In the near future, CUSTOMER CARE REGISTRY will be mostly analytical & net based. More trending technologies of CUSTOMER CARE REGISTRY such as data analytics & other matrices will be used to analyze the business performance.

Moreover, more user will be benefited due to the linkage of CUSTOMER CARE

REGISTRY along with social media as it will see more popularity in the coming days. Apart from this, the future CUSTOMER CARE REGISTRY will enable its user to exchange data over electronic devices more easily than ever.

Not to mention CUSTOMER CARE REGISTRY's immense scope of being integrated with multiple other platforms in the future that will boost its functionalities resulting in great progress and development of company & organizational activities.

13. APPENDIX

GitHub

<https://github.com/IBM-EPBL/IBM-Project-25675-1659970518.git>

Project Demo Link

<https://drive.google.com/file/d/12XILoHyaj9jmNa7DrR396upEgqKAXZ7n/view?usp=sharing>