## **CUSTOMER CARE REGISTRY**

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#### 1.INTRODUCTION

#### 1.1 PROJECT OVERVEW

This 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.

#### 1.2 PURPOSE

An online Comprehensive Customer Care solution is to manage Customer interaction and complaints with the Service Providers over the Phone or through E-mail. The System Should have capability to integrate with any Service Provider from any domain or industry like Banking, Telecom and many Social Media. Customer Service is also known as Client Service is the provision of service to customers. It significance varies by product industry and domain in many cases customer services.

Customer service may be provided by a service representatives. Customer service is normally an integral part of a company's customer value preposition.

#### 2. LITERATURE SURVEY

#### [1] Cloud Computing Characteristics and Services: A Brief Review

The IT industry is likely to undergo a significant transition in the next years as a result of the growing technology known as cloud computing. The authors of this work attempted to examine various cloud computing services, applications, and characteristics; they provided a number of examples for cloud services provided by the most popular Cloud Service Providers (CSPs), including Google, Microsoft, and Amazon. The development of alternative approaches that can handle cloud computing's security concerns will undoubtedly be the main focus of future study in the field. In their upcoming work, they would like to address the issue of cloud computing security and strive to offer a framework and security model that handle security concerns and reduce risks related to cloud computing.

# [2] Security and Privacy Protection in Cloud Computing: Discussions and Challenges

Industry and academia are concerned about privacy security vulnerabilities that have arisen as a result of the advent of cloud computing. From the standpoint of various privacy security protection solutions used in cloud computing, the author reviews the research progress on privacy security challenges. First, the author discusses certain privacy security threats associated with cloud computing and offers a thorough strategy for protecting against those risks. The author then compares and analyses the features and application range of typical schemes before demonstrating and discussing the research progress of several technologies, including access control,

CP-ABE, KP-ABE, the fine-grain, multi-authority, revocation mechanism, the trace mechanism, PRE, hierarchical encryption, SE, and multi-tenant, trust. Finally, the author highlights potential future study directions and discusses present challenges.

# [3] Electronic-Customer Complaint Management System (E-CCMS) – a Generic Approach

On the basis of service-oriented architecture, the researchers provided a summary of the design and implementation of the electronic customer complaint management system (e-CCMS) as a web service (SOA). The results of the installation are encouraging and hopeful for the future development of the suggested model or even more complex systems because complaints management is a complicated and important issue. At the conclusion of the investigation, the researcher outlined the system's operation, key users, services, and strategies for dealing with the suggested system. In terms of Citizen Adaption and Citizen Loyalty, the researcher feels the proposed model can be useful in various e-complaining sectors. The approach demonstrated that it is possible to implement SOA standards and ideas.

# [4] Customer Care Strategies On Customer Satisfaction In Government Agencies: A CaseStudy Of Kenya Bureau Of Standards (KEBS)

The major goal of that study was to determine how customer service practises affected customer satisfaction in government organisations. According to the researcher's findings in that report, KEBS's customer care initiatives and tactics are subpar. However, it was discovered that the few customer care services provided by KEBS are dependable and solid. The study's results also showed that the majority of KEBS clients are happy with the company's security and front desk services. Customers are dissatisfied with KEBS's parking lot, service turnaround time, and

institution guide, though. According to the results of the regression study, 62.9% of the variation in customer satisfaction can be attributed to the three variables of employee training, customer feedback, and management support.

#### [5] Implementation of a Chatbot System using AI and NLP

A class of bots known as chatbots have been present in chat networks. The user can interact with them through widgets or graphical user interfaces, and this is the current trend. A chatbot system's goal is to mimic a human conversation. The chatbot quickly and effectively searches for the answers to users' questions and finds the pertinent links. In order to establish the right link, background research was conducted, which included an overview of the discussion process and an attempt to identify the pertinent keywords associated with that query. Information regarding questions, responses, keywords, and logs is stored in the database. Additionally, we created an interface. One section of the interface being designed will be for users, and the other will be for administrator.

# [5] Design of Customer Service System of Online Shop based on Customer Satisfaction

One of the key services offered on the Internet today is the online customer support system of online stores. The contact between customers and customer service representatives via instant messaging cannot satisfy customer needs in the conventional customer service system. On the basis of such findings, the study analyses the design specifications and objectives of the customer service management system. After that, references to customer service management systems are discussed, along with the system modelling, database design, and architecture realisation of the system.

# [6] A Study on the Impact of E-Banking Service Quality on Customer Satisfaction

Indian banks are investing heavily in implementing the most recent E-Banking methods in order to maintain and strengthen their competitive edge. Indian banks are strategically exploiting developments in E-Banking services for keeping and attracting consumers. In order to identify which aspect of the quality of the E-Banking service may have the greatest impact on customer satisfaction, the study looked at the relationship between those dimensions and consumer satisfaction. The most significant factor among young people is website design. They placed less value on security & privacy, dependability, and responsiveness & communication since they trusted banks' online transactions. The results of the study are anticipated to have particular repercussions for online banking services and boost client satisfaction by developing an appropriate strategy.

#### 2.1 EXISTING PROBLEM

Customers today expect communication with service department to be instant. In fact, they want immediate resolution of their concern too. This is, indisputably, the first in the long list of the company problem with customer service that needs to be addressed by businesses. You may not want to be in a position where you have to listen to customers complaining. Unless you give your full attention to what the customer is saying, it will be difficult to understand what they need or how to service their problem. When a customer keeps getting transferred from one agent or department to another, it ensures that a customer will never return to you or your business in the future. Neither will they recommend you to people they know. This brings us to the second most common customer service problem. No matter how

frustrated or high-pitched a customer might be at the time of conversing with a service agent, it does not give rep the license to be rude to the customer in any way. Generally, such situation are handed by an experienced manager. Customer service reps are only human and may not be able to offer a resolution of customer queries on the first contact. When customers have to chat or call the service department multiple times, it can be a hassle for them. Customers today want to talk to humans, not machines. This brings us to another key customer service issue that is quite common these days. Many times, Customer service agents adopt a 'one size fits all' kind of approach. This may result them in pushing a product or service to the customer. Thus, adversely impacting their the experience with the business. This brings us to next customer service problem of reps not following through with the promise that they have made to the customer. It can be infuriating when the issue remains unsolved due to this. This brings us to the last problem with customer service, where businesses are not paying adequate attention to getting their customer service workflow in line which the customer's lifecycle.

#### 2.2 REFERENCES

#### References:

Afriliana, I., Munadia, H., & Hasta, I. D. (2018). EKUPEL: E-Customer Satisfaction

Questionnaire at PT. PLN (Persero) Rayon Tegal Timur. ICT Journal: Information

Communication & Technology, 17(1). https://doi.org/10.36054/jict-ikmi.v17i1.37

Agussalim, M., Ayu Rezkiana Putri, M., & Ali, H. (2016). Analysis work discipline and work spirit toward performance of employees (case study tax office Pratama two Padang).

International Journal of Economic Research. Cronin, J. J., Brady, M. K., & Hult, G. T. M. (2000). Assessing the effects of quality, value, and customer satisfaction on consumer behavioural intentions in service environments. Journal of Retailing, 76(2),193-218.http://dx.doi.org/10.1016/S0022-4359(00)00028-2 Vargo, S.L. and Lusch, R.F. (2008)

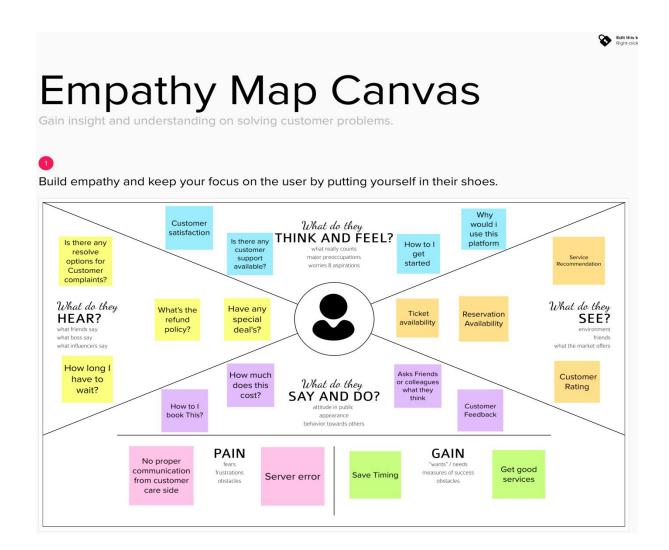
Service-dominant logic: Continuing the evolution.

#### 2.3 PROBLEM STATEMENT DEFINITION

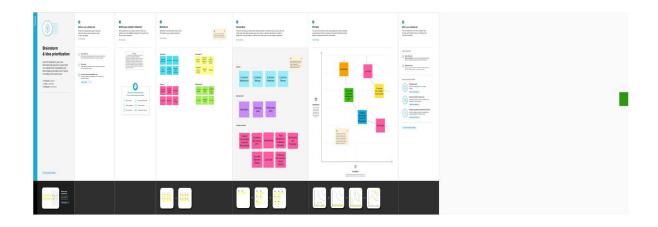
The purpose of this application is to assist customers in handling their complaints. Customers may submit a ticket with a thorough explanation of the problem. The customer will be assigned an Agent to address the issue. An email notice will be sent to the client each time the agent is assigned to that person. Before the service is rendered, customers can examine the status of their tickets.

#### 3. IDEATION & PROPOSED SOLUTION

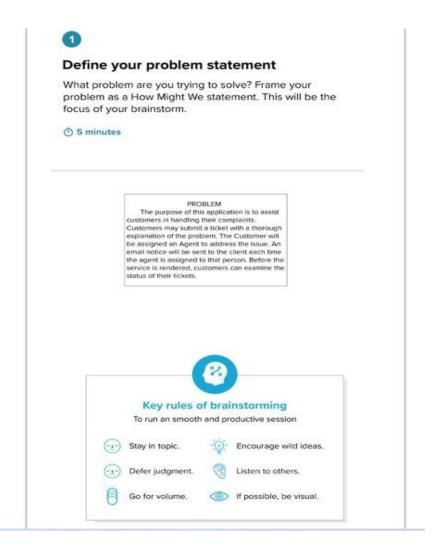
#### 3.1 EMPATHY MAP CANVAS



#### 3.2 IDEATION & BRAINSTORMING



**Step-1: Define your Problem Statement** 



**Step-2: Brainstorm** 

#### Kiruthika M

Customer Satisfication	Email Alert	Be Proactive		
Self Services	Chatbot Conversation should be Personalized	Empathize with Customers		

#### Kumararaja M

Customer Ratings	To provide Customer Services as 24*7	Fast response to Customer Queries	
Understand the Customer Queries	Message Alert	Reliability	

#### Praveen J

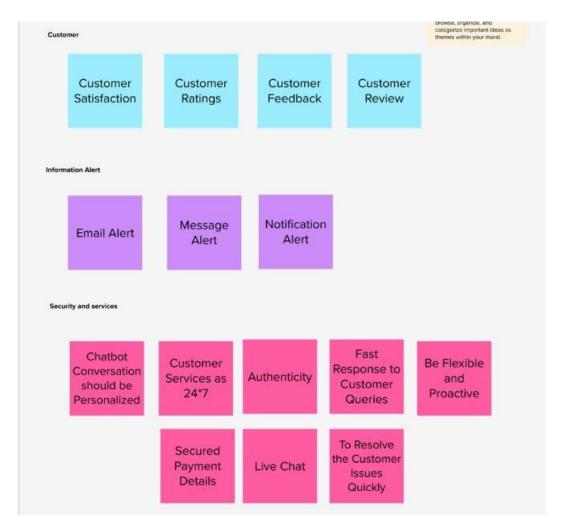
Customer Feedback	Secured Payment Details	Authenticity		
Email Alert	Be Flexible	User Friendly		

#### Silambarasan D

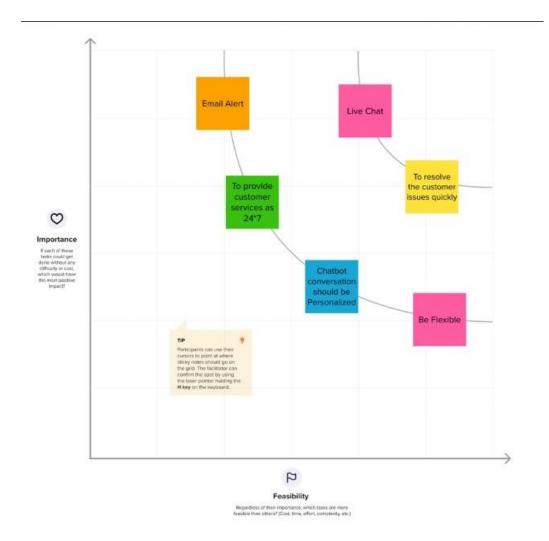
Customer Review	Notification Alert	To Resolve the Customer Issues Quickly
Live Chat	Allocating Agents	Security

Step-3 : Group

## Idea



**Step-4: Prioritize** 



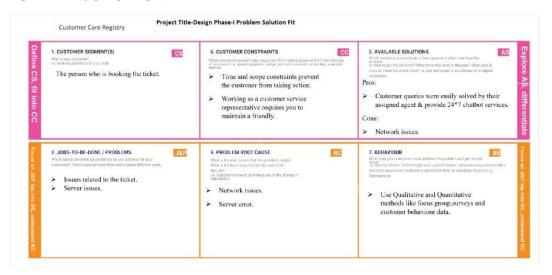
## 3.3 PROPOSED SOLUTION

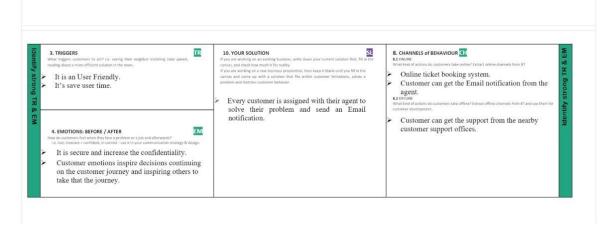
Parameter	Description
Problem Statement (Problem to	The purpose of this application is to assist
besolved)	customers in handling their complaints.
	Customers may submit a ticket with a
	thorough explanation of the problem. The
	customer will be assigned an Agent to
	address the issue. An email notice will be
	Problem Statement (Problem to

		sent to the client each time the agent is assigned to that person. Before the service is
		rendered, customers can examine the
		status of their tickets.
2.	Idea / Solution description	User can register for an account. After the
		login, they can create the complaint with a
		detailed description of the problem they are
		facing. Each user will be assigned with an
		agent. They can view the status of the
		complaints and sends the email notification.
3.	Novelty / Uniqueness	1. An agent will be assigned to the
		Customer to solve the Problem.
		2. User doesn't require to visit any
		office.Theyjust need internet and device to
		book the Ticket.
		3. Status shown to the Customer.
		4. The ability of Customers to Cancel
		theirbooking.
		5. The tracking method will keep updating
		youon the ticket processing and sends the
		Email alert.

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#### 3.4 PROBLEM SOLUTION FIT





# **4.REQUIREMENT ANALYSIS**

# 4.1 FUNCTIONAL REQUIREMENT

FR No.	Functional Requirement	Sub Requirement (Story / Sub-Task)
	(Epic)	
FR-1	User Registration	<ul> <li>Registration done by the customer through website</li> <li>or our application form.</li> </ul>
FR-2	User Confirmation	<ul><li>Confirmation via Email.</li><li>Confirmation via OTP.</li></ul>
FR-3	User Login	> Login via Google and Email.
FR-4	Admin Login	> Login via Google and Email.
FR-5	Query Form	> Description of the issues in contactinformation.
FR-6	E-Mail	> To get email alert.
FR-7	Feedback	> To get customer feedback.

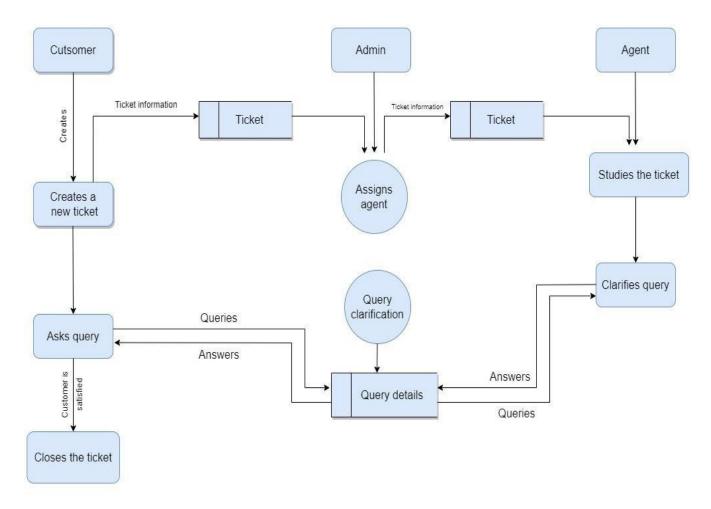
# **4.2 NON-FUNCTIONAL REQUIREMENTS**

FR No.	Non-Functional Requirement	Description
NED 1	TT 1994	N T. ' C' 11 1 1 1
NFR-1	Usability	➤ It is an user friendly and simple customer
		support application. To provide the
		solution to the customer queries.

NFR-2	Security	<b>\</b>	Secured customer support application and Customers are asked to create an account
			for themselves using their email which is protected with an 8 character-long password, making it more secure.
NFR-3	Reliability	<b>&gt;</b>	The application can be even more reliableand trust-worthy.
NFR-4	Performance	AA	Easy to access with any devices.  Effective development of web application.
NFR-5	Availability	AA	To provide the chatbot support as 24*7.  Users are requested to have good internet connection.
NFR-6	Scalability	>	To provide 24*7 Customer care support.

# **5.PROJECT DESIGN**

## **5.1 DATA FLOW DIAGRAMS**

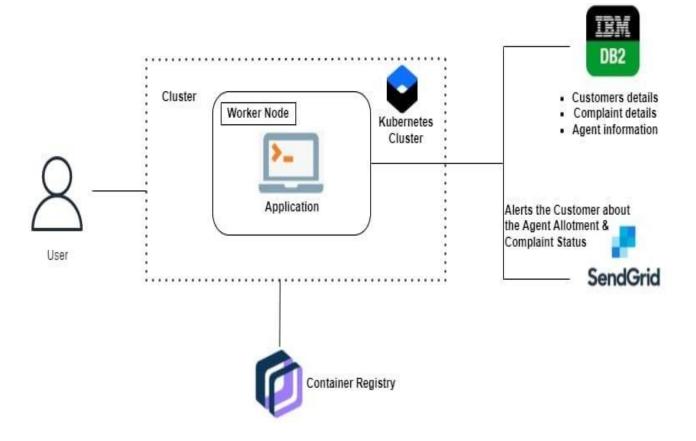


#### 5.2 SOLUTION & TECHNICAL ARCHITECTURE

#### **Solution**

User can register for an account. After the login, they can create the complaint with a detailed description of the problem they are facing. Each user will be assigned with an agent. They can view the status of the complaints and sends the email notification.

#### **Technical Architecture**



### **5.3 USER STORIES**

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release	
Customer (Web user)	Registration	USN-1	As a customer, 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 customer, I can login to the application by entering correct email and password	I can access my account/ dashboard	High	Sprint-1	
	Dashboard	USN-3	As a customer, I can see all the tickets raised by me and lot more	I get all the info needed in my dashboard	High	Sprint-1	
	Ticket Creation	USN-4	As a customer, I can create a new ticket with the detailed description of my query	I can ask my query	High	Sprint-2	
	Address Column	USN-5	As a customer, I can have conversations with the assigned agent and get my queries clarified	My queries are clarified	High	Sprint-3	
	Forgot Password	USN-6	As a customer, I can reset my password by this option in case I forgot my old password	I get access to my account again	Medium	Sprint-4	+
	Ticket Details	USN-7	As a customer, I can see the current status of my tickets	I get better understanding	Medium	Sprint-4	
Agent (Web user)	Login	USN-1	As an agent, I can login to the application by entering correct email and password	I can access my account / dashboard	High	Sprint-3	
	Dashboard	USN-2	As an agent, I can see all the tickets assigned to me by the admin	I can see the tickets to which I could answer	High	Sprint-3	
	Address Column	USN-3	As an agent, I get to have conversations with the customer and clear his/her queries	I can clarify the issues	High	Sprint-3	
	Forgot Password	USN-4	As an agent, I can reset my password by this option in case I fbrgot my old password	I get access to my account again	Medium	Sprint-4	
	1	L	+	1			К.

Admin (Web user)	Logih	USN-1	As an admin, I can login to the application by entering correct email and password	I can access my account / dashboard	High	Sprint-1
	Dashboard	USN-2	As an admin, I can see all the tickets raised in the entire system and lot more	I can assign agents by seeing those tickets	High	Sprint-1
	Agent Creation	USN-3	As an admin, I can create an agent for clarifying the customer's queries	I can create agents	High	Sprint-2
	Assigning Agent	USN-4	As an admin, I can assign an agent for each ticket created by the customer	Enables agent to clarify the queries	High	Sprint-2
	Notification & Tracking	USN-5	As an admin, I can send a notification via both E-mail and Mobile Number and keep track of the work assigned to the agent	I can send an E-mail alert and keep tracking the work	High	Sprint-4

## 6.PROJECT PLANNING & SCHEDULING

### **6.1 SPRINT PLANNING & ESTIMATION**

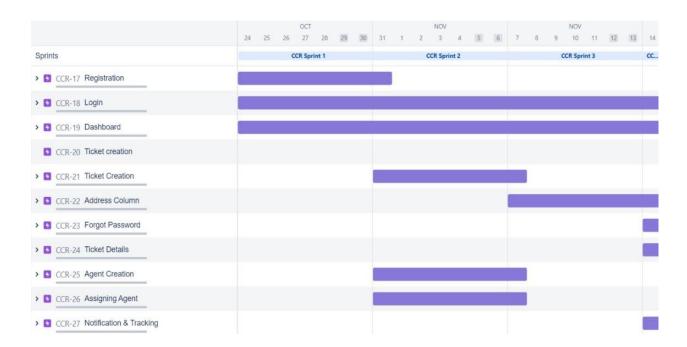
Sprint	Functional User Story User Story / Task Requirement (Epic) Number		Story Points	Priority	Team Members	
Sprint-1	Registration	USN-1	As a customer, I can register for the application by entering my email, password, and confirming my password.	2	High	Kiruthika M
Sprint-1	Login	USN-2	As a customer, I can login to the application by entering correct email and password	1	High	Kumararaja M
Sprint-1	Dashboard	USN-3	As a customer, I can see all the tickets raised by me and lot more	2	High	Praveen J
Sprint-2	Ticket Creation	USN-4	As a customer, I can create a new ticket with the detailed description of my query	3	High	Silambarasan D
Sprint-3	Address Column	USN-5	As a customer, I can have conversations with the assigned agent and get my queries clarified	3	High	Kumararaja M
Sprint-4	Forgot Password	USN-6	As a customer, I can reset my password by this option in case I forgot my old password	2	Medium	Kiruthika M
Sprint-4	Ticket Details	USN-7	As a customer, I can see the current status of my tickets	2	Medium	Praveen J
Sprint-3	Login	USN-1	As an agent, I can login to the application by entering correct email and password	1	High	Silambarsan D
Sprint-3	Dashboard	USN-2	As an agent, I can see all the tickets assigned to me by the admin	2	High	Praveen J

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-3	Address Column	USN-3	As an agent, I get to have conversations with the customer and clear his/her queries	3	High	Silambarasan D
Sprint-4	Forgot Password	USN-4	As an agent, I can reset my password by this option in case I forgot my old password	2	Medium	Kiruthika M
Sprint-1	Login	USN-1	As an admin, I can login to the application by entering correct email and password	1	High	Kumararaja M
Sprint-1	Dashboard	USN-2	As an admin, I can see all the tickets raised in the entire system and lot more	2	High	Silambarasan D
Sprint-2	Agent Creation	USN-3	As an admin, I can create an agent for clarifying the customer's queries	5	High	Praveen J
Sprint-2	Assigning Agent	USN-4	As an admin, I can assign an agent for each ticket created by the customer	5	High	Kumararaja M
Sprint-4	Notification & Tracking	USN-5	As an admin, I can send a notification via both Email and Phone Number and keep track of the work assigned to the agent	8	High	Kiruthika M

#### **6.2 SPRINT DELIVERY SCHEDULE**

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



## 7. CODING & SOLUTIONING

```
index.html:
<!DOCTYPE html>
<head>
href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.
css" rel="stylesheet"
       integrity="sha384-
EVSTQN3/azprG1Ann3QDgpJLlm9NacOYz1ztcQTwFspd3yD65VohhpuuCOmLASjC*
crossorigin="anonymous">
    dink rel="stylesheet"
href='https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/6.2.1/css/all.min.css*
       integrity="sha512-
MV7K8+y+gLIBoVD591QIYicR65iaqukzvf/nwasF0nqhPay5w/91JmVM2hMDcnK1OnMGCdVK+i
OrJ71zPJOdlwee*
       crossorigin="anonymous" referrerpolicy="no-referrer" />
   slink href="/style2.css" rel="stylesheet">
</head>
    <nav class="navbar navbar-expand-lg">
       <div class="container-fluid">
        <img src="/assets/help-desk (1).png">
               <h1>Customer Care Registry</h1>
            <button class="navbar-toggler" type="button" data-bs-</pre>
toggle="collapse" data-bs-target="#navbarNav
               aria-controls-"navbarNav" aria-expanded-"false" aria-
label="Toggle navigation">
               <apan class="navbar-toggler-icon"></span>
            </button>
       </div>
   «/nav»
   <section id="section1">
       <svg xmlns="http://www.w3.org/2000/svg" viewBox="0 0 1440 320">
```

```
<path fill="#fff" fill-opacity="1"</pre>
d="M0,224L48,197.3C96,171,192,117,288,117.3C384,117,480,171,576,197.3C672,
224, 768, 224, 864, 1920960, 160, 1056, 96, 1152, 69, 301248, 43, 1344, 53, 1392, 58, 7114
40,64L1440,0L1392,0C1344,0,1248,0,1152,0C1056,0,960,0,864,0C768,0,672,0,57
6,0C480,0,384,0,288,0C192,0,96,0,48,0L0,0Z">
            </path>
        </avg>
        <div class="container">
            <div class="row">
                 <div class="col-md-6">
                     <img id=*imgl" src=*/assets/image01.jpg' alt="">
                 c/div>
                 <div class="col-md-6" id="container1col2">
                     «a href="/login.html"> <button class="btn"</pre>
input="submit">Login</button></a>
                     <br>
                     <a href="/register.html"> <button class="btn"
input="submit">Sign Up</button></a>
                     <br >
                    <a href="#section2"> <button class="btn"
input="submit">About Us</button></a>
                 </div>
            </div>
        e/dius
        <svg xmlns="http://www.w3.org/2000/svg" viewBox=*0 0 1440 320">
            <path fill='#fff" fill-opacity='1"</pre>
d="M0,224L48,197,3096,171,192,117,288,117,30384,117,480,171,576,197,30672,
224, 768, 224, 864, 1920960, 160, 1056, 96, 1152, 69.301248, 43, 1344, 53, 1392, 58.7414
40,641,1440,3201,1392,3200,1344,320,1248,320,1152,3200,1056,320,960,320,864,32
00768, 320, 672, 320, 576, 3200480, 320, 384, 320, 288, 3200192, 320, 96, 320, 48, 32010,
        </avg>
    </section>
    <section id=*section2*>
        <div class="container">
             <div class="row row2">
                 <div class="col-md-4">
                    <br/>
<br/>
dutton class="btn" input="submit">
                          <a href='https://www.instagram.com/'
```

```
ForgotPassword.html:
```

```
<head>
     <meta charset="UTF-8">
     <meta name="viewport" content="width=device-width, initial-scale=1">
     <meta name="author" content="Yinka Enoch Adedokun">
     <meta name="description" content="Simple Forgot Password Page Using</pre>
HTML and CSS">
     <meta name="keywords" content="forgot password page, basic html and</pre>
     <title>Forgot Password Page</title>
   <link rel="stylesheet" href="style.css">
</head>
<body>
     <div class="row">
          <h1>Forgot Password</h1>
           <h6 class="information-text">Enter your registered email to
reset your password.</h6>
           <div class="form-group">
                <input type="email" name="user_email" id="user_email">
                <label for="username">Email</label>
                <button onclick="showSpinner()">Reset Password</button>
```

#### SOLUTIONING:

Index :

Customer Care Registry

Login Sign Up About Us

Login:

CUSTOMER CARE

Welcome back

Login Forgot?

#### **CONCLUSION:**

In conclusion, customer care, involves the use of basic ethics and any company whowants to have success and grow, needs to remember, that in order to do so, it must begin withestablishing a code of ethics in regards to how each employee is to handle the dealing withcustomers. Customers are at the heart of the company and its growth or decline. Customer careinvolves, the treatment, care, loyalty, trust the employee should extend to the consumer, as wellin life. This concept can be applied to so much more than just customer care. People need to treatothers with respect and kindness, people should try to take others into consideration whenmaking any decision. If more people were to practice this policy, chances are the world would bea better, more understanding place for all to exist

#### **GITHUB**

https://github.com/IBM-EPBL/IBM-Project-9413-1659002834/

#### **DEMO VIDEO LINK**

https://drive.google.com/file/d/1yqdCqRJQqKsDX0xly7A4hsBCRu-left and the complex of the comple

fXwrR/view?usp=sharing