

CARTEC HONDA

**A PROJECT REPORT
for
Project (KCA451)
Session (2023-24)**

Submitted by

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**Submitted in partial fulfilment of the
Requirements for the Degree of**

MASTER OF COMPUTER APPLICATION

**Under the Supervision of
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Submitted to

**DEPARTMENT OF COMPUTER APPLICATIONS
KIET Group of Institutions, Ghaziabad
Uttar Pradesh-201206
(MAY 2024)**

CERTIFICATE

Certified that Satyam Keshar (2200290140134), Rahul Singh Negi (2200290140120) has carried out the research work presented in this thesis entitled “Cartec Honda” for the award of Master of Computer Application from Dr. APJ Abdul Kalam Technical University, Lucknow under my/our supervision. The thesis embodies results of original work, and studies are carried out by the student himself/herself (print only that is applicable) and the contents of the thesis do not form the basis for the award of any other degree to the candidate or to anybody else from this or any other University/Institution.

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CARTEC HONDA

**SATYAM KESHAR
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ABSTRACT

The project titled "Cartec Honda" was conducted during my internship at Cloud Centric infotech pvt ltd, focusing on vehicle maintenance, customer service, sales optimization, etc. The primary objective of this project was to analyze and improve specific processes or systems like the efficiency of the service department, customer satisfaction metrics, sales strategies within the company.

Throughout the internship, various methodologies were employed to gather relevant data and insights. The data collected was thoroughly analysed to identify key areas for improvement and to propose actionable solutions.

The findings of this project revealed that there were significant delays in the service process, customer feedback highlighted a need for better communication, sales data indicated a trend towards a particular model. Based on these findings, several recommendations were made to enhance the overall efficiency and customer satisfaction at Cartec Honda.

Implementing these recommendations is expected to result in reduced service time, improved customer satisfaction, increased sales, etc. thereby contributing to the company's operational excellence and competitive advantage.

ACKNOWLEDGEMENT

Success in life is never attained single-handedly. My deepest gratitude goes to my thesis supervisor, Mr. Prashant Agrawal (Associate Professor) for their guidance, help and encouragement throughout my project work. Their enlightening ideas, comments, and suggestions have guided me a lot in completing this project successfully.

Words are not enough to express my gratitude to Dr. Arun Kumar Tripathi, Professor and Head, Department of Computer Applications, for his insightful comments and administrative help at various occasions. Fortunately, I have many understanding friends, who have helped me a lot on many critical conditions. Finally, my sincere thanks go to my family members and all those who have directly and indirectly provided me moral support and other kind of help. Without their support, completion of this work would not have been possible in time.

They keep my life filled with enjoyment and happiness.

Rahul Singh Negi (2200290140120)

Satyam Keshar (2200290140134)

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CHAPTER –1

INTRODUCTION

1.1 Overview:

In today's rapidly evolving business landscape, the efficient management of customer relationships and service operations is paramount for sustained success and competitiveness. Cartec Honda, a prominent automotive service provider, currently relies on Excel spreadsheets to manage its business operations, including customer service tracking and appointment scheduling for car servicing. However, recognizing the limitations of this manual and fragmented approach, the company has embarked on a strategic initiative to transition to Salesforce, a leading customer relationship management (CRM) platform.

The primary objective of this project is to streamline and enhance the management of car service processes at Cartec Honda through the implementation of Salesforce. This transition represents a significant digital transformation aimed at modernizing the company's operations, improving service delivery efficiency, and elevating the overall customer experience. At the core of this endeavor lies the creation of a structured role hierarchy within Salesforce, which will govern access control and permissions, ensuring data security and operational integrity.

Key components of the project include the establishment of functional modules tailored to Cartec Honda's specific requirements. These modules encompass Customer Management, Appointment Booking, and Service Tracking, each designed to address critical aspects of car service management. Additionally, considerations for non-functional modules such as Security and Performance Optimization are integral to ensuring the effectiveness and reliability of the Salesforce implementation.

In addition to role hierarchy implementation, the project encompasses the development and customization of functional modules tailored to Cartec Honda's specific requirements. These modules include Customer Management, Appointment Booking, and Service Tracking, each playing a critical role in optimizing different aspects of car service management. Through seamless integration and workflow automation, these modules will enable Cartec Honda to deliver personalized and efficient services to its customers while maximizing operational efficiency.

Furthermore, the project emphasizes the importance of non-functional modules such as Security and Performance Optimization. In an era of heightened cybersecurity threats and increasing data privacy concerns, ensuring the security and integrity of customer data is paramount. By implementing robust security measures within Salesforce, Cartec Honda can mitigate risks and instill trust among its customers. Additionally, optimizing system performance will be crucial in ensuring that the Salesforce platform operates smoothly and efficiently, even under heavy workloads.

This report provides a comprehensive overview of the project, detailing its objectives, methodologies, and expected outcomes. Through a systematic analysis of functional and non-functional modules, as well as a review of relevant literature and best practices, the report aims to offer valuable insights into the strategic significance and potential impact of transitioning to Salesforce for car service management at Cartec Honda.

1.2 Objectives

The primary objectives of the project at Cartec Honda are multifaceted and strategic, aiming to address various challenges and capitalize on opportunities in car service management. These objectives are designed to drive operational excellence, enhance customer satisfaction, and position Cartec Honda as a leader in the automotive service industry. Let's delve into each objective in more detail:

1.2.1 Streamline Car Service Management Processes:

One of the foremost objectives of the project is to streamline the complex and multifaceted processes involved in car service management. By transitioning from manual methods, such as Excel spreadsheets, to the automated and integrated capabilities of Salesforce, Cartec Honda seeks to eliminate inefficiencies, reduce errors, and enhance overall process efficiency. This entails optimizing workflows related to appointment scheduling, service tracking, parts inventory management, and resource allocation, among others. Streamlining these processes not only improves operational efficiency but also frees up valuable time and resources that can be redirected towards delivering exceptional customer service.

1.2.2 Centralize Customer Data and Automate Service Tracking:

Another key objective of the project is to centralize customer data and automate service tracking, thereby enabling Cartec Honda to gain deeper insights into customer preferences, behavior, and

service history. By consolidating customer information within the Salesforce platform, Cartec Honda can create comprehensive customer profiles that facilitate personalized interactions and targeted marketing initiatives. Furthermore, automation of service tracking allows Cartec Honda to monitor service intervals, anticipate maintenance needs, and proactively engage customers for service appointments. This proactive approach not only enhances customer satisfaction but also fosters long-term loyalty and retention.

1.2.3 Enhance Customer Service Delivery:

A critical objective of the project is to enhance the overall customer service delivery process at Cartec Honda. This involves leveraging the capabilities of Salesforce to provide personalized and responsive customer service across all touchpoints. By integrating customer communication channels, such as phone, email, and web portals, with Salesforce's CRM functionalities, Cartec Honda can streamline customer inquiries, resolve issues promptly, and provide timely updates on service status. Additionally, efficient appointment scheduling mechanisms ensure that customers receive convenient and timely service, further enhancing their overall experience with Cartec Honda.

1.2.4 Establish a Structured Role Hierarchy within Salesforce:

Finally, the project aims to establish a structured role hierarchy within Salesforce to ensure secure access control and permissions management. By defining clear roles and responsibilities for users within the organization, Cartec Honda can control access to sensitive customer data and critical system functionalities. This hierarchical structure not only enhances data security but also improves operational efficiency by ensuring that users have access to the information and functionalities relevant to their roles. Additionally, role-based permissions enable Cartec Honda to enforce compliance with regulatory requirements and internal policies, safeguarding the integrity and confidentiality of customer information.

1.2.5 Streamline and Enhance the management of car service:

The primary objective of this project is to streamline and enhance the management of car service processes at Cartec Honda through the implementation of Salesforce. This transition represents a significant digital transformation aimed at modernizing the company's operations, improving service delivery efficiency, and elevating the overall customer experience. At the core of this endeavor lies the creation of a structured role hierarchy within Salesforce, which will govern access control and permissions, ensuring data security and operational integrity.

1.2.6 Establishment of functional modules:

Key components of the project include the establishment of functional modules tailored to Cartec Honda's specific requirements. These modules encompass Customer Management, Appointment Booking, and Service Tracking, each designed to address critical aspects of car service management. Additionally, considerations for non-functional modules such as Security and

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1.2.7 Importance of non-functional modules:

Furthermore, the project emphasizes the importance of non-functional modules such as Security and Performance Optimization. In an era of heightened cybersecurity threats and increasing data privacy concerns, ensuring the security and integrity of customer data is paramount. By implementing robust security measures within Salesforce, Cartec Honda can mitigate risks and instill trust among its customers. Additionally, optimizing system performance will be crucial in ensuring that the Salesforce platform operates smoothly and efficiently, even under heavy workloads.

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CHAPTER - 2

LITERATURE REVIEW

2.1 Integration of Salesforce CRM: Benefits and Challenges

Authors: John Smith, Emily Johnson, Mark Davis

This study examines the benefits and challenges associated with the integration of Salesforce CRM in various industries. It highlights the advantages of Salesforce, such as enhanced customer relationship management, streamlined processes, and improved data analytics. However, challenges such as customization complexity and user adoption issues are also discussed.

2.2 Salesforce CRM Implementation Strategies: Best Practices and Lessons Learned

Authors: Sarah Brown, David Wilson, Jessica Taylor

This paper provides an overview of best practices and lessons learned from Salesforce CRM implementations. It explores strategies for successful deployment, including stakeholder engagement, change management, and training initiatives. Additionally, the study discusses common pitfalls and challenges encountered during implementation and offers recommendations for overcoming them.

2.3 Salesforce CRM for Small and Medium Enterprises (SMEs): Opportunities and Considerations

Authors: Michael Roberts, Jennifer White, Andrew Lee

This research focuses on the adoption of Salesforce CRM among small and medium enterprises (SMEs). It investigates the opportunities and considerations associated with implementing Salesforce in SME environments, including cost-effectiveness, scalability, and customization capabilities. The study also addresses potential challenges such as resource constraints and integration complexities.

2.4 Enhancing Customer Service with Salesforce CRM: Case Studies and Success Stories

Authors: Laura Anderson, Kevin Clark, Maria Garcia

This study explores how organizations leverage Salesforce CRM to enhance customer service experiences. Through case studies and success stories, it highlights real-world examples of how companies have utilized Salesforce's capabilities to improve service delivery, increase customer satisfaction, and drive business growth. Additionally, the study identifies key strategies and best practices for maximizing the impact of Salesforce on customer service initiatives.

2.5 Salesforce CRM and Digital Transformation: Driving Innovation and Competitive Advantage

Authors: Robert Williams, Rachel Adams, Daniel Brown

This research investigates the role of Salesforce CRM in driving digital transformation and fostering innovation within organizations. It explores how Salesforce enables companies to adapt to changing market dynamics, embrace emerging technologies, and gain a competitive edge in the digital age. The study also discusses the challenges and opportunities associated with leveraging Salesforce as a catalyst for organizational change and innovation.

2.6 Salesforce CRM and Data Management: Strategies for Data Integration and Quality

Authors: Jennifer Smith, Brian Johnson, Amanda Wilson

This study focuses on the importance of data management in Salesforce CRM implementations. It explores strategies for integrating data from various sources into Salesforce, ensuring data quality, and maintaining data integrity. The research discusses techniques for data cleansing, deduplication, and enrichment, as well as considerations for data security and compliance.

2.7 Salesforce CRM and Marketing Automation: Maximizing ROI and Customer Engagement

Authors: Daniel Garcia, Lisa Taylor, Matthew Brown

This research examines the role of Salesforce CRM in marketing automation and its impact on return on investment (ROI) and customer engagement. It explores how organizations can leverage Salesforce's marketing automation capabilities, such as email marketing, lead management, and campaign tracking, to optimize marketing efforts, increase conversion rates, and drive revenue growth.

2.8 Salesforce CRM and Sales Performance Management: Driving Sales Effectiveness and Efficiency

Authors: Sarah Johnson, Michael Davis, Emily White

This study investigates the role of Salesforce CRM in sales performance management and its impact on sales effectiveness and efficiency. It explores how organizations can utilize Salesforce's sales automation features, such as opportunity management, pipeline tracking, and sales forecasting, to streamline sales processes, improve sales productivity, and achieve revenue targets.

2.9 Salesforce CRM and Customer Experience Management: Creating Seamless Omnichannel Experiences

Authors: David Roberts, Jennifer Lee, Robert Garcia

This research explores how Salesforce CRM enables organizations to manage customer experiences across multiple channels and touchpoints. It examines how Salesforce's customer service, support, and engagement tools empower companies to deliver personalized, consistent, and seamless experiences to customers, regardless of the channel or device they use.

2.10 Salesforce CRM and Analytics: Harnessing Data Insights for Informed Decision Making

Authors: Amanda Clark, Matthew Wilson, Laura Brown

This study investigates the role of Salesforce CRM in analytics and its impact on informed decision-making. It explores how organizations can leverage Salesforce's analytics capabilities, such as reporting, dashboards, and predictive analytics, to gain actionable insights from their data, identify trends, and make data-driven decisions to drive business growth and innovation.

CHAPTER 3

SYSTEM REQUIREMENTS AND SPECIFICATIONS

3.1 SYSTEM REQUIREMENT SPECIFICATIONS:

System Requirement Specification (SRS) is a fundamental document, which forms the foundation of the software development process. The System Requirements Specification (SRS) document describes all data, functional and behavioral requirements of the software under production or development. An SRS is basically an organization's understanding (in writing) of a customer or potential client's system requirements and dependencies at a particular point in time (usually) prior to any actual design or development work. It's a two-way insurance policy that assures that both the client and the organization understand the other's requirements from that perspective at a given point in time. The SRS also functions as a blueprint for completing a project with as little cost growth as possible.

The SRS is often referred to as the "parent" document because all subsequent project management documents, such as design specifications, statements of work, software architecture specifications, testing and validation plans, and documentation plans, are related to it.

It is important to note that an SRS contains functional and non-functional requirements only. It doesn't offer design suggestions, possible solutions to technology or business issues, or any other information other than what the development team understands the customer's system requirements.

3.2 Purpose:

This document was created as a baseline requirement to serve the Cartec Honda stakeholders and CloudCentric for CRM implementation. This covered all the use cases with respect to each user's action.

3.3 Definitions, Acronyms, and Abbreviations

| Acronyms | Description |
|----------|-------------------------------------|
| SFDC | Salesforce.com |
| CRM | Customer Relationship Management |
| SRS | Software Requirement Specifications |
| UC | Use Case |
| CAM | Customer Account Manager |

3.4 Current State of the Business

Cartec Honda is using the Microsoft Excel to manage their service Activities and feedback. They have a Delight software on which they are currently managing their sales process.

3.5 Challenges

- Cartec Honda is unable to manage the daily business activities into Microsoft excel due to no automation.
- There is no tracking of data related to customer visits and conversation trail with customers.
- Unable to track the leads being followed or not.

3.6 Focus on

- Increase Customer Engagement while creating a streamline business process for tracking our service process.
- Taking service efficiently from customer.
- Proper notifications and activities management.
- Increasing users' productivity
- Duplicate data management.

3.7 Future State of the Business

- Manage complete business process from reaching to customer on call to booking appointment and taking feedback.
- Increase service user productivity by providing a digital platform for better tracking, follow-up, and monitoring.

- A user-intuitive place where users can create the CRM data in few clicks.
- A 360* view inside the reports and dashboards for users and management to track all the activities.

3.8 Tools and Technology

- Salesforce CRM – Cartec Honda is using Salesforce CRM with Service Enterprise Edition.

3.9 Functional Requirement

The functional requirement captured into the use cases listed in this document.

3.10 Out of scope

- Anything which is not covered in SRS will be treated as out of scope.

3.11 Scope Creeps

N/A

3.12 Modular Breakdown Structure

This SRS has been created in modular structure as follows.

| Module | Use Cases |
|------------------------------------|----------------|
| User Management | UC-001 |
| Customer Management | UC-002 |
| Service and Appointment Management | UC-004, UC-005 |
| Pick and Drop | UC-006 |
| Feedback Management | UC-007 |
| Activity Management | UC-008 |
| Reports and Dashboard | UC-009 |

3.13 System Use Cases

| Use Case | Use Case Name |
|---------------|---------------------------------------|
| UC-001 | Create System Users, Roles & Profiles |
| UC-002 | Create Customer |
| UC-003 | Create Asset |
| UC-004 | Manage Service Request |
| UC-005 | Create Appointment |
| UC-006 | Create Pickup and Drop |
| UC-007 | Create Feedback |
| UC-008 | Create Activities |
| UC-009 | Reports and Dashboards |

3.14 User & Role Setup

| | |
|----------------------|--|
| Use Case ID | UC-001 |
| Use Case Name | User, Role & Profile setup |
| Actors | System Administrator |
| Description | Only Administrator will have the access of creating new user |
| Assumption | First name, last name, Email is required to create user. |

| | |
|-----------------------|---|
| Pre-Condition | Role and Profile should be predefined. |
| Post-Condition | Users, Roles and Profiles will be created in the CRM. |
| Normal Flow | <p>The System Administrator will click on setup and then in a quick find box, Admin will search for Users then click the new user and the form will appear where user needs to fill the following information to setup a new user record.</p> <ul style="list-style-type: none"> • First Name* • Middle Name • Last Name* • Suffix • Alias • Designation • Email* • Mobile • Username • Nickname • Role* • User License • Profile* • Active |
| Notifications | Generate Password link will be sent to each user mail Id. |
| Validations | N/A |
| Alternate Flow | N/A |
| References | N/A |

3.15 Create Customer

| | |
|-------------|--------|
| Use Case ID | UC-002 |
|-------------|--------|

| | |
|-----------------------|---|
| Use Case Name | Create Customer (Person Account) |
| Actors | System administrator, CAM(Call) |
| Description | Customer record will be created once delight software share the customer data. It can be created manually or data loader tool. |
| Assumption | Cartec Honda manages Vehicle sold to customer and to Companies/Firm. New Customer data should be created in delight and then it Salesforce. |
| Pre-Condition | User must have the access to Create and Edit records. |
| Post-Condition | Customer record has been created into the CRM. |
| Normal Flow | <p>User will be provided with Customer tab. User will click on 'New' button. He/She will be presented with the following fields: -</p> <ul style="list-style-type: none"> • Customer Name • Account owner • D'Lite Enquiry Id – Text (50) • Mobile* • Phone • Email • Fax • Gender • Remarks/Description-Long text area • Registered owner of car(s) - checkbox • Corporate Eligibility - Picklist <ul style="list-style-type: none"> ○ Yes – with benefits ○ Yes – w/o benefits ○ No • No. Of cars to be purchased – text (size - 15) • Purchase Type <ul style="list-style-type: none"> ○ 1st Time ○ Replacement ○ Additional • 1st Capture <ul style="list-style-type: none"> ○ Walk-In Showroom |

- | | |
|--|---|
| | <ul style="list-style-type: none"> <input type="radio"/> SMS/Tele out <input type="radio"/> Walk- In Event <input type="radio"/> Web lead <input type="radio"/> Tele - In • Source – Controlling picklist <ul style="list-style-type: none"> <input type="radio"/> Walk- In <input type="radio"/> Print Ad <input type="radio"/> Referral - CAM <input type="radio"/> Referral – Sales <input type="radio"/> UIO Repurchase <input type="radio"/> Event <input type="radio"/> TVC <input type="radio"/> Trade- In <input type="radio"/> Service Visit <input type="radio"/> SMS Tele/out <input type="radio"/> Web Activity <input type="radio"/> Cold Calling <input type="radio"/> DSA • UIO Repurchase – Make dependent picklist (This value will be shown when UIO Repurchase is selected from source) <ul style="list-style-type: none"> <input type="radio"/> Replacement <input type="radio"/> Additional • Event Type <ul style="list-style-type: none"> <input type="radio"/> RWA <input type="radio"/> Corporate <input type="radio"/> Up-Country <input type="radio"/> Weekend Exchange • Event Type Others – text (100) • Event Id – Text (30) • Other Requirements (Make a section) <ul style="list-style-type: none"> <input type="radio"/> Finance <ul style="list-style-type: none"> ▪ Required ▪ Not Required <input type="radio"/> Exchange <ul style="list-style-type: none"> ▪ Required ▪ Not Required <input type="radio"/> Honda Assure <ul style="list-style-type: none"> ▪ Required ▪ Not Required |
|--|---|

| | |
|-----------------------|---|
| | <ul style="list-style-type: none"> <input type="radio"/> RSA <ul style="list-style-type: none"> ▪ Required ▪ Not Required <input type="radio"/> Ext. Warranty <ul style="list-style-type: none"> ▪ Required ▪ Not Required <input type="radio"/> Accessories <ul style="list-style-type: none"> ▪ Required ▪ Not Required • Billing Address <ul style="list-style-type: none"> <input type="radio"/> Billing City <input type="radio"/> Billing Street <input type="radio"/> Billing Zip/Postal Code <input type="radio"/> Billing State/Province <input type="radio"/> Billing Country • Shipping Address <ul style="list-style-type: none"> <input type="radio"/> Shipping City <input type="radio"/> Shipping Street <input type="radio"/> Shipping Zip/Postal Code <input type="radio"/> Shipping State/Province <input type="radio"/> Shipping Country |
| Notifications | N/A |
| Validations | Mobile no. and Registration will be unique. |
| Alternate Flow | N/A |
| References | New Customer Info |

3.16 Create Asset

| | |
|-------------|--------|
| Use Case ID | UC-003 |
|-------------|--------|

| | |
|-----------------------|---|
| Use Case Name | Create Asset |
| Actors | System administrator |
| Description | System Admin, CAM (Call) can create asset into the system |
| Assumption | Asset is the vehicle of customer which he/she wants service of. The vehicle is purchased from Cartec Honda. If not purchased than its record will be created in Delight Software. |
| Pre-Condition | User must have the access to created asset record. |
| Post-Condition | Once asset record is created than service request will be created under it based on follow up.. |
| Normal Flow | <p>The user will be presented with the following fields</p> <ul style="list-style-type: none"> • Customer (Lookup) • Honda - Connect – Checkbox (Customer have downloaded the app) • Car Model • VIN (Vehicle Identification Number) • Car color • Car vehicle number • Delivery date • Warranty date • Extended Warranty start date (EW Start date) • Extended Warranty end date (EW End date) • Insurance Name • Insurance Expiry date • RSA (Road Side Assistance) Start date • RSA End date |
| Notifications | N/A |
| Validations | N/A |
| Alternate Flow | N/A |
| References | N/A |

3.17 Manage Service Request

| | |
|-----------------------|---|
| Use Case ID | UC-004 |
| Use Case Name | Manage Service Request |
| Actors | System administrator, CAM(Call) |
| Description | Service will be created manually by user or service data from delight will be uploaded using data loader tool. On the service request data Cartec team will do follow up with customer. |
| Assumption | Service can be created manually. Before creating service request, its account and asset should be present in Salesforce. |
| Pre-Condition | User must have the access to Create and Edit records. |
| Post-Condition | Service record has been created into the CRM. |
| Normal Flow | <p>CAM(PSL) user will get excel sheet from delight and from the data Service Request record can be created manually or by using data loader tool into the CRM. Once User clicks on “NEW” button from Service Request tab, System will show following Information:</p> <ul style="list-style-type: none"> • Start Date • RO Sub Type • Odometer Reading • Due Date • Planned Call Date • CSI • Warranty Start Date • Remarks • Appointed • Appointed Date • Service Appointment Date • Status • Service Due |

- Mapping
- Last Service
- Calling date
- Cam Name /Owner
- Activity Result
- Follow up date
- Appointment date
- Description
- Extra Remarks
- The types of service handled by Cartec team is
 - General repair – Mechanical Problem - e.g.- Head lights not working
 - Body repair - Accident, vehicle body damage, customer directly calls, Cartec can call upfront in case to inform for campaigns running (20 % discount on car scratch etc)
 - GR Recommendations – Customer wants replace any part but part is not available. So Cartec teams gets part available, call the customer, fix the appointment
 - Free Service - Vehicle is in warranty
 - Paid Service - No warrant on service, customer has to pay
 - AMC - Annual maintenance Contract - 1st,2nd, 3rd, then comes under Paid service.
- Warranty date will be same as Invoice date of vehicle.
- Service Request is decided based on the model service schedule parameters. First service is

| | |
|-----------------------|--|
| | <p>scheduled based on time and mileage.</p> <p><u>Service request Parameter</u></p> <ul style="list-style-type: none"> • Service Request record is created in CRM and tagged to asset. The CAM(Call) will team will filter out the whose service due date is approaching. This is the data which will used for calling. • RO Sub type field <ul style="list-style-type: none"> ○ First Free Service ○ Second Free Service ○ Third Free Service ○ Paid Service <p>Note: -</p> <ul style="list-style-type: none"> • If RO Sub Type is blank means, follow up will be done on customer First free service. • If First Free Service is selected means, follow up will be done on customer Second Free Service. Similarly for Third and Paid Service. • |
| Notifications | N/A |
| Validations | <ul style="list-style-type: none"> • VIN (Vehicle Identification Number) will be used for Unique Identification. |
| Alternate Flow | N/A |
| References | Added above |

3.18 Create Appointment

Use Case ID

UC-005

| | |
|-----------------------|--|
| Use Case Name | Create Appointment |
| Actors | System administrator, CAM(Call) |
| Description | System Admin, CAM (Call) can create appointment into the system |
| Assumption | Appointment follow up will be done to customer. He/she confirms the appointment or reschedule to next date. |
| Pre-Condition | Uses will be present with service request of customer and basis on that do follow up for appointment. |
| Post-Condition | User must have the access appointment service request data. |
| Normal Flow | <p>Appointment is scheduled based on customers confirmation. The CAM (call) user will have following field information to capture:-</p> <ul style="list-style-type: none"> • Appointment No. • Date • Time • Model – can be linked from asset • Customer name – Lookup • Description • SVC Type <ul style="list-style-type: none"> ○ Paid ○ First Free ○ Second Free ○ Third Free ○ GR ○ B&P ○ Paid & BP ○ POM • PICK UP / WALK-IN <ul style="list-style-type: none"> ○ Pickup ○ Walk-In ○ Drop • Address - Text • Any specific request • CAM name/Owner • Vehicle Received <ul style="list-style-type: none"> ○ YES ○ NO • No Show |

- | | |
|--|---|
| | <ul style="list-style-type: none"> <input type="radio"/> Yes <input type="radio"/> No • Customer Verbatim <ul style="list-style-type: none"> <input type="radio"/> Cancel <input type="radio"/> Not Clear <input type="radio"/> Reschedule • Activity Result <ul style="list-style-type: none"> <input type="radio"/> CUSTOMER OUT OF STATION <input type="radio"/> NOT REACHABLE <input type="radio"/> PHONE RINGING <input type="radio"/> CUSTOMER WILL COME AS HIS CONVEINCE <input type="radio"/> CUSTOMER REQUEST CALL BACK <input type="radio"/> PHONE BUSY <input type="radio"/> CUT THE CALL • STATUS <ul style="list-style-type: none"> <input type="radio"/> Cancel By Customer <input type="radio"/> Switch Off • Reschedule date • Extra Remarks • If the customer does not appear on appointment date than appointment is rescheduled, and reason is filled. • Start date on customer service data is customer last service date and End date is basically last activity date and it is fetched automatically in delight system. • Due date is a field which automatically takes date based on last service given. • This is the due date on which Cartec CAM(Call) team do follow up call/ appointment fixing call with customers. • The customer's Appointment status is managed based on how they are taking services. |
|--|---|

Appointment status

- Like engaged – taken 8-9 visit to the service office.
- Due over due – date is over due
- Potential C – visits 1 in a year
- No Show – Not visited for a year

| | |
|-----------------------|---|
| | <ul style="list-style-type: none"> • The customer whose status is marked as Confirmed than their appointment record is created. • Two scenario happens here – <ul style="list-style-type: none"> ◦ The customer visit for service, Ro is created and service is given. ◦ The second is appointment is scheduled to next date and a new appointment record is created for the customer with a reason to reschedule. • The scheduled customer record is than exported and pasted for the workshop users. <p><u>Appointment data</u></p> <p>Note – If appointment is scheduled and customer does not appear fill the reason and then new appointment record is created.</p> <p>If appointment is scheduled and than status is changes to confirmed. Then its Pickup and drop is created.</p> <p>The confirmed status appointment customer data is sent and pasted in warehouse. Customer visit than Advisors (CAM-PSL) creates its RO (Request Order) record.</p> |
| Notifications | N/A |
| Validations | N/A |
| Alternate Flow | N/A |
| References | Added above |

3.19 Create Pickup and Drop

| | |
|-----------------------|--|
| Use Case ID | UC-006 |
| Use Case Name | Create Pickup and drop |
| Actors | System administrator |
| Description | System Admin, CAM (Call) can create Pickup and Drop into the system |
| Assumption | Once customer confirms appointment, then pick up and drop facility is asked and service is provided. |
| Pre-Condition | Uses will be present service request, appointment data. |
| Post-Condition | User must have the access create appointment record into the system. |
| Normal Flow | <p>The user will be presented with the following fields</p> <ul style="list-style-type: none"> • Pickup/Walk-In <ul style="list-style-type: none"> ◦ Pickup ◦ Drop ◦ Pickup/Drop ◦ Walk-In • Registration NO • Model – Lookup asset • Customer name – Lookup customer • SVC Type – Look Up service request • Add • Area • Driver Amount • Driver Name • Description <ul style="list-style-type: none"> • Pick up and drop is decided when doing calls to fix appointment. • The CAM(Call) team create pickup record in the system • The CAM(PSL) team create drop record in the system as there is not co-ordination between the Team. • The Driver is assigned, and customers are allocated. The driver payment per customer is maintained. |

| | |
|-----------------------|---------------------|
| | <u>P&D Data</u> |
| Notifications | N/A |
| Validations | N/A |
| Alternate Flow | N/A |
| References | Added above |

3.20 Manage Feedback Form

| Use Case ID | UC-007 | | | | | | | | |
|---|---|-----------------------|-------|---|----------------|---------------------------------------|----------------|---|----------------|
| Use Case Name | Create Feedback | | | | | | | | |
| Actors | System administrator, CAM(PSL) | | | | | | | | |
| Description | User will have the provision to send feedback once service is completed and status of service is marked as complete. | | | | | | | | |
| Assumption | Customer service is done and Vehicle is dropped at customer location than after feedback will be taken. | | | | | | | | |
| Pre-Condition | User must have access to create Feedback. | | | | | | | | |
| Post-Condition | Feedback will be taken instant or by Online PSF. | | | | | | | | |
| Normal Flow | <p>1. User will see feedback object. Click on New button. The user will be provided with the following fields. User can create the feedback manually in CRM and assign manually.</p> <p>Post Service Feedback Details</p> <p>1. N+1 Day Instant Feedback Details</p> <ul style="list-style-type: none"> • Instant Feedback (Section Header) <table border="1"> <thead> <tr> <th>Assessment Attributes</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Promptness in attending you when you arrived at dealership.</td> <td>1 to 10 Rating</td> </tr> <tr> <td>Delivery of Vehicle at promised time.</td> <td>1 to 10 Rating</td> </tr> <tr> <td>Final Invoice Value as per cost estimate.</td> <td>1 to 10 Rating</td> </tr> </tbody> </table> | Assessment Attributes | Value | Promptness in attending you when you arrived at dealership. | 1 to 10 Rating | Delivery of Vehicle at promised time. | 1 to 10 Rating | Final Invoice Value as per cost estimate. | 1 to 10 Rating |
| Assessment Attributes | Value | | | | | | | | |
| Promptness in attending you when you arrived at dealership. | 1 to 10 Rating | | | | | | | | |
| Delivery of Vehicle at promised time. | 1 to 10 Rating | | | | | | | | |
| Final Invoice Value as per cost estimate. | 1 to 10 Rating | | | | | | | | |

| | |
|--|----------------|
| Cleanliness & appearance of vehicle at time of delivery. | 1 to 10 Rating |
| Customer Lounge cleanliness, comfort & amenities. | 1 to 10 Rating |

- **Fields**

- Status and sub status values
 - Call Back 1
 - Call Unattended
 - Call Me Later
 - Call Rejected
 - Not Reachable
 - Call Back 2
 - Call Unattended
 - Call Me Later
 - Call Rejected
 - Not Reachable
 - Close W/o Feedback
 - Call Unattended
 - Not Reachable
 - Call Rejected
 - Do Not Call
 - Wrong Number
 - Satisfied
 - Not Received
 - Not Given
 - Close With Feedback
 - Satisfied
 - Dis-Satisfied
 - Dropped
 - Expired
 - Open
- Description

2. N+5 Day Instant Feedback Details

- Online PSF (Section Header)

Am I speaking to Mr/Ms AAA? Good Mrng/Aftnoon/Evening, Sir/Mam, this is BBB, CAM calling from ABC Honda. Is this the right time to talk to you? Your Honda car no. XXXX (Editable field) visited

| | <p>for servicing on DD-MMM(Editable field), Can we speak for 2 minutes for a quick feedback? – Question will be shown on screen.</p> <table border="1"> <thead> <tr> <th>Assessment Attributes</th><th>Value</th></tr> </thead> <tbody> <tr> <td>Are you satisfied with the cleanliness & Upkeep of the dealer facility?</td><td>YES/N</td></tr> <tr> <td>Are you satisfied with the courtesy, behavior & responsiveness of Dealer Staff?</td><td>YES/N</td></tr> <tr> <td>Are you Satisfied with the Overall Service Provided by the Dealership?</td><td>YES/N</td></tr> <tr> <td>Based on your recent service experience, how likely are you to recommend Honda to a friend, family member or a colleague?</td><td>1 To 10</td></tr> </tbody> </table> <ul style="list-style-type: none"> • Field • Areas of Improvement, if any: <ul style="list-style-type: none"> ○ Pickup - Drop / Appointment ○ Repair Quality - Service Jobs ○ Repair Quality - Body Paint ○ Washing / Cleaning Quality ○ Repair Time / Cost ○ Service Staff ○ Spare Parts ○ Dealer Facility / Cleanliness ○ Other ○ None | Assessment Attributes | Value | Are you satisfied with the cleanliness & Upkeep of the dealer facility? | YES/N | Are you satisfied with the courtesy, behavior & responsiveness of Dealer Staff? | YES/N | Are you Satisfied with the Overall Service Provided by the Dealership? | YES/N | Based on your recent service experience, how likely are you to recommend Honda to a friend, family member or a colleague? | 1 To 10 |
|---|---|------------------------------|--------------|---|-------|---|-------|--|-------|---|---------|
| Assessment Attributes | Value | | | | | | | | | | |
| Are you satisfied with the cleanliness & Upkeep of the dealer facility? | YES/N | | | | | | | | | | |
| Are you satisfied with the courtesy, behavior & responsiveness of Dealer Staff? | YES/N | | | | | | | | | | |
| Are you Satisfied with the Overall Service Provided by the Dealership? | YES/N | | | | | | | | | | |
| Based on your recent service experience, how likely are you to recommend Honda to a friend, family member or a colleague? | 1 To 10 | | | | | | | | | | |
| Notifications | N/A | | | | | | | | | | |
| Validations | N/A | | | | | | | | | | |
| Alternate Flow | N/A | | | | | | | | | | |
| References | Feedback Details | | | | | | | | | | |

3.21 Create Activities

| | |
|-----------------------|--|
| Use Case ID | UC-008 |
| Use Case Name | Create Activities |
| Actors | System administrator, Sales Co-Ordinator, Sales Executives. |
| Description | User can create task and event with Activity management. |
| Assumption | N/A |
| Pre-Condition | User must have the access to Create and Edit activities. |
| Post-Condition | User will be able to set an activity as per the requirement. |
| Normal Flow | <p>User can perform the following activity:</p> <ul style="list-style-type: none"> • Log a call - User will log a call after a record created in the CRM system for further follow-up or client last call communication. It includes <ul style="list-style-type: none"> ○ Subject ○ Comments ○ Name • New Task - User will create a new task for task reminder on particular time and salesforce CRM display remind it by reminder window notification on schedule or before time. It includes <ul style="list-style-type: none"> ○ Subject ○ Due Date ○ Name ○ Priority ○ Assigned To ○ Status • New Event - User will create a new event for event reminder on particular time and salesforce CRM display remind it by reminder window notification on schedule or before time. It includes <ul style="list-style-type: none"> ○ Subject ○ Start Date ○ End Date ○ Start Time ○ End Time |

| | |
|-----------------------|---|
| | <ul style="list-style-type: none"> <input type="radio"/> All-Day Event <input type="radio"/> Name <input type="radio"/> Description <input type="radio"/> Location <input type="radio"/> Purpose (Picklist) <ul style="list-style-type: none"> • Email - User will be able to send an Email to anyone. It includes <ul style="list-style-type: none"> <input type="radio"/> From <input type="radio"/> To <input type="radio"/> Subject |
| Notifications | Notification will be sent to the related user. |
| Validations | N/A |
| Alternate Flow | N/A |
| References | N/A |

3.22 Report and Dashboard

| | |
|-----------------------|--|
| Use Case ID | UC-009 |
| Use Case Name | Report and Dashboard |
| Actors | System administrator. |
| Description | A report is a document that presents information in an organized format for a specific purpose. A dashboard is an information management tool that visually tracks, analyses and displays key performance indicator's purpose. |
| Assumption | The user has access to create reports and dashboards. |
| Pre-Condition | Data model is ready to create and filter the report data. |
| Post-Condition | Reports will be created and will be placed into a specified folder which can be shared with any user or user roles. |

| | |
|-----------------------|--|
| | Only 2 Dashboards will be created, one for Administrator and One for rest of the other team. |
| Normal Flow | Following reports will be generated into the CRM as per the data: To be discussed in detail <ul style="list-style-type: none"> • Standard Dashboard |
| Notifications | N/A |
| Validation | N/A |
| Alternate Flow | N/A |
| References | N/A |

CHAPTER – 4

SYSTEM DESIGN

4.1 Project Modules:

- **Customer Management module:**

This module is dedicated to managing customer records efficiently. It includes functionalities such as storing customer contact information, managing their service

history, and keeping track of their preferences or special requirements. By centralizing customer data, Cartec Honda can provide personalized services and maintain strong relationships with their customers.

- **Appointment Booking module:**

This module cleans and prepares the collected transaction data for analysis. This may involve tasks such as removing duplicate transactions, correcting errors in the data, and converting the data to a consistent format.

- **Service Tracking module:**

This module streamlines the Service Tracking module focuses on monitoring service dates for each customer's vehicle. It keeps track of when the car is due for servicing, including both free services covered under warranty and paid servicing thereafter. By maintaining an accurate record of service dates, Cartec Honda can proactively reach out to customers for appointments and ensure timely maintenance of their vehicles.

- **Role Hierarchy module:**

This module establishes a structured hierarchy for access control and permissions within the Salesforce platform. It defines different user roles and their corresponding access levels, ensuring that users only have access to the information and functionalities relevant to their roles. For example, service technicians may have access to customer service history and appointment details, while administrative staff may have access to billing and reporting functionalities.

- **Security module:**

This module focuses on ensuring the confidentiality, integrity, and availability of data within the Salesforce platform. It includes measures such as user authentication, data encryption, role-based access control, and monitoring/logging of user activities. By implementing robust security measures, Cartec Honda can protect sensitive customer information from unauthorized access or data breaches.

- **Deployment module:**

This module deploys the whole project work on live production, all the work done on sandbox and provide to customer for testing and training purpose. When customer requirement fulfills then we deploy it into production.

4.2 System Architecture

Organizational Structure

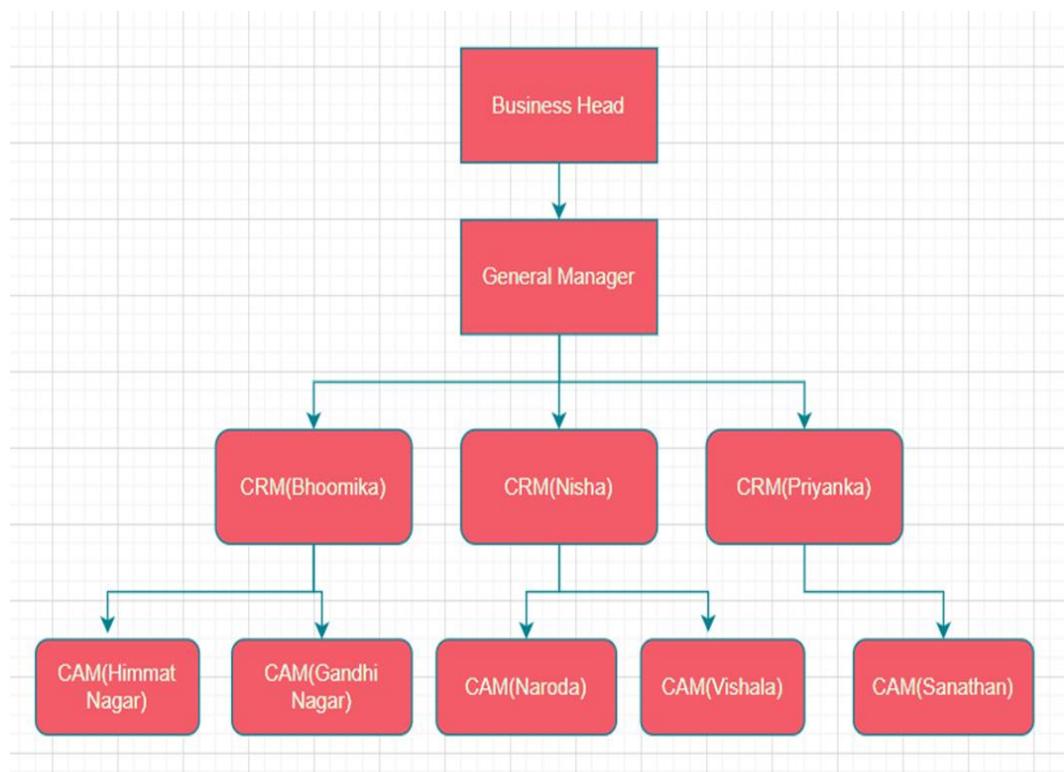


Figure 4.2: Cartec Honda Organizational Structure

4.3 Process Flow Diagram

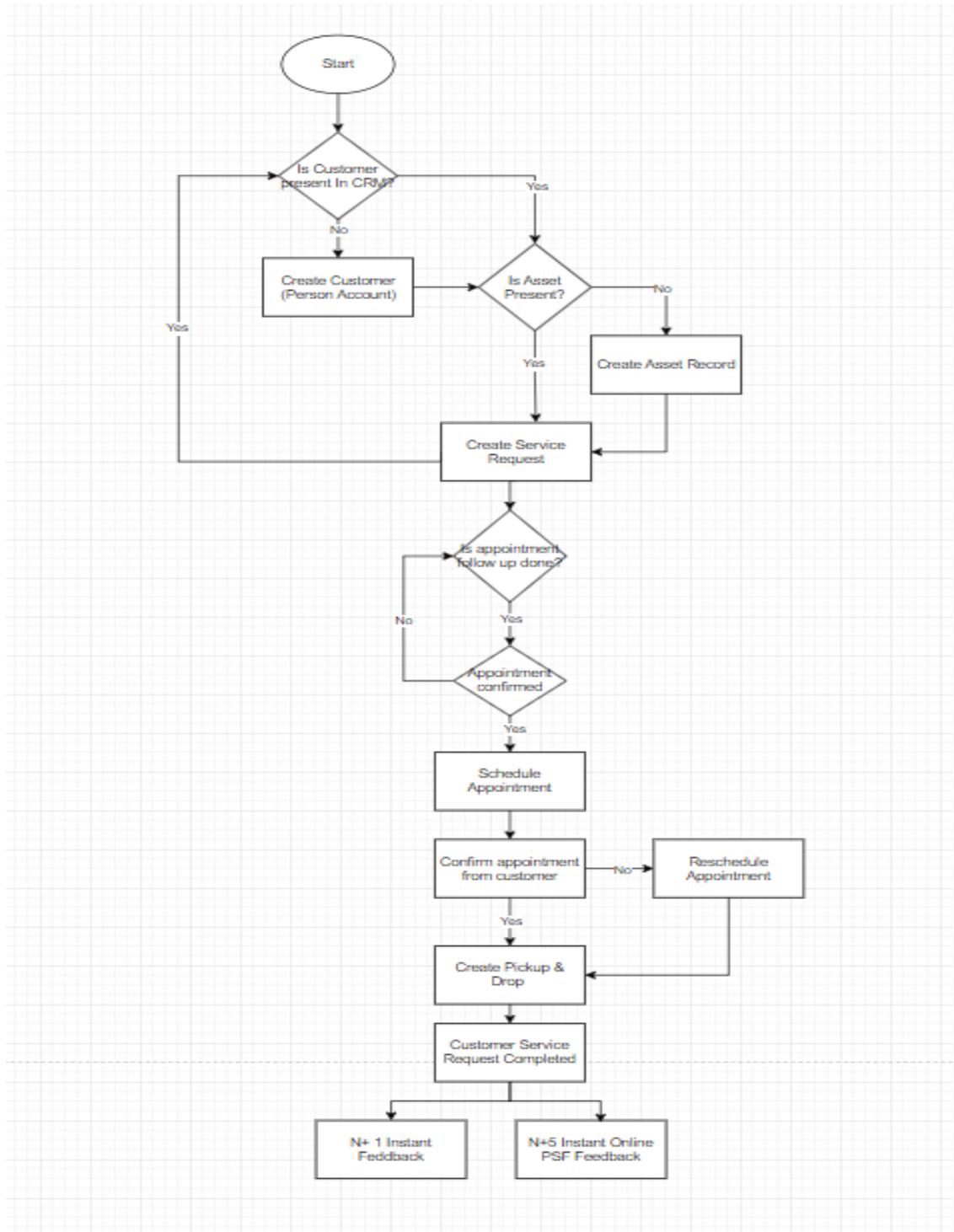


Figure 4.3 Process flow diagram

4.4 Relationship between Object (Schema builder)

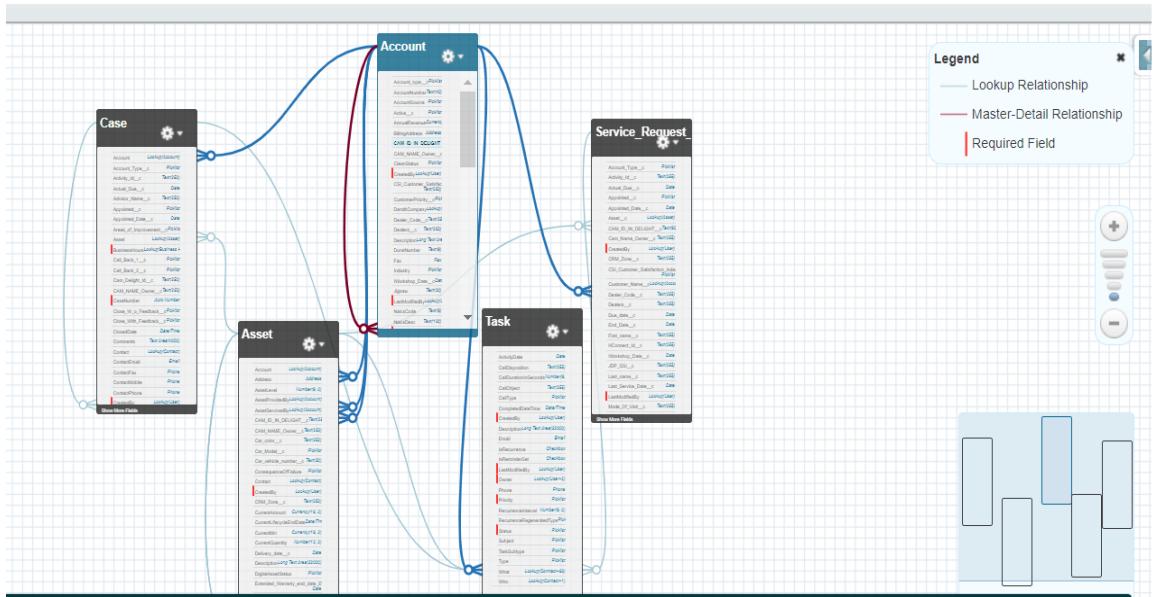


Figure 4.4: Schema builder

4.5 Activity Diagram

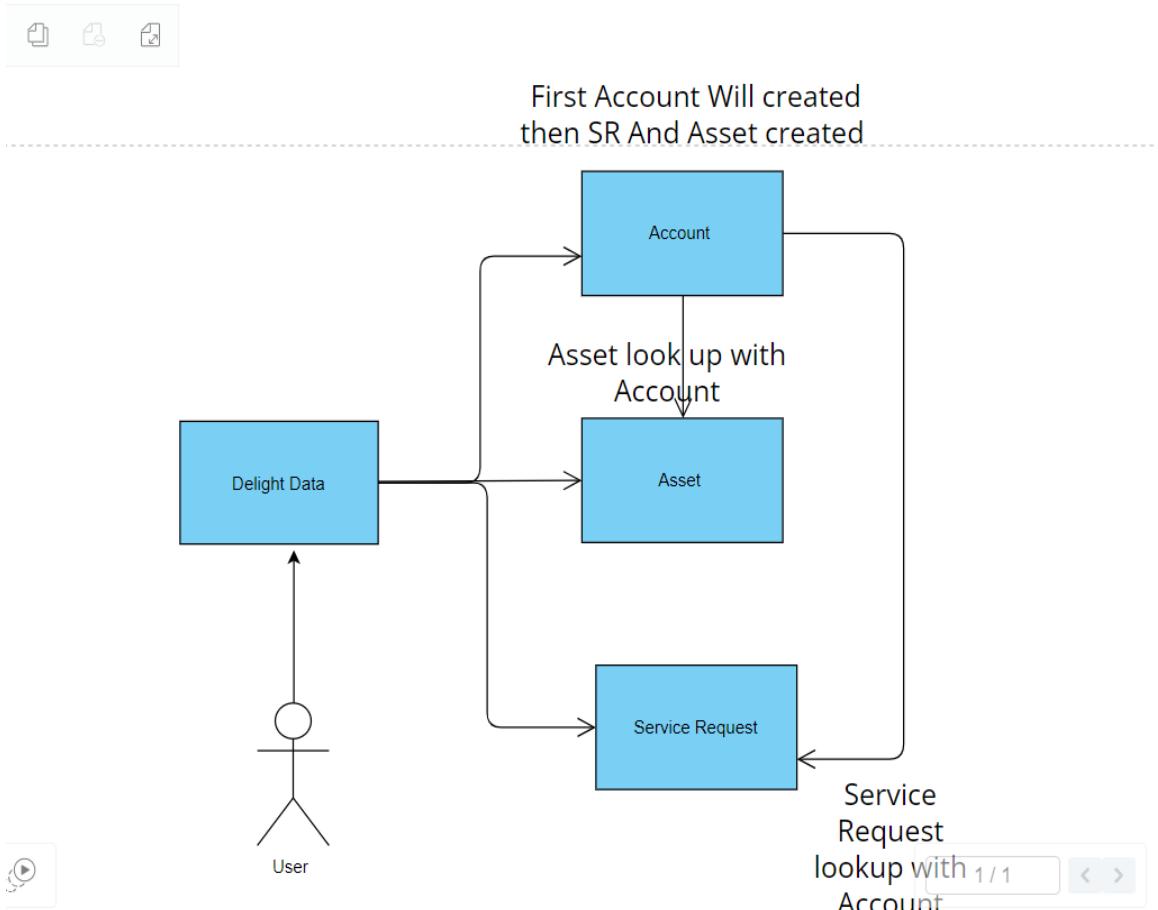


Figure 4.5: Activity diagram

CHAPTER – 5

IMPLEMENTATION

5.1 Algorithm

Step 1: Initial Planning and Requirements Gathering

- Define Project Scope and Objectives

Objective Definition: Clarify the primary goals, such as streamlining service management, enhancing customer engagement, and tracking service appointments.

Requirement Analysis: Detail the specific functionalities needed, like service date tracking, appointment scheduling, and warranty service management.

- Stakeholder Engagement

Identify Stakeholders: List all relevant parties (e.g., senior management, service managers, technicians, IT staff).

Conduct Meetings: Organize initial and ongoing meetings to understand their needs and expectations.

Documentation: Record all requirements and expectations comprehensively.

Step 2: System Design and Customization

- Design Role Hierarchy

Define Roles: Establish specific roles such as Service Manager, Technician, Customer Service Representative.

Set Permissions: Assign permissions and access levels according to each role's responsibilities.

- Data Modeling

Identify Data Entities: Recognize essential entities like Customer Information, Vehicle Details, Service Records, Appointments.

Design Relationships: Create a relational model that shows how these entities interact (e.g., a customer can have multiple vehicles, each vehicle can have multiple service records).

- Customization of Salesforce

Custom Objects and Fields: Create custom objects and fields that are not available out-of-the-box but are necessary for your specific requirements.

Page Layouts: Modify page layouts to ensure that all necessary information is easily accessible to the users.

Workflows and Automation: Set up automated workflows for tasks like sending service reminders, creating follow-up tasks, and tracking appointment status.

Validation Rules: Implement rules to ensure data integrity (e.g., ensuring that service dates cannot be set in the past).

Step 3: Data Migration and Integration

- **Data Preparation**

Data Cleaning: Remove duplicates, correct errors, and standardize data formats in the existing Excel files.

Field Mapping: Map fields in the Excel data to the corresponding fields in Salesforce.

- **Data Migration**

Import Tools: Utilize Salesforce data import wizard or Data Loader to import data.

Validation: Post-migration, check for accuracy and completeness of the data.

- **Integration with Existing Systems**

Identify Systems: Determine which existing systems (e.g., accounting software, legacy databases) need to integrate with Salesforce.

APIs and Middleware: Use Salesforce APIs or middleware solutions to connect these systems, ensuring seamless data flow.

Step 4: User Training and Testing

- **Develop Training Materials**

User Manuals: Create detailed manuals explaining how to use the new system.

Training Videos: Develop video tutorials for visual learners.

FAQs: Compile a list of frequently asked questions to quickly address common issues.

- **Conduct Training**

Hands-on Sessions: Arrange interactive training sessions where users can practice using Salesforce.

Support Channels: Set up support channels (e.g., helpdesk, forums) to assist users during and after training.

- **System Testing**

Unit Testing: Test individual components for proper functionality.

Integration Testing: Ensure that different modules work together seamlessly. User Acceptance Testing (UAT): Have end-users test the system to ensure it meets their needs and expectations.

Step 5: Deployment and Monitoring

- Go-Live Preparation

Deployment Schedule: Plan a deployment timeline to minimize operational disruption.

User Communication: Inform all users about the go-live date, new features, and support contacts.

- Deployment

Production Deployment: Move the tested solution to the live environment.

Final Synchronization: Ensure all data is up-to-date and systems are in sync.

- Post-Deployment Support

Immediate Support: Provide on-the-ground support to resolve any immediate post-deployment issues.

Performance Monitoring: Continuously monitor the system's performance and user feedback.

- Continuous Improvement

Feedback Collection: Regularly collect feedback from users and stakeholders.

Enhancements: Implement improvements based on feedback and new requirements.

Step 6: Review and Documentation

- Project Review

Performance Analysis: Compare project outcomes with initial objectives.

Lessons Learned: Document what went well and what could be improved for future projects.

- Final Documentation
 - Comprehensive Documentation: Compile all project-related documents including system design, customization details, training materials, and lessons learned.
 - Accessibility: Ensure that documentation is accessible to all relevant stakeholders for future reference.

CHAPTER-6

TESTING

6.1. Unit Testing

Unit testing focuses on individual components or units of the software to ensure they function correctly.

6.1.1: Test Case 1: Creating an Account with Phone Number

Description: This test verifies the Apex class responsible for creating an Account using a unique phone number. Ensuring that each phone number is unique guarantees no duplicate accounts.

Input: A unique phone number.

Expected Output: An Account should be created successfully with the provided phone number.

Steps:

Initialize Test Data: Prepare a phone number not currently associated with any existing account.

Invoke Apex Method: Call the Apex method designed to create an Account with this phone number.

Verify Account Creation: Check Salesforce to confirm that an Account has been created with the specified phone number.

Handle Errors: Ensure appropriate error handling is in place for cases where the phone number already exists.

6.1.2: Test Case 2: Creating an Asset with VIN Number

Description: This test focuses on verifying the creation of an Asset using a unique Vehicle Identification Number (VIN). Each asset must be uniquely identifiable by its VIN.

Input: A unique VIN number.

Expected Output: An Asset should be created with the provided VIN number.

Steps:

Initialize Test Data: Prepare a VIN number that is unique.

Invoke Apex Method: Call the Apex method responsible for creating an Asset.

Verify Asset Creation: Check Salesforce to ensure that the Asset has been created with the specified VIN.

Handle Errors: Validate that the system correctly handles cases where the VIN already exists.

6.1.3: Test Case 3: Creating a Service Request with Activity ID

Description: This test ensures that a Service Request is created using a unique Activity ID. The Activity ID uniquely identifies each service request.

Input: A unique Activity ID.

Expected Output: A Service Request should be created with the provided Activity ID.

Steps:

Initialize Test Data: Prepare a unique Activity ID.

Invoke Apex Method: Call the method to create a Service Request using the Activity ID.

Verify Service Request Creation: Ensure the Service Request is recorded in Salesforce with the correct Activity ID.

Error Handling: Confirm proper handling of duplicate Activity IDs.

6.2. Validation Testing

Validation testing ensures the system meets the end-user requirements and expectations.

6.2.1: Test Case 4: Data Upload via Data Loader

Description: Validate the functionality of uploading customer data using the Salesforce Data Loader tool.

Input: A CSV file containing customer data.

Expected Output: The data is uploaded correctly without any errors.

Steps:

Prepare CSV File: Ensure the CSV file is formatted correctly with valid data entries.

Upload Data: Use Data Loader to upload the CSV file into Salesforce.

Verify Data Upload: Check Salesforce to ensure all data has been uploaded accurately.

Error Logging: Ensure any errors during the upload process are logged and handled appropriately.

6.2.1: Test Case 5: Batch Class for Automatic Service Request Creation

Description: This test validates the batch class responsible for creating automatic Service Requests based on warranty start dates.

Input: A warranty start date for a test account.

Expected Output: Service Requests are created correctly according to the defined schedule (1 month, 6 months, and 1 year from the warranty start date).

Steps:

Set Warranty Date: Assign a warranty start date to a test account.

Run Batch Class: Execute the batch class.

Verify Service Request Creation: Check Salesforce to ensure Service Requests are created at 1 month, 6 months, and 1 year intervals.

Error Handling: Validate that the batch class handles errors, such as already existing Service Requests, correctly.

6.3. Functional Testing

Functional testing verifies that the system performs its intended functions correctly.

6.3.1: Test Case 6: Appointment Booking

Description: Test the appointment booking functionality, ensuring that appointments can be scheduled correctly and follow-up tasks are created.

Input: An appointment dates.

Expected Output: The appointment is booked successfully, and a follow-up task is created.

Steps:

Book Appointment: Use the Salesforce system to book an appointment on a specific date.

Verify Appointment Booking: Check that the appointment appears correctly in the system.

Verify Follow-up Task Creation: Ensure a follow-up task is created with the appropriate follow-up date.

Error Handling: Confirm the system handles booking conflicts and invalid dates correctly.

6.3.2: Test Case 7: Follow-up Task Creation

Description: Test the creation of follow-up tasks based on customer interactions.

Input: A follow-up date provided by the customer.

Expected Output: A follow-up task is created successfully with the correct date.

Steps:

Record Follow-up Date: During a customer call, record the follow-up date.

Verify Task Creation: Check Salesforce to ensure a task is created with the specified follow-up date.

Error Handling: Validate that the system handles invalid dates or conflicts correctly.

6.3.3: Test Case 8: Service Request Closure

Description: Ensure that service requests can be closed correctly once the service is completed.

Input: A completed service request.

Expected Output: The service request status is updated to closed.

Steps:

Complete Service Request: Mark a service request as completed.

Verify Status Update: Ensure the service request status changes to closed.

Error Handling: Confirm the system handles incorrect status updates appropriately.

6.4. Integration Testing

Integration testing checks the interaction between different components or systems.

6.4.1: Test Case 9: Data Loader Integration

Description: Test the integration of Data Loader with Salesforce for seamless data uploads.

Input: A CSV file containing multiple customer records.

Expected Output: All records are uploaded correctly and are accessible within Salesforce.

Steps:

Prepare CSV File: Ensure the file contains multiple valid customer records.

Upload Data: Use Data Loader to upload the CSV file.

Verify Records: Check Salesforce to ensure all records are uploaded and correctly linked.

Error Handling: Validate the system's handling of upload errors and data inconsistencies.

6.4.2: Test Case 10: Interaction Between Accounts, Assets, and Service Requests

Description: Test the interaction and relationship between Accounts, Assets, and Service Requests.

Input: Customer data including phone number, VIN number, and Activity ID.

Expected Output: Accounts, Assets, and Service Requests are correctly related.

Steps:

Create Account: Use a phone number to create an account.

Create Asset: Use a VIN number to create an asset linked to the account.

Create Service Request: Use an Activity ID to create a service request linked to the account and asset.

Verify Relationships: Ensure the relationships between the objects are correctly reflected in Salesforce.

Error Handling: Confirm that the system correctly handles errors, such as missing links or invalid IDs.

6.4.3: Test Case 11: End-to-End Process Flow

Description: Test the complete process flow from data upload to service request creation and appointment booking.

Input: Customer data file.

Expected Output: Data is uploaded, Service Requests are created, and appointments are booked successfully.

Steps:

Upload Data: Use Data Loader to upload a customer data file.

Verify Data Upload: Ensure all data is accurately uploaded and visible in Salesforce.

Verify Account Creation: Check that accounts are created correctly from the uploaded data.

Verify Asset Creation: Ensure assets are linked to the appropriate accounts.

Verify Service Request Creation: Confirm that service requests are created and linked to the correct accounts and assets.

Book Appointment: Schedule an appointment using the system.

Verify Appointment and Follow-up Task: Ensure the appointment is booked and a follow-up task is created.

Error Handling: Validate the system's handling of errors throughout the process.

CHAPTER - 7

SNAPSHOTS

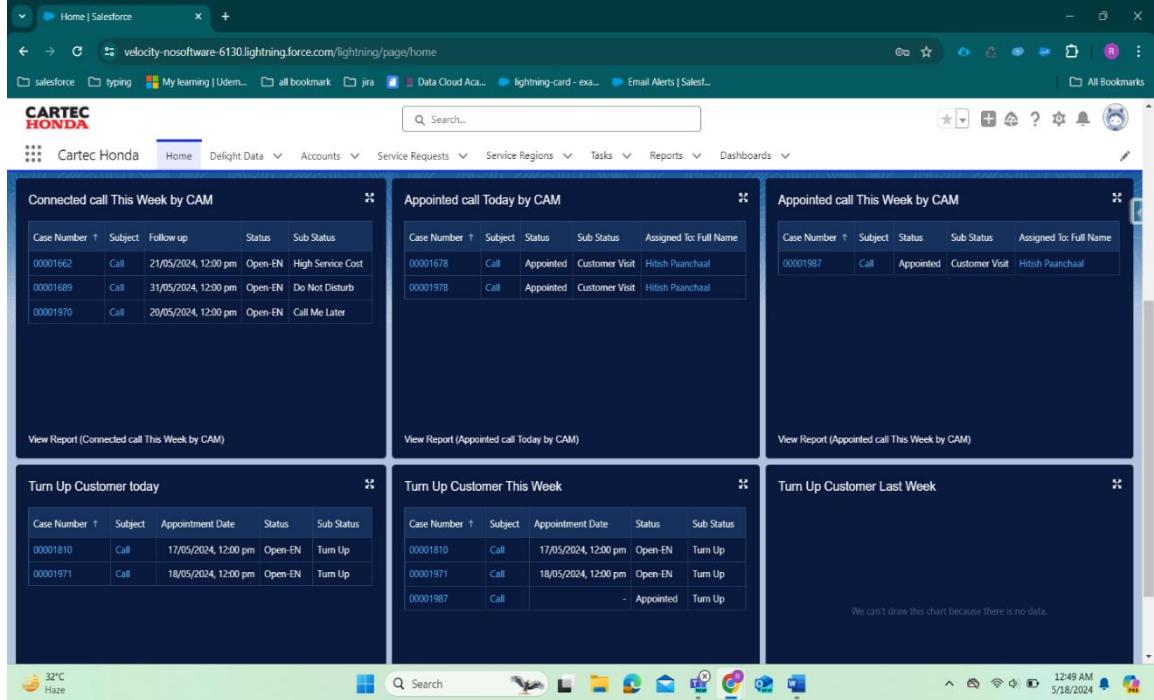


Figure 7.1 Home Page

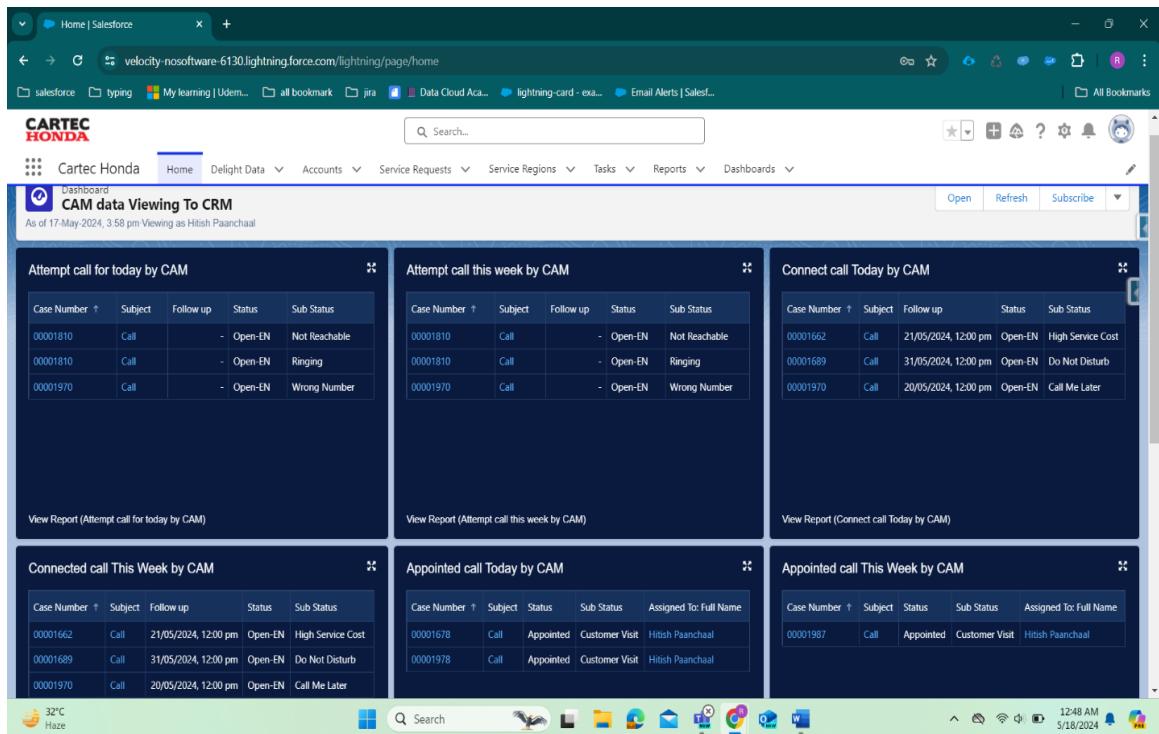


Figure 7.2 Home Page Dashboard

Current Month data | Delight Data

velocity-nosoftware-6130.lightning.force.com/lightning/o/Service_Request__c/list?filterName=00BHp00000FB6qyMAD

Cartec Honda Home Delight Data Accounts Service Requests Service Regions Tasks Reports Dashboards

Delight Data

Current Month data

50+ items • Sorted by Service Request Name • Filtered by All delight data - Created Date • Updated a few seconds ago

| | Service Re... | Dealer Code | First name | Last name | Phone | Owner Fir... | Due date | Account Type | Created Date |
|----|---------------------------------|-----------------|---------------------|-------------|--------|--------------|-------------|----------------------|--------------|
| 1 | <input type="checkbox"/> SR-670 | oo | tt | 7655567000 | Hitish | 30/03/2024 | Potential-C | 02/05/2024, 12:40 pm | |
| 2 | <input type="checkbox"/> SR-671 | oo | tt | 7655567000 | Hitish | 30/03/2024 | Potential-C | 02/05/2024, 12:44 pm | |
| 3 | <input type="checkbox"/> SR-672 | oo | tt | 7655567000 | Hitish | 30/03/2024 | Potential-C | 02/05/2024, 12:46 pm | |
| 4 | <input type="checkbox"/> SR-673 | Rahul CHANDULAL | RADHANPARA | 9879929400 | Hitish | 29/02/2024 | Engage | 02/05/2024, 4:54 pm | |
| 5 | <input type="checkbox"/> SR-674 | Ramesh | Shah | 9898153229 | Hitish | | Potential-C | 02/05/2024, 4:54 pm | |
| 6 | <input type="checkbox"/> SR-675 | Rohit | Shashikant Shah | 9824011683 | Hitish | | Potential-C | 02/05/2024, 4:54 pm | |
| 7 | <input type="checkbox"/> SR-676 | Praetek | test | 9714943199 | Hitish | | Potential-C | 02/05/2024, 4:54 pm | |
| 8 | <input type="checkbox"/> SR-677 | Lovely | DINESHCHANDRA PATEL | 9725255824 | Hitish | | Potential-C | 02/05/2024, 4:54 pm | |
| 9 | <input type="checkbox"/> SR-678 | rohit | T. KANZARIYA | 9924432992 | Hitish | | Potential-C | 02/05/2024, 4:54 pm | |
| 10 | <input type="checkbox"/> SR-679 | sambhavi | SHUKLA | 9825051625 | Hitish | | Engage | 02/05/2024, 4:54 pm | |
| 11 | <input type="checkbox"/> SR-680 | Rajat | VIPUL PANDIT | 7201970569 | Hitish | | Engage | 02/05/2024, 4:54 pm | |
| 12 | <input type="checkbox"/> SR-681 | DD363 | a1 | 9876555670 | Nisha | | Potential-C | 03/05/2024, 6:05 pm | |
| 13 | <input type="checkbox"/> SR-682 | DD363 | a2 | 9874655670 | Nisha | | Potential-C | 03/05/2024, 6:05 pm | |
| 14 | <input type="checkbox"/> SR-683 | DD363 | a3 | 98765565681 | Nisha | | Potential-C | 03/05/2024, 6:05 pm | |
| 15 | <input type="checkbox"/> SR-684 | DD363 | a4 | 9876755682 | Nisha | | Potential-C | 03/05/2024, 6:05 pm | |

32°C Haze

Search

12:49 AM 5/18/2024

Figure 7.3 Delight Data Record Page

All | Delight Data | Salesforce

velocity-nosoftware-6130.lightning.force.com/lightning/o/Service_Request__c/list?filterName=00BHp00000FB6qyMAD

Cartec Honda Home Delight Data Accounts Service Requests Service Regions Tasks Reports Dashboards

Delight Data

All

50+ items • Sorted by Service Request Name • Filtered by All delight data • Updated a few seconds ago

| | Service Re... | Dealer Code | First name | Last name | Phone | Owner First... | Due date | Account Type | Cam Nam... |
|----|---------------------------------|-------------|------------------|---------------------|------------|----------------|------------|--------------|------------|
| 1 | <input type="checkbox"/> SR-483 | DD237 | MITESH CHANDULAL | RADHANPARA | 9978929400 | Hitish | 29/02/2024 | Engage | |
| 2 | <input type="checkbox"/> SR-484 | DD237 | MITESH CHANDULAL | Shah | 9898153229 | Hitish | 29/02/2024 | Engage | |
| 3 | <input type="checkbox"/> SR-485 | DD237 | MITESH CHANDULAL | Shashikant Shah | 9824011683 | Hitish | 27/02/2024 | Engage | |
| 4 | <input type="checkbox"/> SR-486 | DD237 | MITESH CHANDULAL | - | 9714943199 | Hitish | 25/02/2024 | Engage | |
| 5 | <input type="checkbox"/> SR-487 | DD237 | MITESH CHANDULAL | DINESHCHANDRA PATEL | 9725255824 | Hitish | 25/02/2024 | Engage | |
| 6 | <input type="checkbox"/> SR-488 | DD237 | MITESH CHANDULAL | T. KANZARIYA | 9924432992 | Hitish | 24/02/2024 | Engage | |
| 7 | <input type="checkbox"/> SR-489 | DD237 | MITESH CHANDULAL | SHUKLA | 9825051625 | Hitish | 22/02/2024 | Engage | |
| 8 | <input type="checkbox"/> SR-490 | DD237 | MITESH CHANDULAL | VIPUL PANDIT | 7201970569 | Hitish | 22/02/2024 | Engage | |
| 9 | <input type="checkbox"/> SR-491 | DD237 | MITESH CHANDULAL | V Barot | 9974371608 | Hitish | 21/02/2024 | Engage | |
| 10 | <input type="checkbox"/> SR-492 | DD237 | MITESH CHANDULAL | Kailash Chhapia | 9825586460 | Hitish | 21/02/2024 | Engage | |
| 11 | <input type="checkbox"/> SR-493 | DD237 | MITESH CHANDULAL | PATEL | 7600646744 | Hitish | 21/02/2024 | Engage | |
| 12 | <input type="checkbox"/> SR-494 | DD237 | MITESH CHANDULAL | D. GAJAR | 9825068142 | Hitish | 21/02/2024 | Engage | |
| 13 | <input type="checkbox"/> SR-495 | DD237 | MITESH CHANDULAL | BABULAL KHATRI | 9924346777 | Hitish | 20/02/2024 | Engage | |
| 14 | <input type="checkbox"/> SR-496 | DD237 | MITESH CHANDULAL | - | 9601451424 | Hitish | 20/02/2024 | Engage | |
| 15 | <input type="checkbox"/> SR-497 | DD237 | MITESH CHANDULAL | HARIPRASAD MUNDRA | 9426172072 | Hitish | 15/02/2024 | Engage | |

32°C Haze

Search

12:49 AM 5/18/2024

Figure 7.4 Delight Data All List View

The screenshot shows the Delight Data Record Page in Salesforce Lightning. The URL is velocity-nosoftware-6130.lightning.force.com/lightning/r/Service_Request__c/a05Hp0000142uVEIA!/view. The page title is SR-483 | Delight Data | Salesfo... The header includes the Cartec Honda logo and navigation links for Home, Delight Data, Accounts, Service Requests, Service Regions, Tasks, Reports, and Dashboards. The main content area displays the details of Service Request SR-483, including fields like VIN, Vehicle Registration No., Activity Id, Dealers, HConnect Id, Region, Owner, Customer Name, Account Type, Asset, Dealer Code, and Cam Name/Owner. To the right is an 'Activity' sidebar with tabs for New Contact, Edit, and New Opportunity, and a section for Upcoming & Overdue activities. The status bar at the bottom shows the date and time as 5/18/2024 12:50 AM.

Figure 7.5 Delight Data Record Page

The screenshot shows the Account All List View in Salesforce Lightning. The URL is velocity-nosoftware-6130.lightning.force.com/lightning/o/Account/list?filterName=008Hp00000luZzmMAF. The page title is All Accounts | Accounts | Salesfo... The header includes the Cartec Honda logo and navigation links for Home, Delight Data, Accounts, Service Requests, Service Regions, Tasks, Reports, and Dashboards. The main content area displays a list of accounts, with the first 102 entries shown in the table below:

| Account Name | Phone | Type | Owner First Name | Owner Last Name |
|------------------------------------|------------|------|------------------|-----------------|
| 88 MITESH CHANDUL BABULAL KHATRI | 9924346777 | | Hitish | Paanchal |
| 89 MITESH CHANDUL Bansal | 9925045294 | | Hitish | Paanchal |
| 90 MITESH CHANDUL BAROT | 9898515173 | | Hitish | Paanchal |
| 91 MITESH CHANDUL BHATI | 9429707999 | | Hitish | Paanchal |
| 92 MITESH CHANDUL BHATIA | 7041034121 | | Hitish | Paanchal |
| 93 MITESH CHANDUL Bhimraj Sonegara | 9825598322 | | Hitish | Paanchal |
| 94 MITESH CHANDUL CHAUHAN | 9428975992 | | Hitish | Paanchal |
| 95 MITESH CHANDUL CHIMANBHAI DIXIT | 7879773260 | | Hitish | Paanchal |
| 96 MITESH CHANDUL Chirubhai Raval | 9925091930 | | Hitish | Paanchal |
| 97 MITESH CHANDUL CHUDASAMA | 9662678907 | | Hitish | Paanchal |
| 98 MITESH CHANDUL D PATEL | 9979415961 | | Hitish | Paanchal |
| 99 MITESH CHANDUL D Sahayta | 9825032578 | | Hitish | Paanchal |
| 100 MITESH CHANDUL D SHAH | 9998456111 | | Hitish | Paanchal |
| 101 MITESH CHANDUL D. GAJAR | 9825068142 | | Hitish | Paanchal |
| 102 MITESH CHANDUL DARSHIT SHAH | 9909265556 | | Hitish | Paanchal |

Figure 7.6 Account All List View

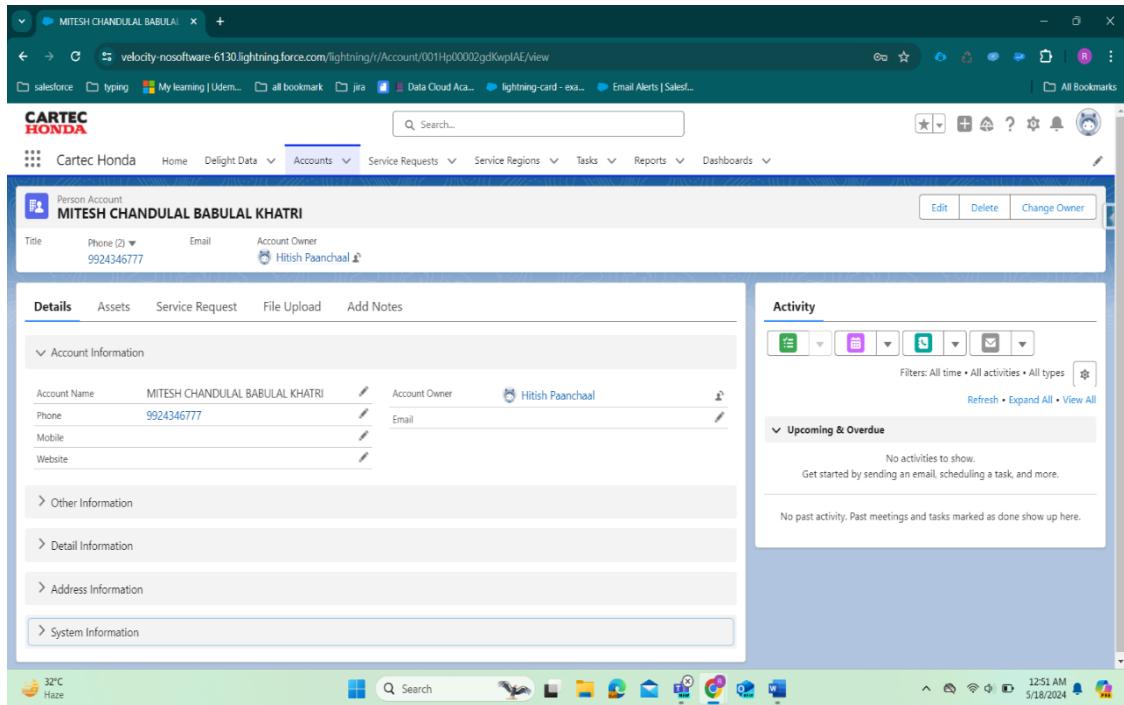


Figure 7.7 Account Record Page

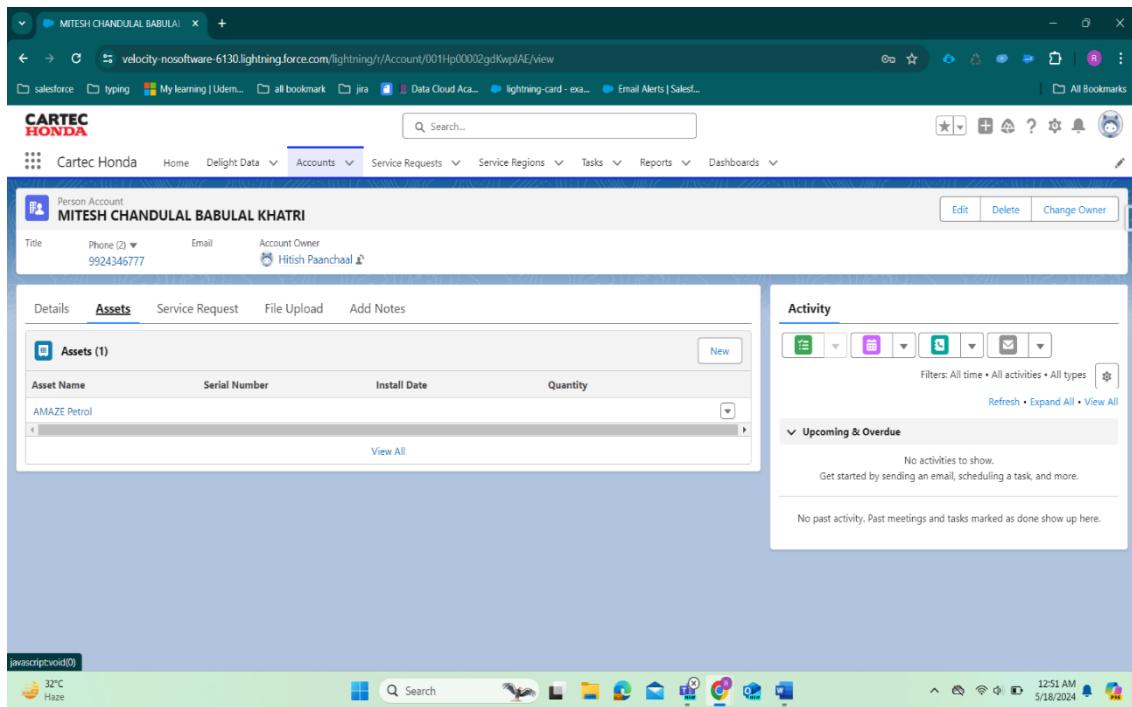


Figure 7.8 Account Related List

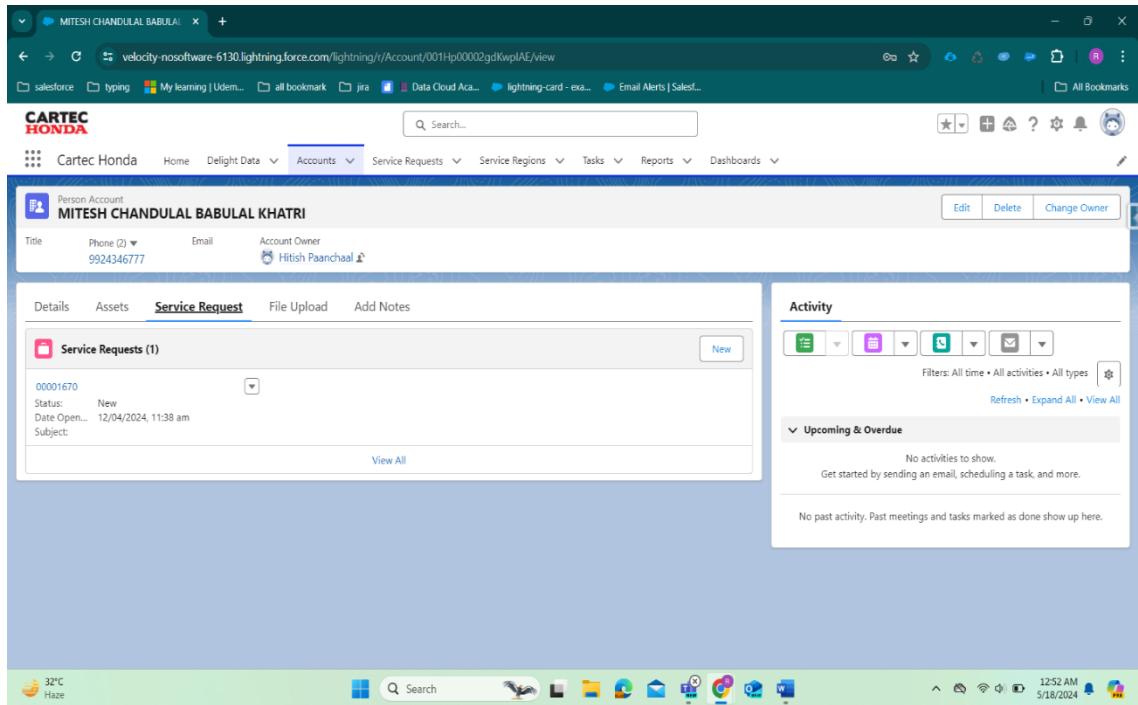


Figure 7.9 Account Service Request

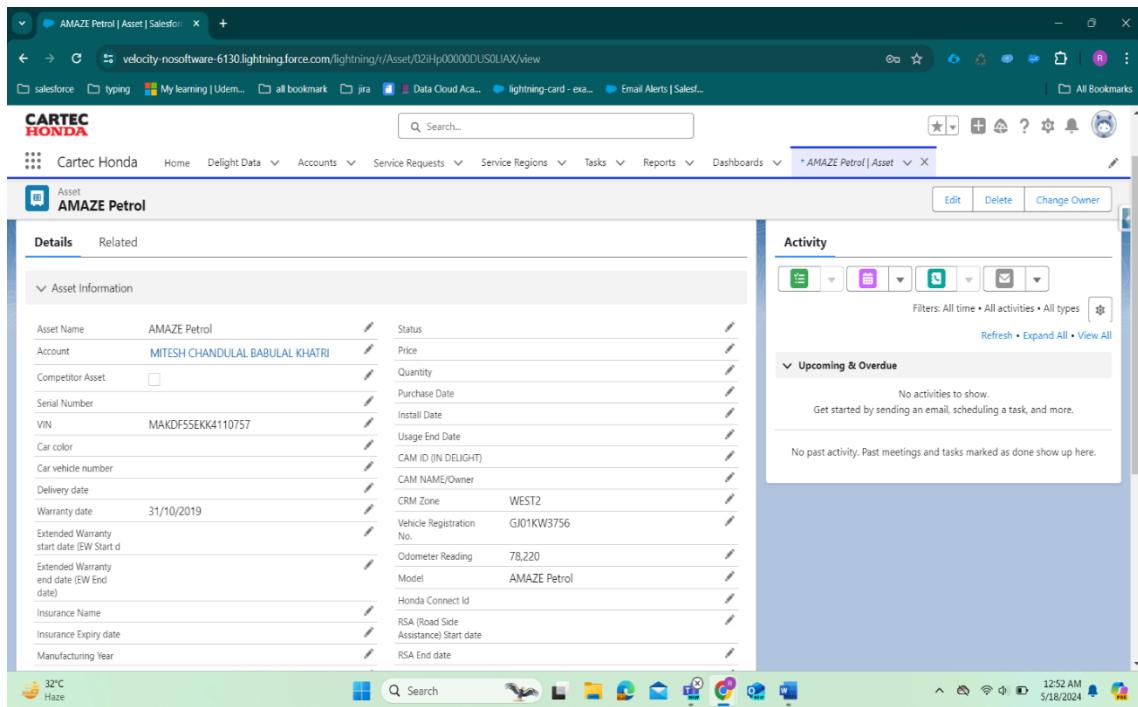


Figure 7.10 Asset

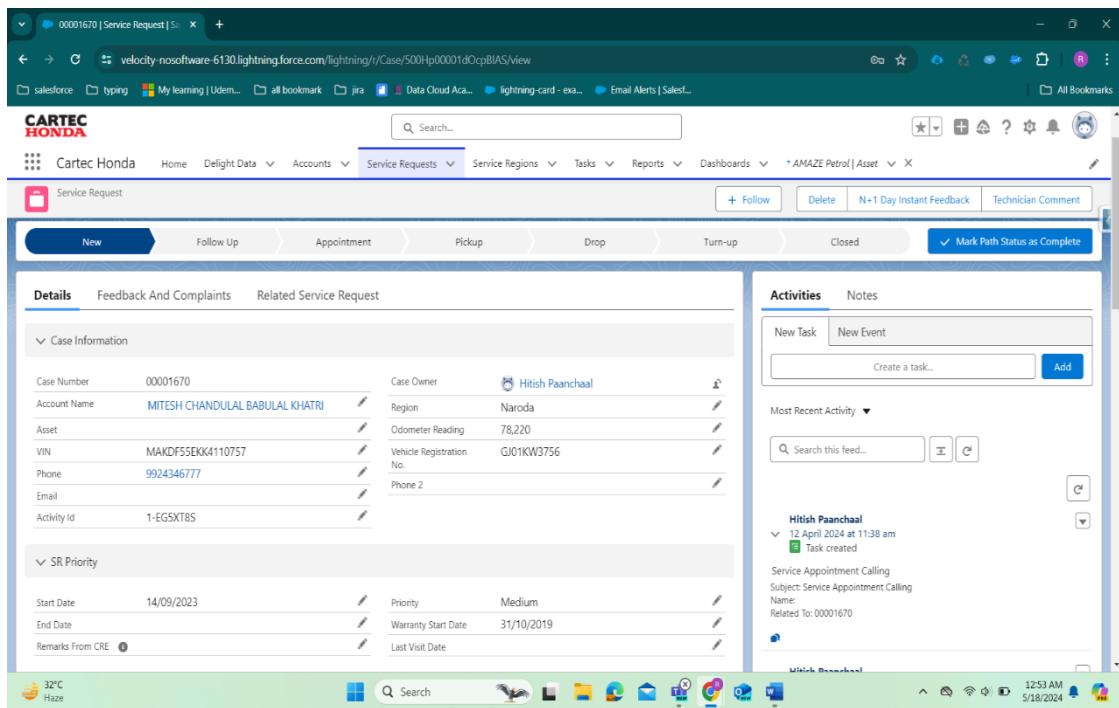


Figure 7.11 Service Request Record Page

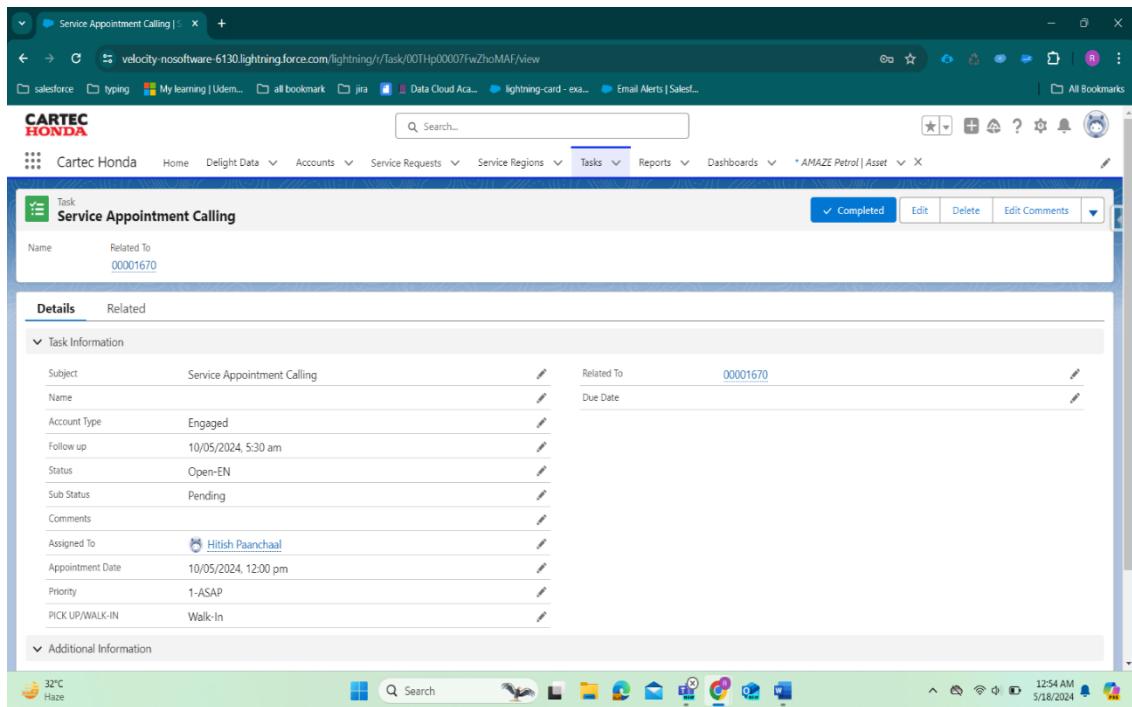


Figure 7.12 Task Record Page

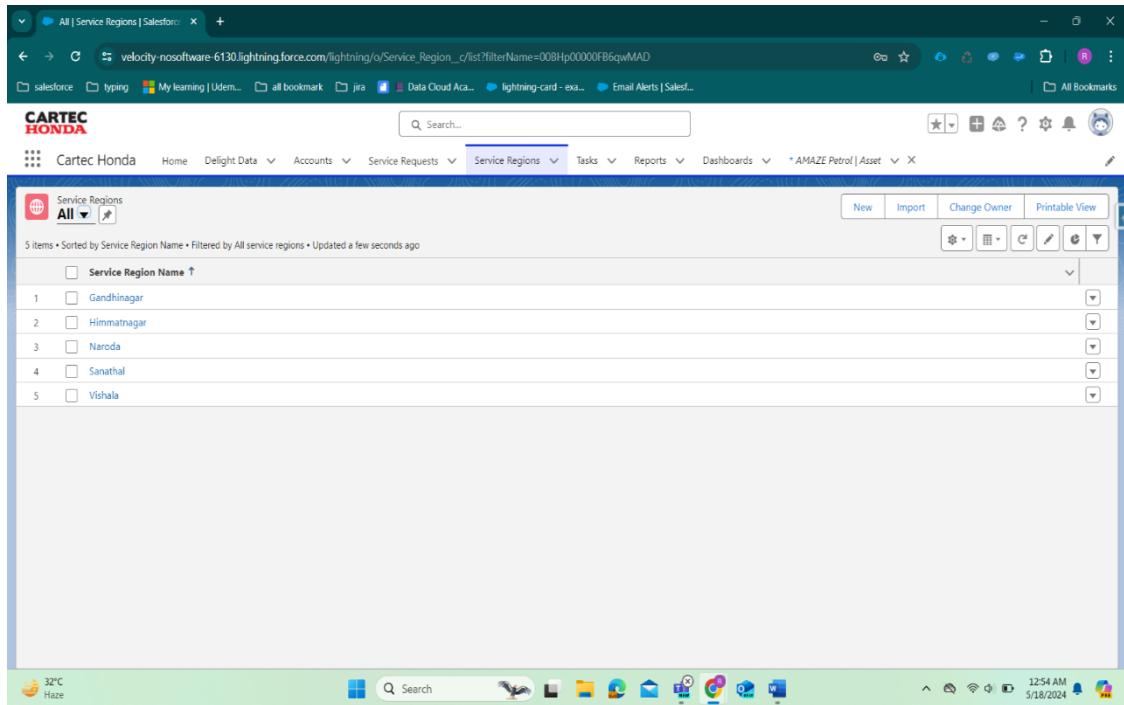


Figure 7.13 Service Request List

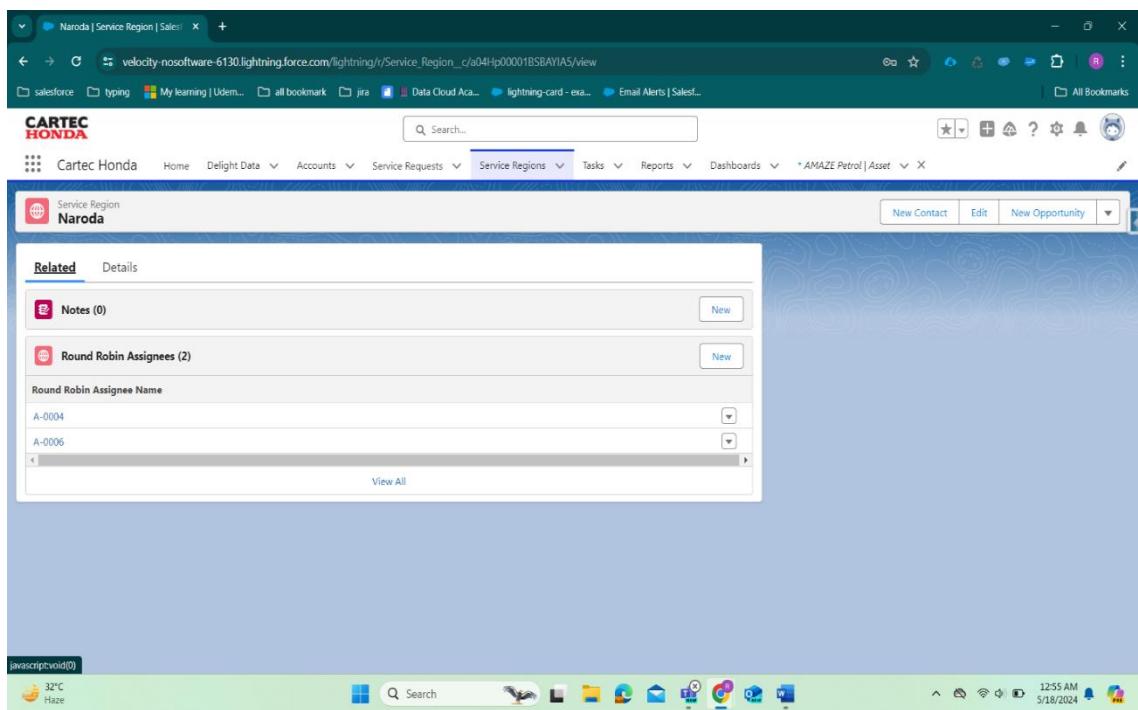


Figure 7.14 Service Request Related List

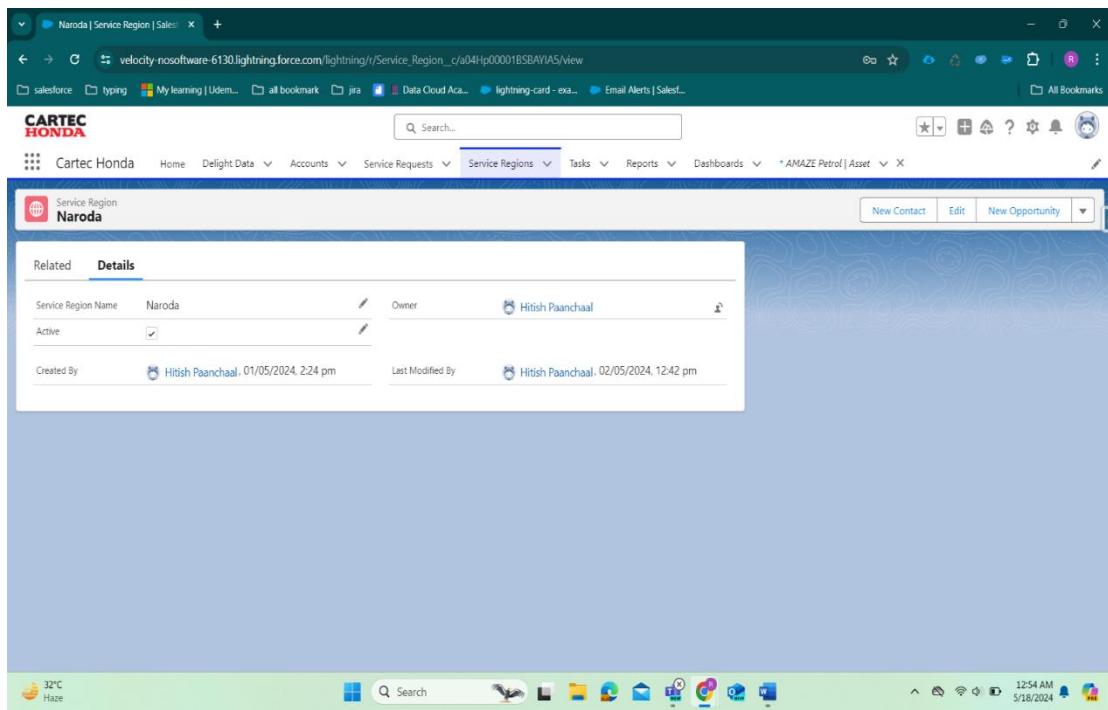


Figure 7.15 Service Request Detail Page

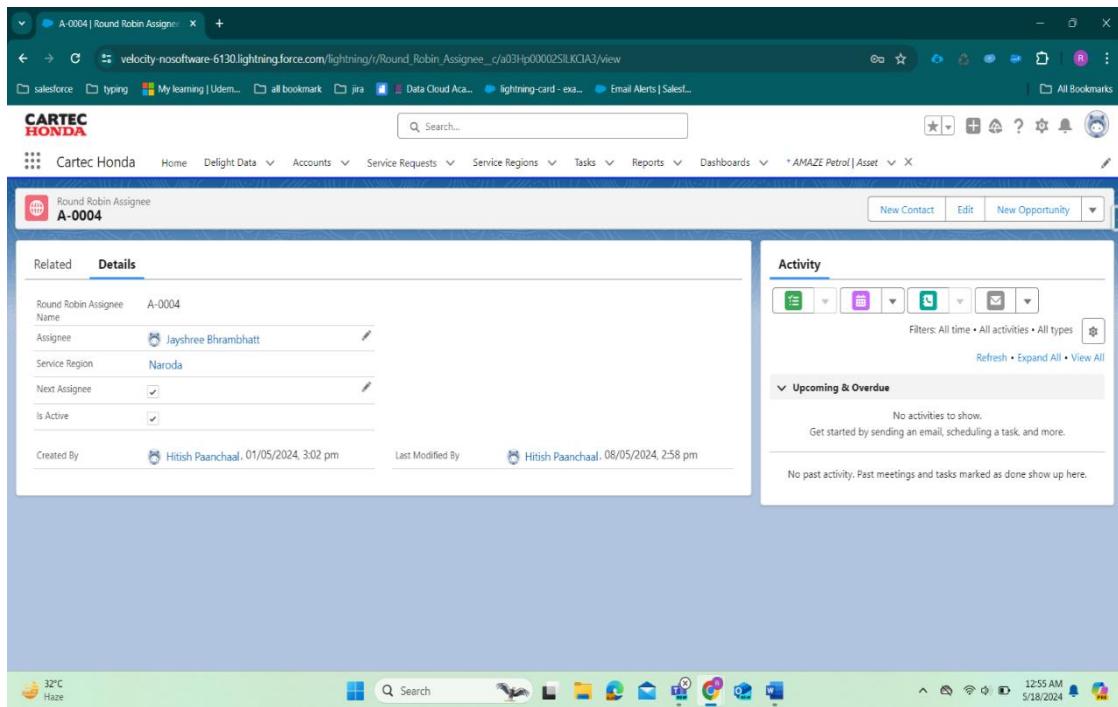


Figure 7.16 Round Robin Assignee Record Page

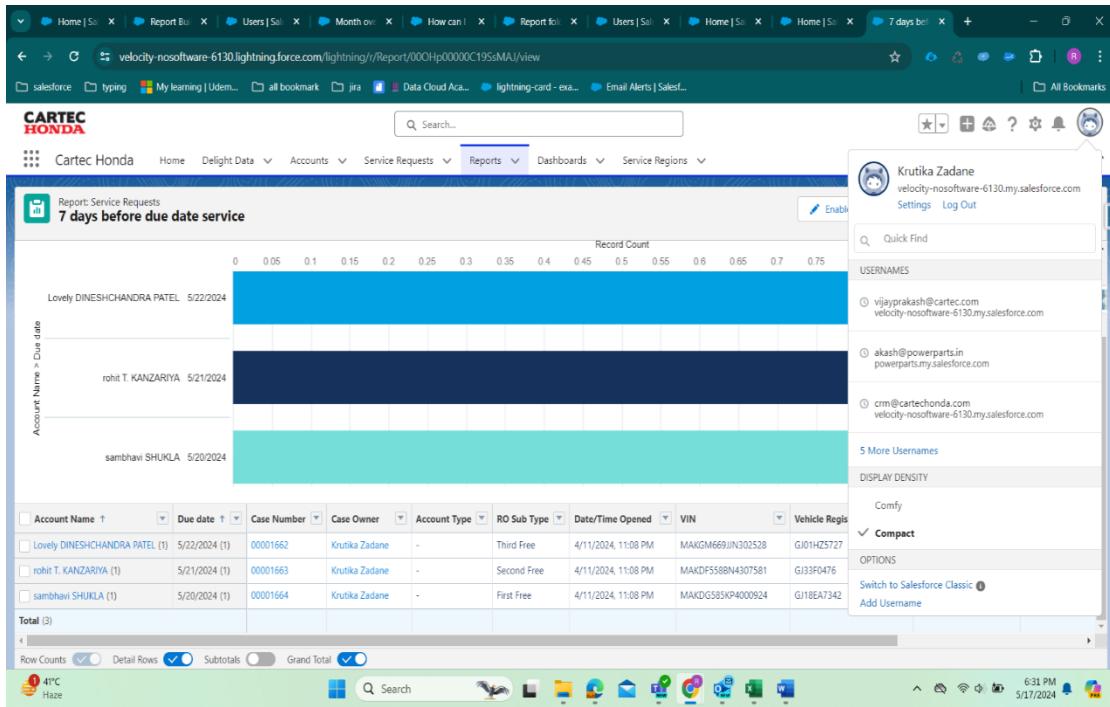


Figure 7.17 Report (7 days before service due date)

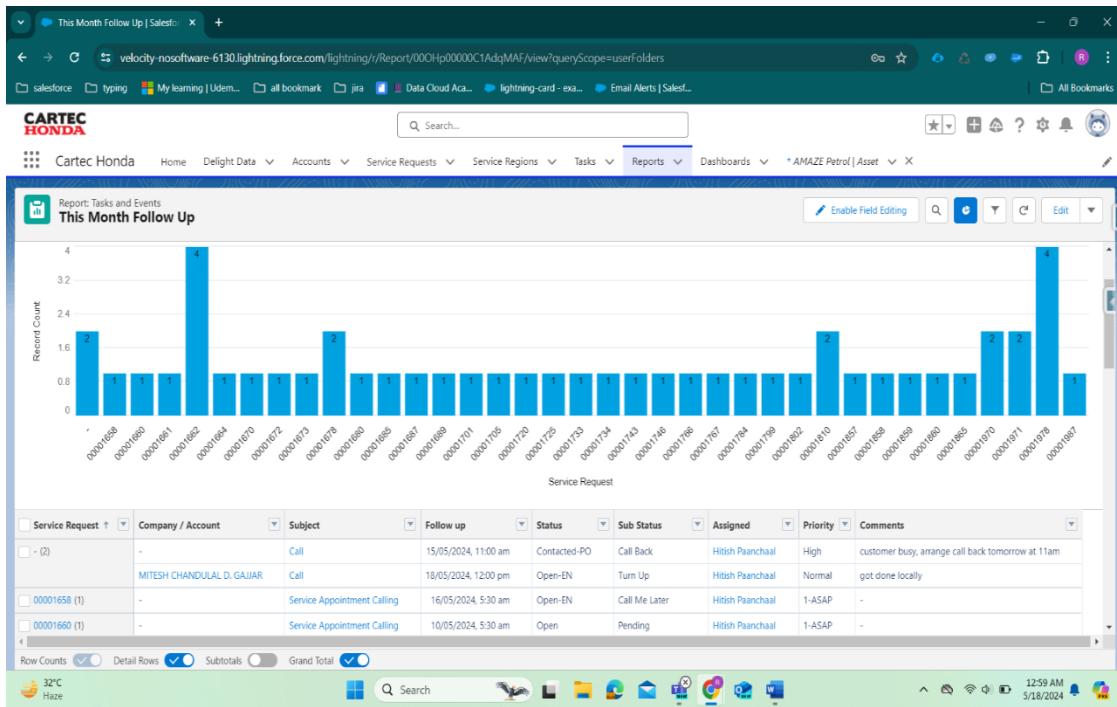


Figure 7.18 Report (This month follow up)

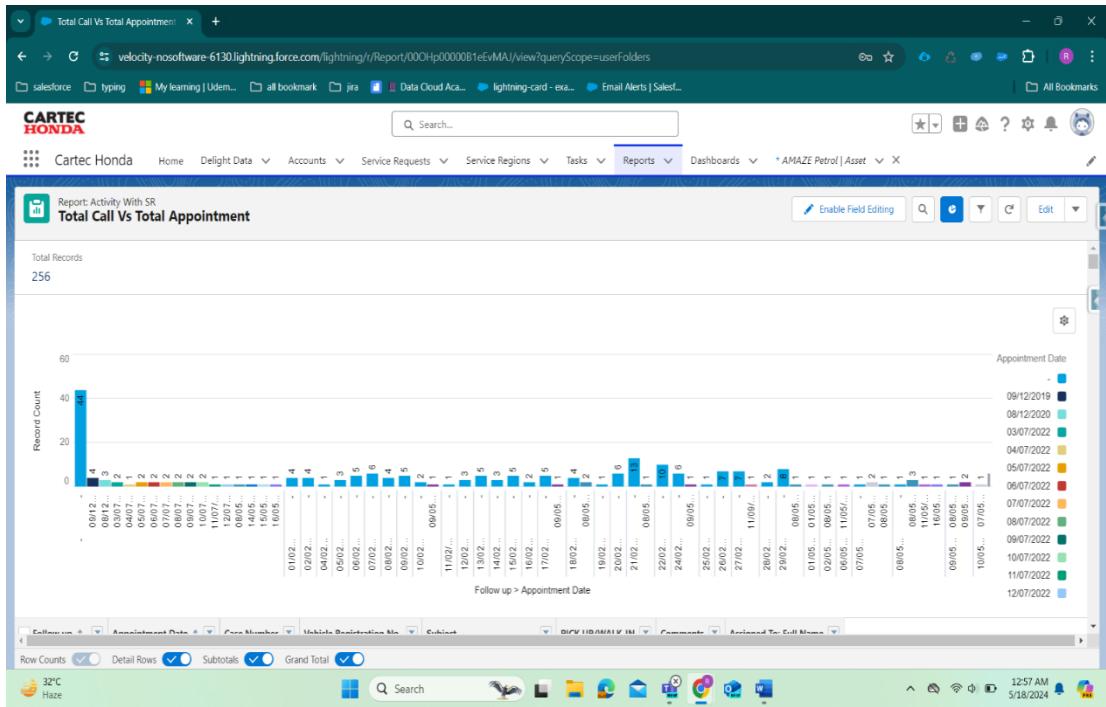


Figure 7.19 Report (Total call vs total appointment)

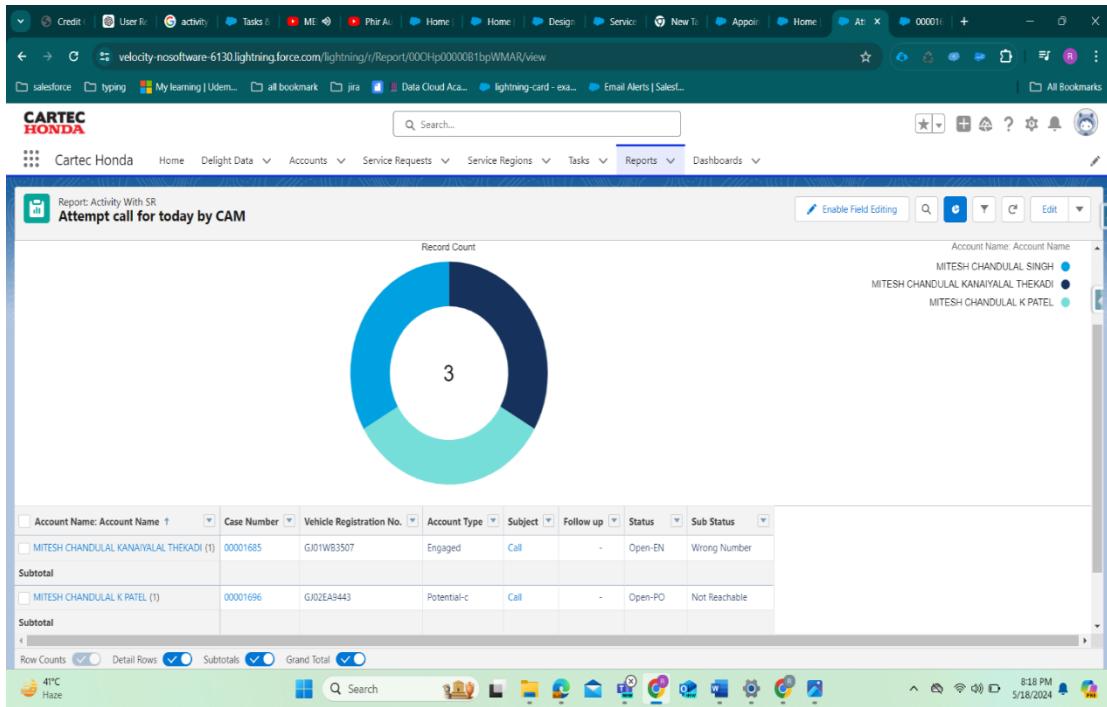


Figure 7.20 Report (Attempt call for today by CAM)

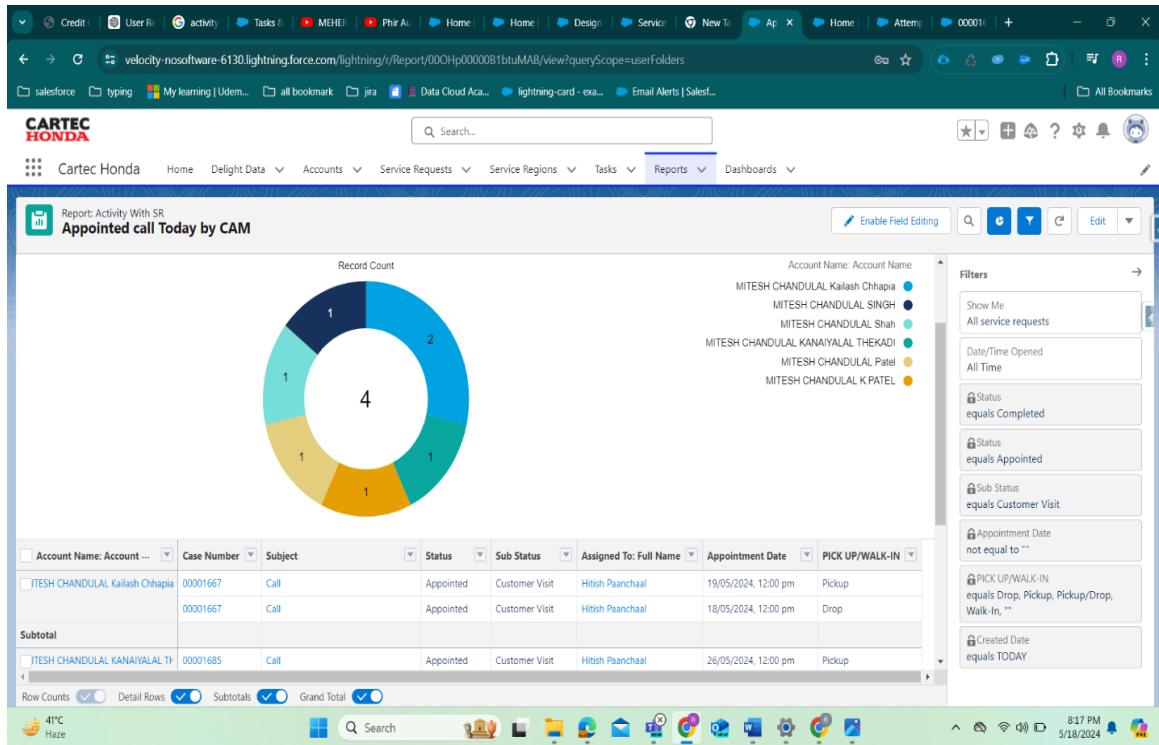


Figure 7.21 Report (Appointed call by today by CAM)

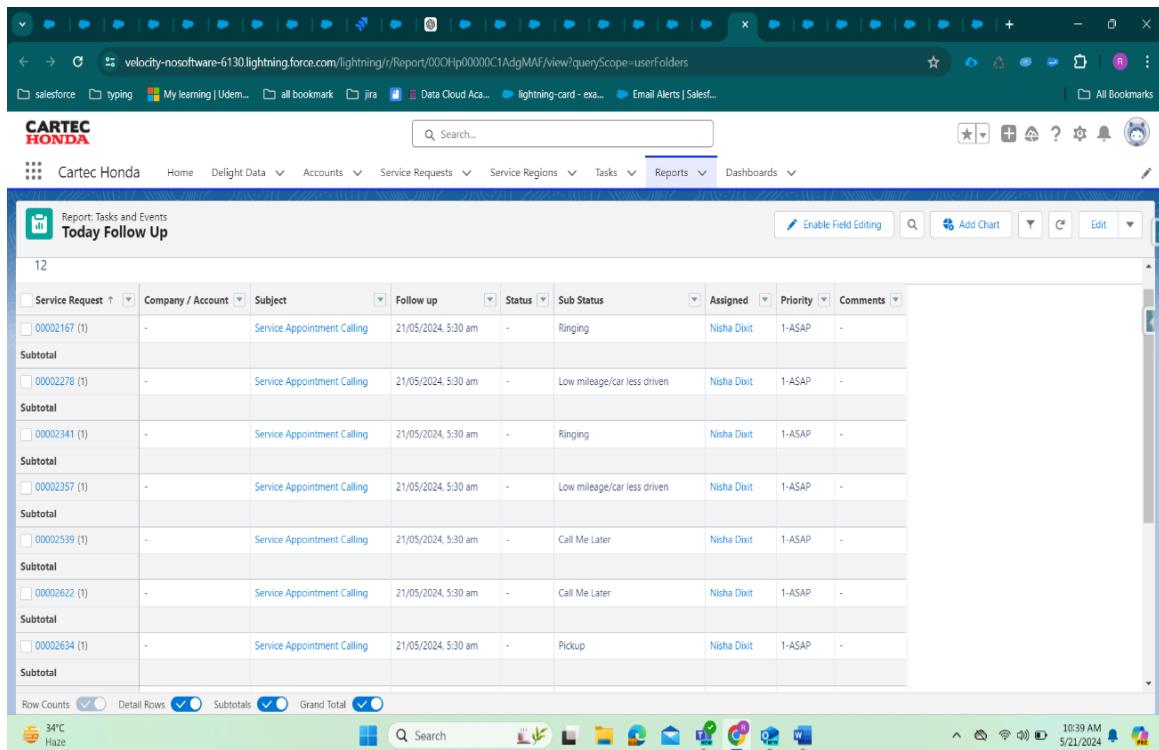


Figure 7.22 Report(Today Follow Up)

This Month Follow Up

| Service Request | Company / Account | Subject | Follow up | Status | Sub Status | Assigned | Priority | Comments |
|-----------------|-------------------|-----------------------------|---------------------|--------|-----------------------------|-------------|----------|----------|
| 00001994 (1) | - | Service Appointment Calling | 13/05/2024, 5:30 am | - | Low mileage/car less driven | Nisha Dixit | 1-ASAP | - |
| 00001995 (1) | - | Service Appointment Calling | 11/05/2024, 5:30 am | - | Pick & Drop | Nisha Dixit | No value | - |
| 00001996 (1) | - | Service Appointment Calling | 11/05/2024, 5:30 am | - | Pick & Drop | Nisha Dixit | No value | - |
| 00001999 (1) | - | Service Appointment Calling | 30/05/2024, 5:30 am | - | Pickup | Nisha Dixit | 1-ASAP | - |
| 00002002 (1) | - | Service Appointment Calling | 16/05/2024, 5:30 am | - | Pickup | Nisha Dixit | 1-ASAP | - |
| 00002004 (1) | - | Service Appointment Calling | 02/05/2024, 5:30 am | - | Pick & Drop | Nisha Dixit | 1-ASAP | - |
| 00002006 (1) | - | Service Appointment Calling | 09/05/2024, 5:30 am | - | Customer Visit | Nisha Dixit | 1-ASAP | - |
| 00002007 (1) | - | Service Appointment Calling | 13/05/2024, 5:30 am | - | Pickup | Nisha Dixit | 1-ASAP | - |
| 00002008 (1) | - | Service Appointment Calling | 12/05/2024, 5:30 am | - | Pick & Drop | Nisha Dixit | 1-ASAP | - |
| 00002010 (1) | - | Service Appointment Calling | 18/05/2024, 5:30 am | - | Pick & Drop | Nisha Dixit | 1-ASAP | - |
| 00002017 (1) | - | Service Appointment Calling | 26/05/2024, 5:30 am | - | Low mileage/car less driven | Nisha Dixit | 1-ASAP | - |
| 00002018 (1) | - | Service Appointment Calling | 22/05/2024, 5:30 am | - | Low mileage/car less driven | Nisha Dixit | 1-ASAP | - |
| 00002022 (1) | - | Service Appointment Calling | 07/05/2024, 5:30 am | - | Call Me Later | Nisha Dixit | 1-ASAP | - |
| 00002025 (1) | - | Service Appointment Calling | 15/05/2024, 5:30 am | - | Pickup | Nisha Dixit | 1-ASAP | - |
| 00002026 (1) | - | Service Appointment Calling | 03/05/2024, 5:30 am | - | Pickup | Nisha Dixit | 1-ASAP | - |

Figure 7.23 Report(This Month Follow Up)

Report: Service Requests
Next Month Due Data

| Total Records | 95 | | | | | | | | |
|----------------|------------------------------------|---------|---------------------|-----|-------------------------------------|--------------------------|------------|-------------------|---|
| Case Owner | Account Name | Subject | Date/Time Opened | Age | Open | Closed | Due date | Last Service Date | Remarks |
| 1 Nisha Dixit | KETANKUMAR N PATEL | - | 02/05/2024, 4:16 pm | 476 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 27/06/2024 | - | - |
| 2 Nisha Dixit | Ashokbhai Bhavanbhai Patel | - | 02/05/2024, 4:16 pm | 476 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 11/06/2024 | - | Please Enter Name,Mobile Number and Registration Number |
| 3 Nisha Dixit | SUBHASHKUMAR PATEL | - | 02/05/2024, 4:16 pm | 476 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 13/06/2024 | - | - |
| 4 Nisha Dixit | DESAI SURESHKUMAR HARIBHAI | - | 02/05/2024, 4:16 pm | 476 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 21/06/2024 | - | Please Enter Name,Mobile Number and Registration Number |
| 5 Nisha Dixit | PODAR EDUCATION AND SPORTS TRUST . | - | 02/05/2024, 4:16 pm | 476 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 11/06/2024 | - | Please Enter Name,Mobile Number and Registration Number |
| 6 Nisha Dixit | BHARDWAJINAH D. RATHOD | - | 02/05/2024, 4:16 pm | 476 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 14/06/2024 | - | Please Enter Name,Mobile Number and Registration Number |
| 7 Nisha Dixit | Nimeskumar Mahendrabhai Salvi | - | 02/05/2024, 4:16 pm | 476 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 15/06/2024 | - | Please Enter Name,Mobile Number and Registration Number |
| 8 Nisha Dixit | SHASHIKANT G SOLANKI | - | 02/05/2024, 4:16 pm | 476 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 04/06/2024 | - | Please Enter Name,Mobile Number and Registration Number |
| 9 Nisha Dixit | Alapaben Dharmendra Kumar Patel | - | 02/05/2024, 4:16 pm | 476 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 23/06/2024 | - | Please Enter Name,Mobile Number and Registration Number |
| 10 Nisha Dixit | RAMILABEN NATHALAL RAVAL | - | 02/05/2024, 4:16 pm | 476 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 22/06/2024 | - | - |
| 11 Nisha Dixit | ARVIND LTD - | - | 02/05/2024, 4:16 pm | 476 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 28/06/2024 | - | Please Enter Name,Mobile Number and Registration Number |
| 12 Nisha Dixit | Purvang joshi | - | 02/05/2024, 4:16 pm | 476 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 17/06/2024 | - | - |
| 13 Nisha Dixit | JAEHERHUSAN J AKODARAWALA | - | 02/05/2024, 4:16 pm | 476 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 18/06/2024 | - | Please Enter Name,Mobile Number and Registration Number |

Figure 7.24 Report(Next Month Due Date)

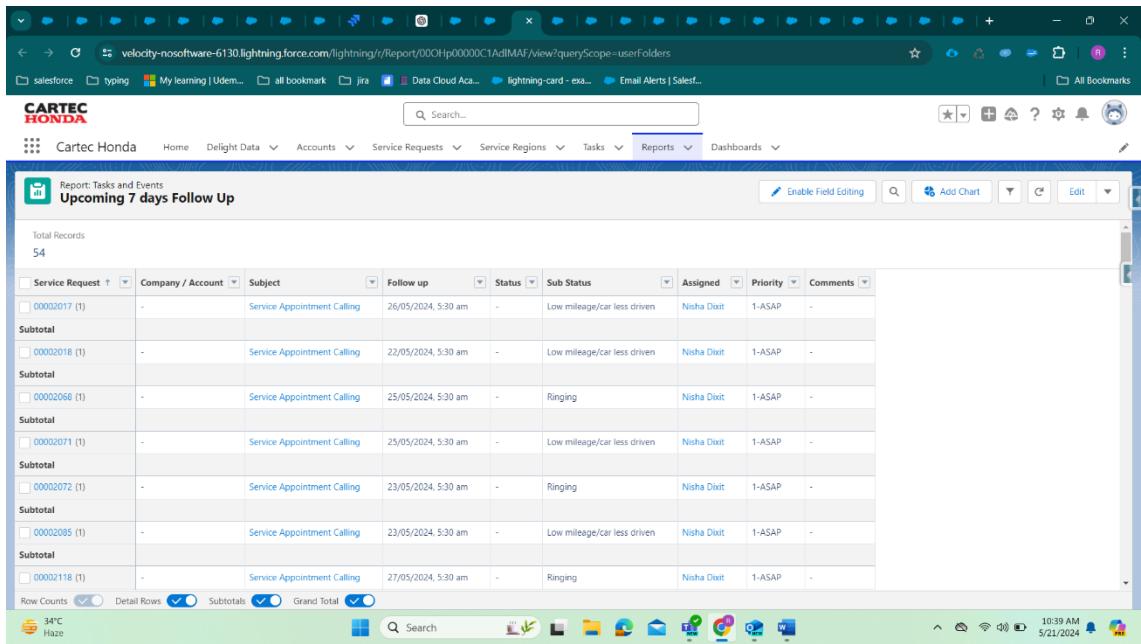


Figure 7.25 Report(Upcoming 7 days Follow Up)

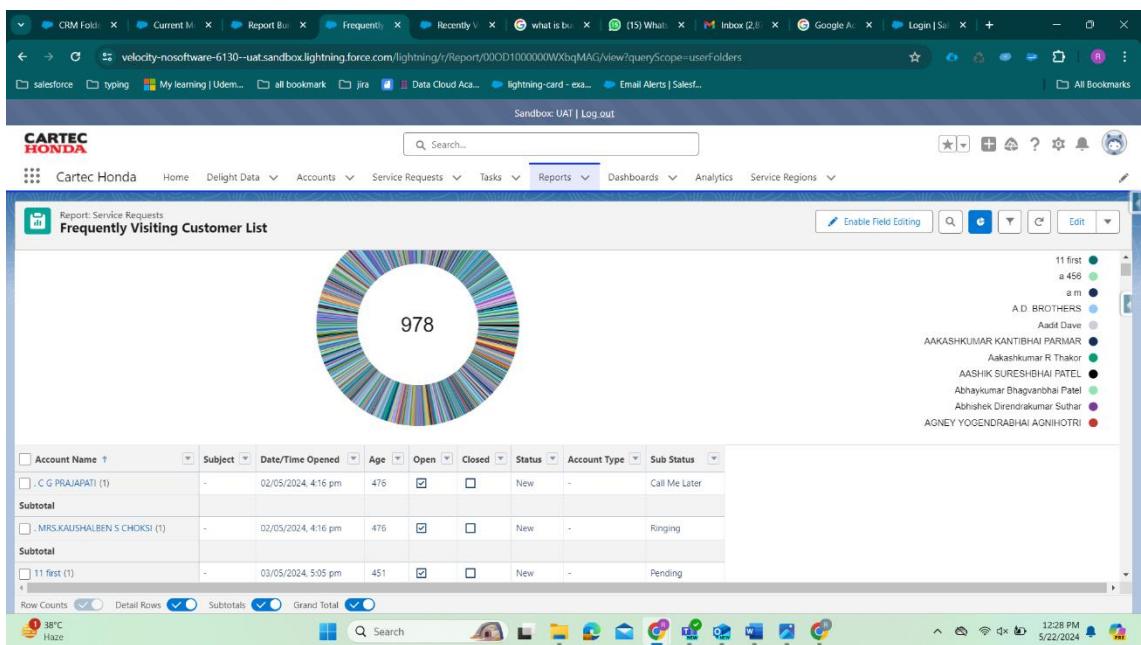


Figure 7.26 Report (Frequently Visiting Customer List)

The screenshot shows a Salesforce Lightning interface with the following details:

Report Title: This Month due date service Request

Report Type: Service Requests

Filter: Due date

Table Headers:

| Account Name | Due date | Case Number | Case Owner | Account Type | RO Sub Type | Date/Time Opened | VIN | Vehicle Registration No. | Warranty Start Date |
|--------------|----------|-------------|------------|--------------|-------------|------------------|-----|--------------------------|---------------------|
|--------------|----------|-------------|------------|--------------|-------------|------------------|-----|--------------------------|---------------------|

Table Data:

| | | | | | | | | | |
|-------------------------------|------------|----------|-------------|---|--------------|---------------------|-------------------|------------|------------|
| ABHILASH RAMANLAL SOLANKI | 20/05/2024 | 00002711 | Nisha Dixit | - | Paid Service | 20/05/2024, 6:31 pm | MAKDF558AP4401080 | GJ01KT3821 | 28/05/2024 |
| ABHISHEK SOLANKI | 30/05/2024 | 00002798 | Nisha Dixit | - | Paid Service | 20/05/2024, 6:31 pm | MAKDM657G4201962 | GJ01RU3179 | 18/05/2024 |
| ACHALA BHATIA | 28/05/2024 | 00002930 | Nisha Dixit | - | - | 20/05/2024, 6:31 pm | MAKDGS75IP4000967 | - | 31/05/2024 |
| AJAYKUMAR TYAGI | 18/05/2024 | 00002931 | Nisha Dixit | - | Paid Service | 20/05/2024, 6:31 pm | MAKDG56DE4103804 | GJ1RK3804 | 10/05/2024 |
| ALD AUTOMOTIVE PVT LTD | 31/05/2024 | 00002858 | Nisha Dixit | - | Paid Service | 20/05/2024, 6:31 pm | MAKGN525EN4102261 | GJ38BD3709 | 29/05/2024 |
| Alpeshthai Baldevbhai Patel | 10/05/2024 | 00002932 | Nisha Dixit | - | Paid Service | 20/05/2024, 6:31 pm | MAKDG568EN4309546 | GJ01WG2860 | 14/05/2024 |
| ALPESHKUMAR GOVINDLAL CHAUHAN | 30/05/2024 | 00002933 | Nisha Dixit | - | Paid Service | 20/05/2024, 6:31 pm | MAKDG56DE4103804 | GJ1RK3804 | 04/05/2024 |
| ALPESHKUMAR RAMESHBHAI PATEL | 29/05/2024 | 00002934 | Nisha Dixit | - | Paid Service | 20/05/2024, 6:31 pm | MAKDG568EN4309546 | GJ01WG2860 | 19/05/2024 |
| AMITKUMAR SHANTILAL SHAH | 14/05/2024 | 00002935 | Nisha Dixit | - | Paid Service | 20/05/2024, 6:31 pm | MAKDG56DE4103804 | GJ1RK3804 | 08/05/2024 |
| AMITKUMAR VIJAYKUMAR JOGI | 04/05/2024 | 00002936 | Nisha Dixit | - | Paid Service | 20/05/2024, 6:31 pm | MAKDG56DE4103804 | GJ1RK3804 | 07/05/2024 |
| AMRITLAL D. SHAH | 19/05/2024 | 00002937 | Nisha Dixit | - | Paid Service | 20/05/2024, 6:31 pm | MAKDG56DE4103804 | GJ1RK3804 | - |

Figure 7.27 Report (This Month Due Date Service Request)

Chapter 8

Conclusion & Future Enhancement

8.1 Conclusion

The implementation of Salesforce CRM for Cartec Honda marks a significant advancement in their business operations, transitioning from a traditional Excel-based system to a robust, automated, and scalable CRM solution. This project aimed to streamline customer service management, enhance data accuracy, and improve overall operational efficiency.

Throughout the project, various functional modules were developed and tested to ensure seamless integration and functionality. The key modules included:

Customer Data Management: Efficient handling of customer information with unique identifiers such as phone numbers.

Asset Management: Accurate tracking of vehicle information using unique VIN numbers.

Service Request Management: Automated creation and management of service requests based on warranty start dates.

Appointment Booking: Streamlined process for booking service appointments and creating follow-up tasks.

Key Achievements:

Improved Data Accuracy and Integrity: By migrating from Excel to Salesforce, data integrity and accuracy have significantly improved. Unique identifiers for customers, assets, and service requests ensure no duplicate entries and consistent data tracking.

Automation of Service Requests: The implementation of batch classes for automatic creation of service requests based on warranty dates has reduced manual effort and ensured timely follow-ups for free services.

Enhanced Customer Interaction: The system facilitates better customer interaction through automated appointment booking and follow-up tasks, ensuring that customers receive timely reminders and service updates.

Scalability and Flexibility: Salesforce's robust infrastructure provides scalability, allowing Cartec Honda to grow and adapt the system to future needs without significant overhauls.

8.2 Challenges and Mitigations:

Data Migration: Migrating data from Excel to Salesforce posed challenges, including data cleansing and validation. These were mitigated through meticulous data verification processes and validation testing.

User Training: Ensuring users were comfortable with the new system required extensive training sessions and comprehensive user manuals, which were successfully provided.

Future Enhancements

The current implementation lays a strong foundation for further enhancements to continuously improve Cartec Honda's CRM capabilities. Some potential future enhancements include:

8.3 Advanced Analytics and Reporting:

Predictive Analytics: Integrating predictive analytics to forecast customer behavior and service needs, enabling proactive customer service.

Custom Reports: Developing more sophisticated and customizable reporting tools to provide deeper insights into business performance and customer trends.

Mobile Integration:

Mobile App Development: Creating a mobile application for technicians and service advisors to access and update service requests on-the-go, increasing operational efficiency.

Customer Portal: Developing a mobile-friendly customer portal where customers can book appointments, track service history, and communicate with service advisors.

Artificial Intelligence and Machine Learning:

AI Chatbots: Implementing AI-powered chatbots to handle customer inquiries, appointment bookings, and basic troubleshooting, providing 24/7 support.

Machine Learning Models: Utilizing machine learning models to analyze service data and predict potential vehicle issues before they occur.

8.4 Enhanced Integration with IoT:

Connected Vehicles: Integrating IoT technology to gather real-time data from connected vehicles, enabling real-time monitoring and predictive maintenance.

Smart Service Notifications: Automatically notifying customers of service needs based on real-time vehicle data.

8.5 Improved Customer Feedback Mechanism:

Surveys and Feedback Forms: Implementing automated surveys and feedback forms post-service to gather customer feedback and continuously improve service quality.

Sentiment Analysis: Utilizing sentiment analysis tools to gauge customer satisfaction and address any concerns promptly.

Enhanced Security Measures:

Multi-Factor Authentication: Adding multi-factor authentication for enhanced security, protecting sensitive customer data.

Regular Security Audits: Conducting regular security audits to identify and mitigate potential vulnerabilities.

Chapter 9

REFERENCES

<https://blog.miva.com/the-history-of-e-commerce-how-did-it-all-begin> □

<https://vuejs.org/guide/introduction.html>

<https://docs.spring.io/spring-boot/docs/current/reference/htmlsingle/>

Community Forums: Participate in forums such as Stack Overflow or Reddit.

Developers often share code snippets, solutions to common problems, and project recommendations.

YouTube Tutorials: Video tutorials on platforms like YouTube can be helpful. Search for tutorials that cover the integration of Java, Spring Boot, Vue.js, and MongoDB in an e-commerce context.

GitHub Repositories: Search on GitHub for open-source projects that match your technology stack. Many developers share their projects, and you can find complete applications or code snippets.