Project Name: Automated Car Catalog System for Enhanced

Showroom Management

Introduction

Project Overview

An Automated Car Catalog System for Enhanced ShowroomManagement aims to streamline the process of managing car inventory, customer information, and sales operations within a car showroom. This system typically involves a web-based application that allows for efficient data management, improved customer interaction, and streamlined sales processes, ultimately increasing overall efficiency and reducing manual workload.

Inventory Management:

The system will likely allow for the management of car models, specifications, pricing, and availability, including features like adding new models, updating existing details, and tracking inventory levels.

Customer Relationship Management (CRM):

Features could include storing customer information, tracking interactions (inquiries, test drives, sales), and managing customer communication.

Online Sales/Booking (Optional):

The system might incorporate online features for browsing cars, requesting quotes, booking test drives, or even completing online purchases, depending on the project scope.

User-Friendly Interface:

The system will need a user-friendly interface for both showroom staff and potentially for customers, allowing for easy navigation and access to relevant information.

Reporting and Analytics:

The system might include reporting features to track sales performance, customer behavior, and other key metrics for management analysis

IDEATION PHASE

Problem Statement:

Car showrooms and dealerships often face challenges in managing and streamlining their catalog of cars, including various models and categories. The manual processes involved in handling customer requests, approvals, and task assignments can lead to inefficiencies, delays, and potential errors. This can negatively impact customer satisfaction and operational deficiency.

Challenges:

This faced during the "Without ServiceNow" phase of implementing an Automated Car Catalog System for enhanced showroom management:

1. Manual Data Entry and Errors

o Without automation tools like ServiceNow, catalog data (vehicle details, specs, images) must be entered manually, increasing the risk of human errors and inconsistencies.

2. Lack of Centralized Data Access

o Showroom staff may struggle with scattered information across spreadsheets or isolated systems, making real-time access to up-to-date car inventory difficult.

3. **Poor Workflow and Communication**

o Without integrated workflow management, coordination between sales, inventory, and procurement teams can be inefficient, leading to delays and miscommunication.

4. Limited Reporting and Analytics

o Generating insights (like popular models, inventory turnover, or custobmer interest trends) becomes time-consuming and less reliable without automated dashboards.

5. Inadequate Tracking and Updates

o Vehicle availability, test drive scheduling, and delivery status updates are harder to track, affecting customer service quality and operational visibility. **Purposes**

An Automated Car Catalog System enhances showroom management by streamlining theprocess of managing vehicle information, customer interactions, and sales operations.

REQUIREMENT ANALYSIS

Solution Requirement(Functional and Non Functional)

| Team Id | LTVIP2025TMID30934 |
|--------------|--|
| Project Name | Automated Car Catalog System for Enhanced Showroom Management |

Functional Requirements: Following are the Functional requirements of the proposal solution.

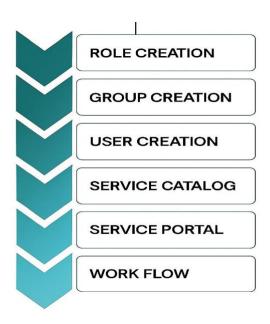
| FR No | Functional Requirement | Description | |
|-------|------------------------|---|--|
| FR 1 | Service catalogue | Create catalogue Create categories | |
| FR 2 | User creation | Create a user | |
| FR 3 | Role creation | Create a roles | |
| FR 4 | Group creation | Create a group | |
| FR 5 | Table creation | Create table | |
| FR 6 | Work flow | Workflow Assignment to Mahindra service Catalog | |
| FR 7 | Service portal | Searching created catalog are available in service portal | |
| FR 8 | result | Check result | |

Non Functional Requirement :Following are the non-functional requirements of the proposed solutions.

| NF No | Non Functional | Sub Requirement |
|-------|----------------|--|
| | Requirement | |
| NFR1 | usability | This could manifest as slow loading times, confusing navigation, inaccurate information, or lack of key features. |
| NFR2 | security | This could manifest as weak password policies, lack of encryption for sensitive data, failure to implement intrusion detection systems, or insufficient user access controls |
| NFR3 | Scalability | This can lead to customer dissatisfaction, lost sales opportunities, and operational inefficiencies. |
| NFR4 | Reliability | This can lead to customer dissatisfaction, lost sales opportunities, and operational inefficiencies. |

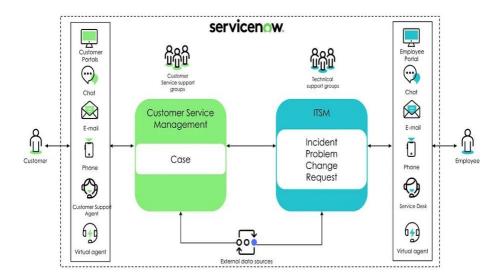
| NFR5 | Performance | This can lead to lost sales opportunities, frustrated customers, and ultimately, decreased revenue. |
|------|---------------|---|
| NFR6 | Accessibility | This could manifest as inaccurate information about which cars are in stock, mislabeled or missing details, or a complete |

DataFlow Diagram



Technology stack

Technology Stack: The image shows how data flows from a third-party system into the ServiceNow app, gets processed through import mechanisms, and ends up in the Incident Table, where it can trigger further actions or updates.



Third Party \rightarrow REST API \rightarrow ServiceNow

• Data is sent from a third-party system via REST API.

REST API \rightarrow **Scheduled Import**

API data is captured by a scheduled import job.

Scheduled Import \rightarrow Import Sets

• Data is loaded into temporary import tables.

Import Sets → **Transform Map**

• Data is transformed to match the format of the target tables.

Transform Map → **Incident Table**

• Transformed data is saved as incidents in ServiceNow.

Incident Table → **Triggered Actions**

• Actions (like alerts, updates) are automatically triggered.

Incident Table ← CMDB Tables

• Incidents are linked to Configuration Items (Cis) from the CMDB.

Project Design

Proposed solutions Template:

Project team shall fill the following information in the proposed solutions Template.

| S.No | Parameters | Description |
|------|---|--|
| 1 | Problem statement(problem to be solved) | revolves around the challenges of efficiently handling and maintaining a large volume of vehicle information, sales data, and customer interactions, leading to inefficiencies, errors, and delays in daily operations |
| 2 | Idea/solutions description | Showroom management can be improved with systems that handle inventory, customer relationship management (CRM), sales tracking, test drive scheduling, and reporting. |
| 3 | Novelty/uniqueness | This could involve features like personalized car recommendations based on detailed customer profiles, augmented reality test drives, and AI-powered customer service chatbots |
| 4 | Social impact/customer satisfaction | Effective car showroom management, particularly through the use of a car catalog, significantly impacts social aspects like customer satisfaction and brand loyalty |
| 5 | Business model (revenue model) | The system itself streamlines operations, allowing for efficient management of inventory, customers, sales, and even after-sales services like repairs and maintenance |
| 6 | Scalability of the solution | A scalable car catalog showroom management solution can handle increasing data volume and user traffic without performance degradatio |

Milestone 1:Service Catalog

Activity 1: Create catalog

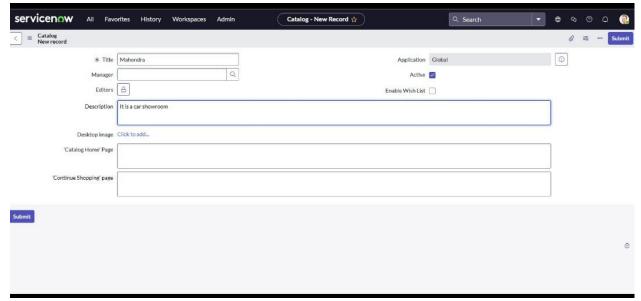
Purpose: Service Catalog is to provide a comprehensive and standardized list of IT services available to users, enabling them to easily browse, select, and request the services they needed.

Uses: It streamlines service delivery, enhances self-service capabilities, and improves overall efficiency by standardizing processes and reducing confusion

Steps:

- 1.Open service now.
- 2.Click on All >> search for Maintain Catalog.
- 3. Click on Maintain Catalog under Catalog Definition.
- 4. After opening Maintain Catalog Click on new.

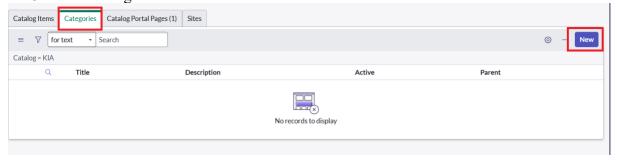
- 5. Give Catalog Name as "Mahendra".
- 6. Application should be Global.
- 7. Give description as it is a car showroom.
- 8.Click on Submit.



Create categories:

Steps:

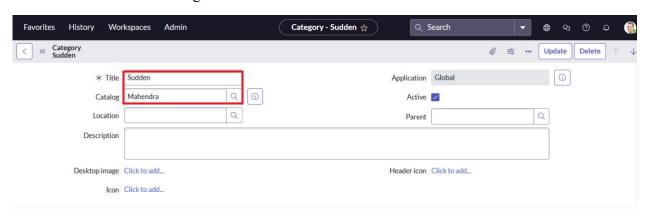
- 1. After submitting you can see the catalog mahendra in the list.
- 2. Open Mahendra Catalog Scroll down.
- 3. Click Categories And Click on New.

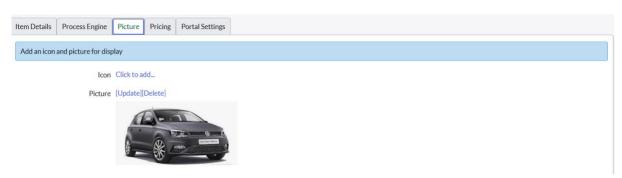


- 4. Give Title as Sudden.
- 5. Search and add catalog as Mahendra.
- 6. Click on submit.
- 7. Create two more categories as XUV and Sports.
- 8. Click on Catalog Items and Click on new.
- 9. Give it a name as polo.
- 10. Select catalog as Mahendra.
- 11. Short description as Volkswagen Polo Compact Hatchback with Superior Comfort and Efficiency.

12. Give Description The Volkswagen Polo is a stylish and compact hatchback known for its agile performance, modern design, and premium features. Equipped with a 1.0-liter TSI engine, the Polo offers an impressive balance of power and fuel efficiency, making it an ideal choice for urban driving and longer journeys alike. This model includes advanced safety features, a touchscreen infotainment system, and spacious seating, ensuring comfort and convenience for all passengers. The Polo stands out with its sporty look, LED headlights, and alloy wheels, reflecting Volkswagen's commitment to quality and design.

13. Click on Picture and add image.





- 14. Click on Pricing and give the price as 70 and recurring price 90.
- 15. Click on Portal setting and Select request method as Request.
- 16. Click on Submit.
- 17. Click on new and create one more catalog.

Activity 2:Users Creation

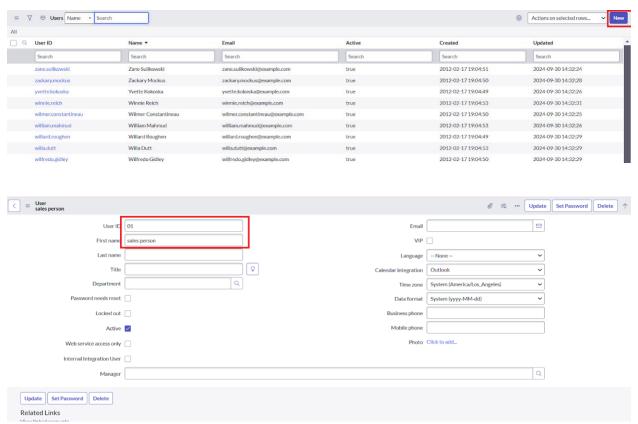
Purpose: User creation allows assigning roles and responsibilities, enabling accurate and efficient car routing in ServiceNow.

Uses: user creation enables role-based access, accurate car assignment, and workflow automation for efficient support operations.

Create Users:

Steps:

- 1. Open service now.
- 2. Click on All >> search for Users.
- 3. Click on Users>> under System Security.
- 4. Click on new, give userId as 01 and name as sales person and add the role emp1.
- 5. Save and Submit.



Activity 3: Role Creation

Purpose: Role creation defines what actions users can perform in ServiceNow, ensuring secure access, proper task ownership, and smooth automation during car assignment.

Uses: Role creation defines user permissions and access levels, ensuring that only authorized users can view, edit, or manage cars—enabling secure and efficient car assignment in ServiceNow.

Create Roles:

Steps:

- 1. Click on the Servicenow logo and click on all and search for roles.
- 2. Click on Roles >> Under system security.
- 3. Click on new and give the name as emp1.



Activity 2: Group creation

Purpose: Group creation allows organizing users into teams (e.g., IT support, HR), so cars can be automatically assigned to the right group, ensuring faster and more efficient support operations.

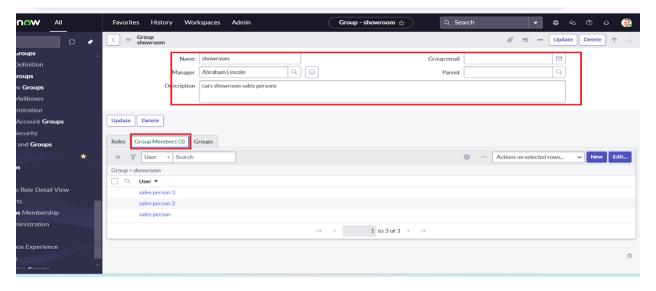
Uses: Group creation helps in assigning cars to the right team, managing workloads efficiently, and enabling automated routing based on skills or roles in ServiceNow.

Create group:

Steps:

- 1. Click on All>>Search for groups.
- 2. Click on groups>>under Security System.
- 3. Click on new and give the group's name as showroom.
- 4. Give the group manager as Abraham lincoln. And Submit.

5. Add group members as Salesperson, Salesperson2 and 3.And update.



Activity 4: Table Creation

Purpose: Table creation provides a structured way to store and manage ticket-related data, such as incidents, users, groups, and assignments in ServiceNow.

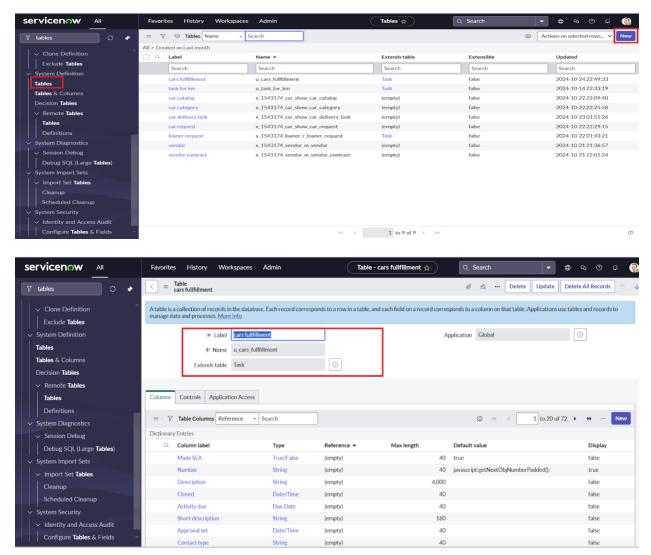
Uses: Organizes data into rows (records) and fields (columns)Enables workflows to automatically assign and track tickets.

Create Table:

Steps:

- 1. Click on All>>Search for Tables.
- 2. Click on Tables>>under System definition.
- 3. Click on the new give name as cars fulfillment.
- 4. Give extended table as Task table.

5. Save and Submitting.



Milestone 2:Work Flow

Activity 1: WorkFlow Assignment to Mahendra service Catalog.

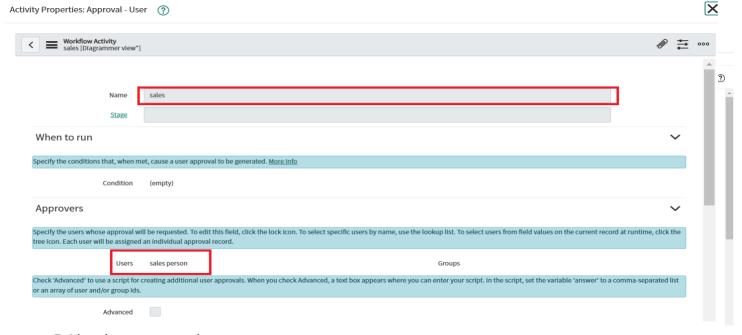
Purpose: A car catalog showroom management workflow aims to streamline the process of showcasing, selling, and managing vehicles within a dealership. It typically involves features like inventory management, customer relationship management, sales tracking, and reporting, all designed to enhance efficiency, improve customer experience, and ultimately boost sales.

Uses: A car catalog showroom management workflow typically uses modules for inventory management, sales management, customer management, and reporting. These modules help streamline

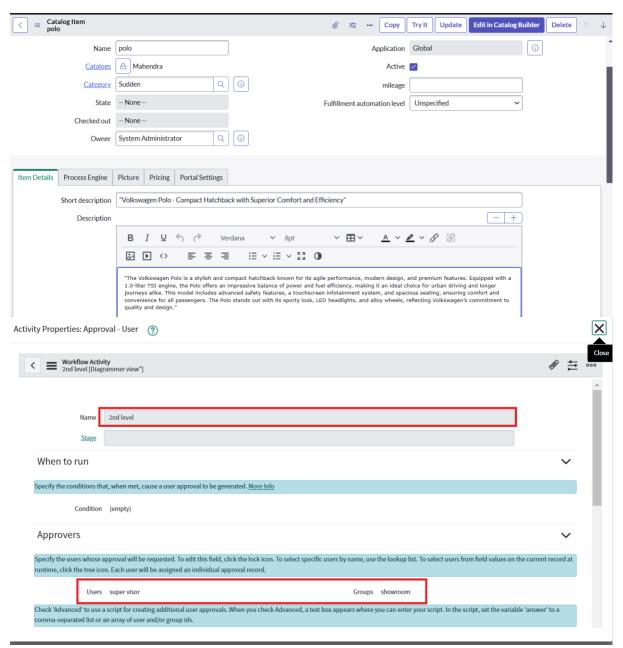
processes like adding new cars, managing customer information, tracking sales, and generating reports on sales performance.

Steps:

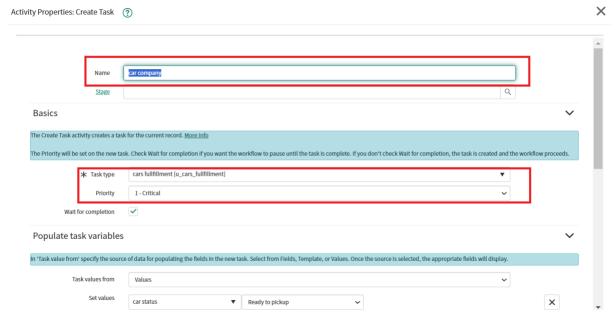
- 1. Navigate to Homepage.
- 2. Click on all search Workflow Editor.
- 3. Click on New Workflow.
- 4. Under the name field search for Test Select that record.
- 5. After creating workflow you can see begin and end.
- 6. Drag the approval user from core and give name as sales



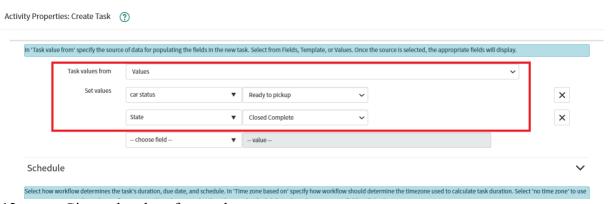
- 7. Give the user as a sales person.
- 8. Drag the approval user from core and give name 2nd level.
- 9. Add a user as supervisor.



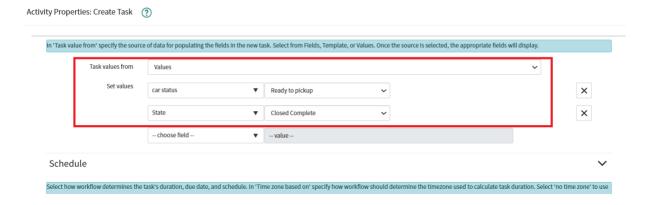
10. Drag create task from core and give name as car company



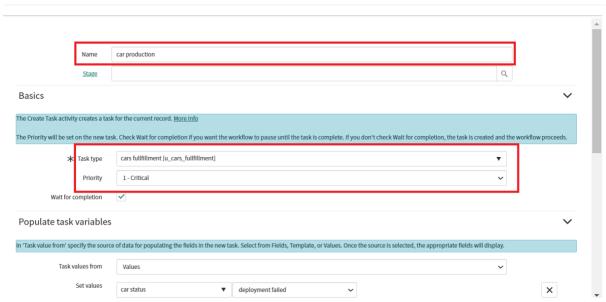
11. Give task type car fulfilment table and priority-1.



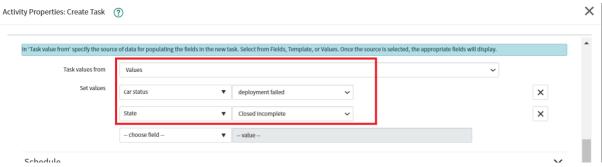
- 12. Give task values from values
- 13. Set values as car status Ready to Pickup.
- 14. State Closed Complete and submit.



- 15. Drag the create task from core and give it name as car production.
- 16. Give task type car fulfilment table and priority-1.

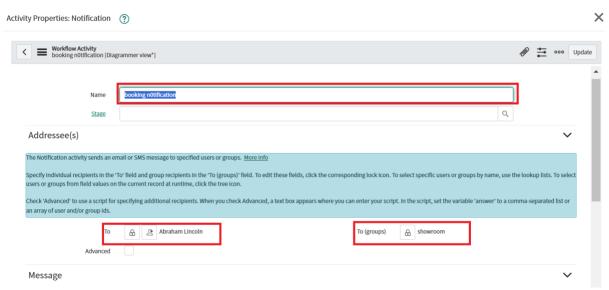


18. Give task values from values

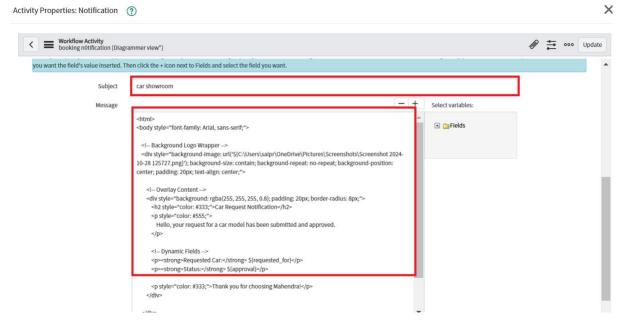


19. Set values as car status deployment failed.

- 20. State closed Incomplete. And Submit.
- 21. Drag Notification from core and give name as Booking Notification.



22. Add To user as Abraham Lincoln and group as Showroom.



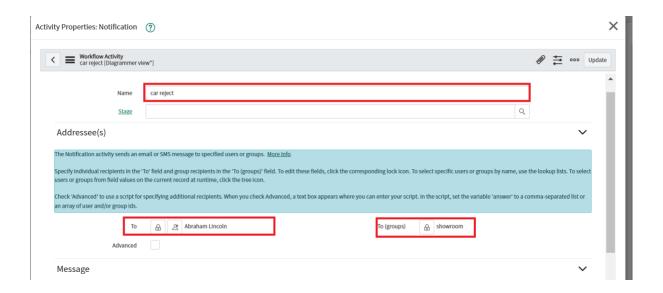
23. Give the subject as car showroom and message httml>

<body style="font-family: Arial, sans-serif;">

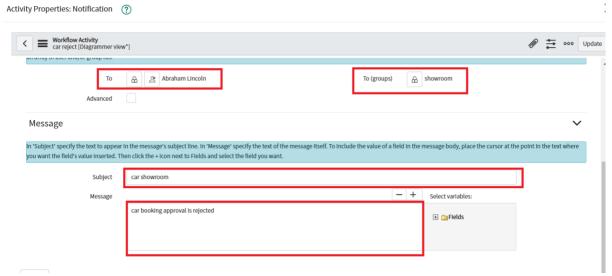
<!-- Background Logo Wrapper -->

<div style="background-image: url('\${C:\Users\saipr\OneDrive\Pictures\Screenshots\Screenshot
2024-10-28 125727.png}'); background-size: contain; background-repeat: no-repeat; backgroundposition: center; padding: 20px; text-align: center;">

25. Drag the Notification and give the name as car reject.



26.Add To user as Abraham Lincoln and add group showroom.



- 27. Give the subject as a car showroom.
- 28. Give a message as car booking approval is rejected.
- 29. Submit and end

Milestone 3:Service Portal

Activity 1: Searching created catalog are available in service portal Purpose:

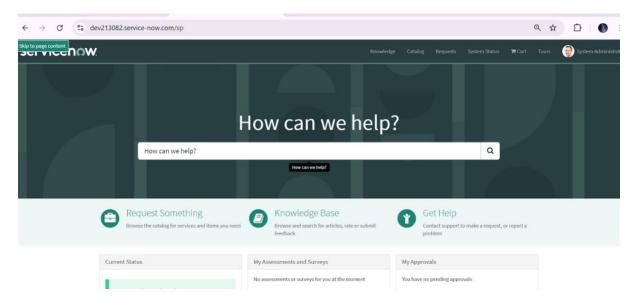
A car catalog showroom management service portal aims to streamline the operations of a car dealership by providing a centralized platform for managing vehicle information, customer interactions, and sales processes. It enhances efficiency by automating tasks, improving data management, and offering convenient online access to information for both staff and customers.

Uses: various features to streamline operations and enhance customer experience. These include tools for managing vehicle inventory, customer information, sales processes, and

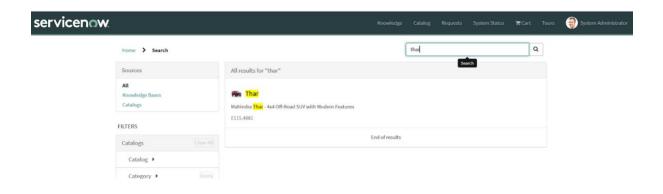
generating reports. The system also often includes online portals for customers to browse vehicles, schedule test drives, and make inquiries.

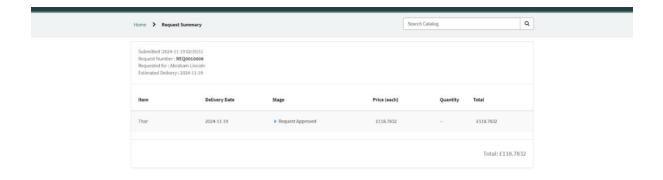
Steps:

- 1. Check the cars are available in the service portal. And order it.
- 2. To open a service portal copy the url of your instance up to com/ and give sp press enter for example(https://dev266346.service-now.com/sp).
- 3. Search the catalog item which you are created.

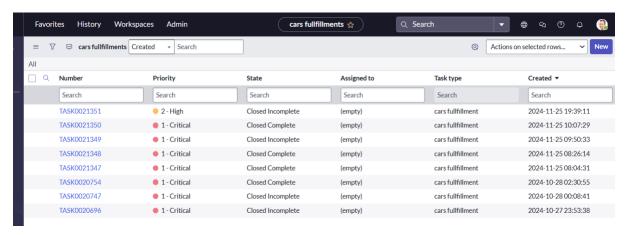


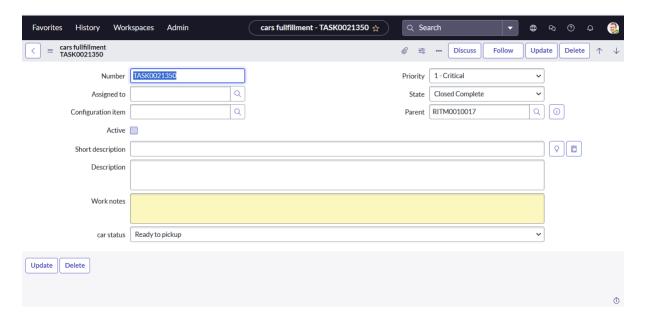
- 5. Search for thar. And order it.
- 6. After ordering the car you get a request number and Delivery date.





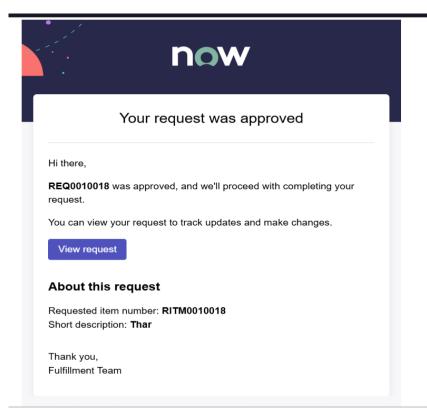
- 7. After requesting an item and the request shown in Task table.
- 8. In Task we Approve or reject the request.



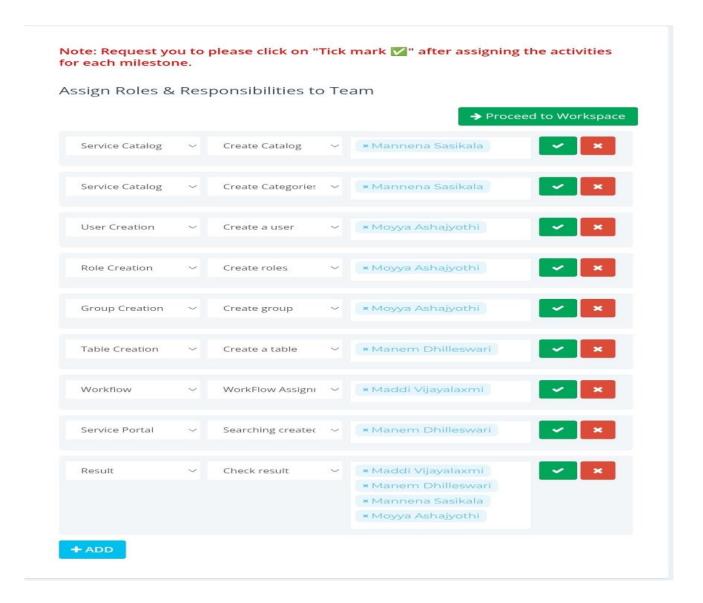


Result

After ordering the car request is approved you get a mail the order will be delivered. And Based on your order being approved or rejected you will receive a rejected mail.



Project Planning and Scheduling



| Functional | User story | No of | Team |
|-------------|---|----------|------------------|
| requirement | | Activity | Members |
| Service | As a user, I want to access an automate | 1 | Mannena Sasikala |
| catalog | catalog through the | | |
| | ServiceNow | | |
| | Service | | |
| | Catalog so that I can easily view, request, | | |
| | and manage | | |
| | available vehicles in the enhanced | | |
| | showroom system. | | |
| | | | |

| User creation | As a showroom manager, I want to automate user creation for the car catalog system in ServiceNow so that new users can quickly access and manage car listings efficiently. | 1 | Moyya Ashajyothi |
|-------------------|--|---|-------------------|
| Role creation | As a system administrator, I want to create and assign user roles (e.g., Sales Agent, Inventory Manager, Service Technician) in | 1 | Moyya Ashajyothi |
| | the automated car catalog system so that each user has appropriate access and permissions for enhanced showroom management inServiceNow. | | |
| Group creation | As a showroom manager, I want to create and manage user groups automatically in the Car Catalog System within Service now. | 1 | Moyya Ashajyothi |
| Table creation | User Story: As a showroom manager, I want an automated car catalog table in ServiceNow to efficiently manage and track vehicle inventory, features, and availability for enhanced showroom operations. | 1 | Manem Dhileswari |
| Workflow | An automated car catalog system in ServiceNow streamlines enhanced | 1 | Maddi Vijayalaxmi |
| | showroom management by enabling seamless vehicle data entry, realtime inventory updates, and automated workflows for approvals, pricing, and customer inquiries. | | |

Н

| Service portal | As a | 1 | Manem Dhilliswari |
|----------------|--|---|-------------------|
| | showroom | | |
| | user, I want to access an automated car | | |
| | catalog | | |
| | through the ServiceNow service portal so | | |
| | that I can easily browse, compare, and | | |
| | request car models for | | |
| | efficient | | |
| | showroom management. | | |
| Result | A user can | 1 | Mannena Sasikala |
| | automatically view, manage, and update a | | Maddi Vijayalaxmi |
| | real-time car catalog in the | | Moyya Ashajyothi |
| | showroom using ServiceNow, streamlining | | Manem Dhilliswari |
| | inventory tracking and customer | | |
| | interactions. | | |

FUNCTIONAL AND PERFORMANCE TESTING

Performance Testing

Milestone 8: Work Flow:

Purpose: A car catalog showroom management workflow aims to streamline the process of

showcasing, selling, and managing vehicles within a dealership. It typically involves features

like inventory management, customer relationship management, sales tracking, and reporting,

all designed to enhance efficiency, improve customer experience, and ultimately boost sales.

Uses: A car catalog showroom management workflow typically uses modules for inventory

management, sales management, customer management, and reporting. These modules help streamline

processes like adding new cars, managing customer information, tracking sales, and generating reports on

sales performance.

Steps:

7. Navigate to Homepage.

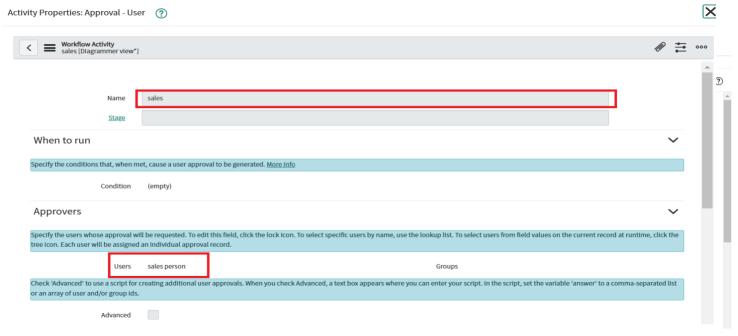
8. Click on all search Workflow Editor.

9. Click on New Workflow.

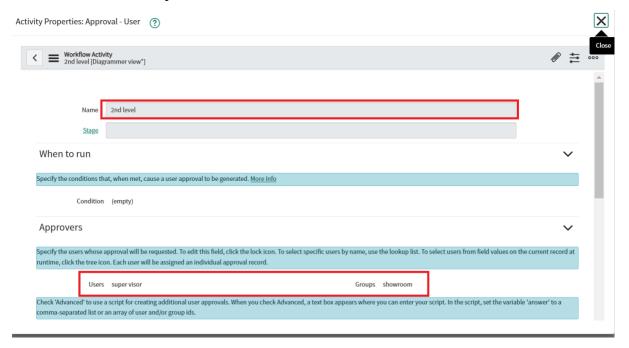
10. Under the name field search for Test Select that record.

11. After creating workflow you can see begin and end.

12. Drag the approval user from core and give name as sales

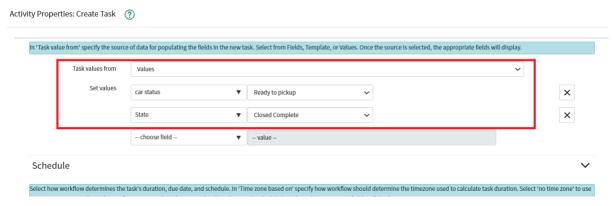


- 7. Give the user as a sales person.
- 10. Drag the approval user from core and give name 2nd level.
- 11. Add a user as supervisor.

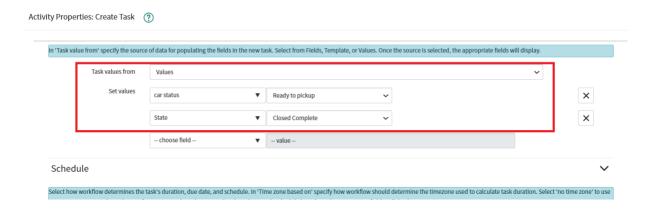


11. Drag create task from core and give name as car company

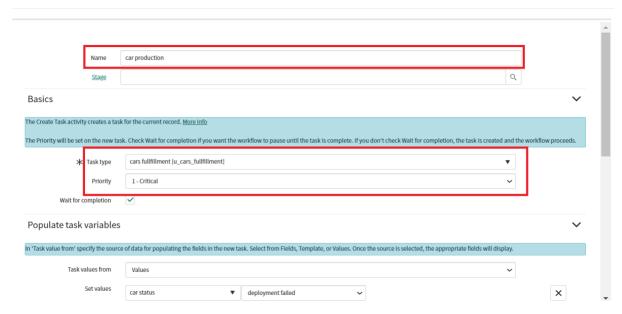
12. Give task type car fulfilment table and priority-1.



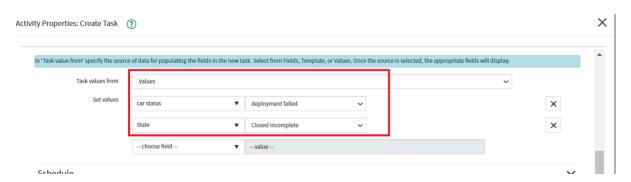
- 15. Give task values from values
- 16. Set values as car status Ready to Pickup.
- 17. State Closed Complete and submit.



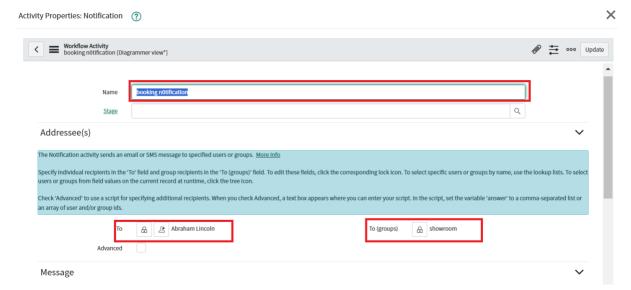
- 17. Drag the create task from core and give it name as car production.
- 18. Give task type car fulfilment table and priority-1.



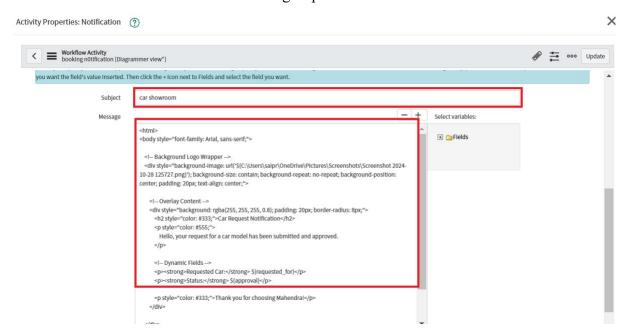
18. Give task values from values



- 19. Set values as car status deployment failed.
- 20. State closed Incomplete. And Submit.
- 21. Drag Notification from core and give name as Booking Notification.



22. Add To user as Abraham Lincoln and group as Showroom.



23. Give the subject as car showroom and message

<html>

<body style="font-family: Arial, sans-serif;">

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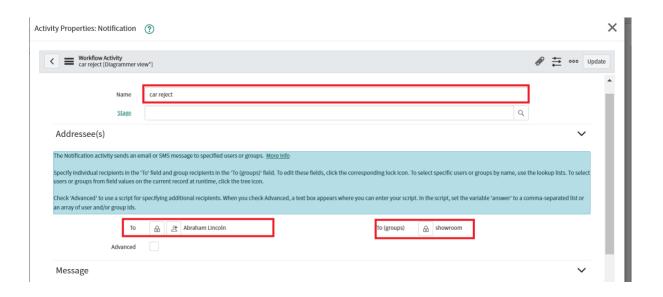
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url('\${C:\Users\saipr\OneDrive\Pictures\Screenshots\Screenshot 2024-10-28 125727.png}');

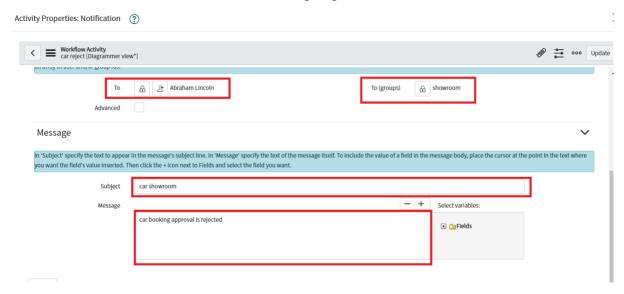
background-size: contain; background-repeat: no-repeat; background-position: center; padding: 20px; text-align: center;"> <!-- Overlay Content --> iv style="background: rgba(255, 255, 255, 0.8); padding: 20px; border-radius: 8px;"> <h2 style="color: #333;">Car Request Notification</h2> Hello, your request for a car model has been submitted and approved. <!-- Dynamic Fields --> Requested Car: \${requested for} Status: \${approval} Thank you for choosing Mahendra! </div> </div></body> </html>

25. Drag the Notification and give the name as car reject.

24. Submit.



26.Add To user as Abraham Lincoln and add group showroom.



- 27. Give the subject as a car showroom.
- 28. Give a message as car booking approval is rejected.
- 29. Submit and end

Advantages and Disadvantages

ADVANTAGES

- Automates inventory tracking, reducing errors and ensuring accurate stock levels.
- Provides customers with easy access to vehicle information, features, and pricing.
- Streamlines showroom operations, reducing manual tasks and freeing up staff to focus on sales.
- Offers real-time data analytics to inform inventory management and sales strategies.
- Minimizes costs associated with manual inventory management and reduces the risk of errors

Disadvantages

- Implementing an automated system can require a significant upfront investment in technology and infrastructure.
- System downtime or technical glitches can disrupt showroom operations and impact sales.
- Staff may require training to effectively use the new system, which can be time-consuming and costly.
- The system may be vulnerable to data security risks, such as hacking or data breaches.
- Over-reliance on technology can lead to decreased manual skills and potential difficulties if the system fails.

Conclusion

The Car Catalog System project for a car showroom in ServiceNow successfully addresses the need for a streamlined, automated approach to managing car catalog items, customer requests, and approval workflows. By organizing car models into easily navigable categories and leveraging ServiceNow's powerful automation features, the system enhances operational efficiency, reduces manual intervention, and improves customer satisfaction.