

Project Documentation

1. Introduction

- **Project Title :** Automated Car Catalog System for Enhanced Showroom Management.

2. Project Overview

The Automated Car Catalog System for Enhanced Showroom Management is designed to streamline the process of managing, displaying, and tracking cars in a showroom. Traditional manual methods of maintaining car records, availability status, and customer requests often lead to inefficiencies, errors, and delays. This system aims to automate catalog management by providing a centralized digital platform where administrators, salespersons, and customers can interact seamlessly.

The system will allow showroom administrators to add, update, and remove car entries with details such as model, brand, price, specifications, images, and availability. Sales staff can quickly access real-time information about cars, enabling them to provide accurate details to customers and track approvals or bookings. Customers can browse the catalog digitally, filter options based on preferences (e.g., model, price range, category), and place requests or test-drive bookings.

By integrating automation, workflows, and notifications, the system improves operational efficiency, reduces manual errors, and enhances customer experience. It can also generate reports on car sales, stock status, and customer interests, supporting management in making data-driven decisions.

Key Features

- Digital Car Catalog: Comprehensive listing of all available cars with images, features, and prices.
- Search & Filter Options: Customers can search cars by brand, type, price, or category.
- Role-based Access: Different permissions for admins, salespersons, and customers.
- Workflow Automation: Approvals, booking requests, and notifications are automated.
- Availability Tracking: Real-time update of stock and sold units.
- Reports & Analytics: Insights into sales performance and customer trends.

Objectives

- To replace manual catalog and record-keeping with a digital solution.
- To improve the efficiency of showroom operations through automation.
- To provide customers with an interactive and transparent car-browsing experience.
- To support management with accurate data for better decision-making.

Purpose :

The purpose of the Automated Car Catalog System is to simplify and modernize showroom management by providing a centralized digital platform for managing car details, streamlining sales processes, and enhancing customer experience.

This system aims to:

- Eliminate manual inefficiencies in maintaining car records and catalogs.
- Provide accurate, real-time information on car availability, pricing, and specifications to sales staff and customers.
- Automate workflows such as approvals, booking requests, and notifications to reduce human errors and delays.
- Enhance customer engagement by allowing easy browsing, filtering, and requesting of vehicles through a user-friendly catalog.
- Support management decisions through reports and analytics on car stock, sales, and customer preferences.

3. Architecture

- **Presentation Layer :**
 - Admin Dashboard
 - Employees Interface
 - Customer Portal
- **Application Layer:**
 - Workflow Automation
 - Booking & Notifications
- **Data Layer:**
 - Car Database
 - Customer Records

4. Setup Instructions

- **Access the Service Portal**
 - Log in to your ServiceNow instance.
 - Navigate to Service Portal from the application navigator.
 - Select the portal where the “Mahendra” catalog has been

configured.

- **Locate the Car Catalog**

- Inside the portal, open the Catalogs section.
- Select Mahendra catalog to view all available car items.

- **Browse Available Cars**

- The system will display all cars (e.g., Polo, XUV, Thar, etc.) categorized under the Mahendra catalog.
- Each item will have details such as model, category, price, specifications, and availability.

- **Add to Cart**

- Choose the desired car item and click "Add to Cart".
- You can add multiple cars to compare or request.

- **Submit Request**

- Once items are added to the cart, click "Checkout" or "Submit Request".
- The system triggers the workflow:
 - First-level approval goes to Salesperson.
 - If approved, request moves to Supervisor for final approval.
 - Notifications are sent to the concerned user(s) at each stage.

- **Track Request Status**

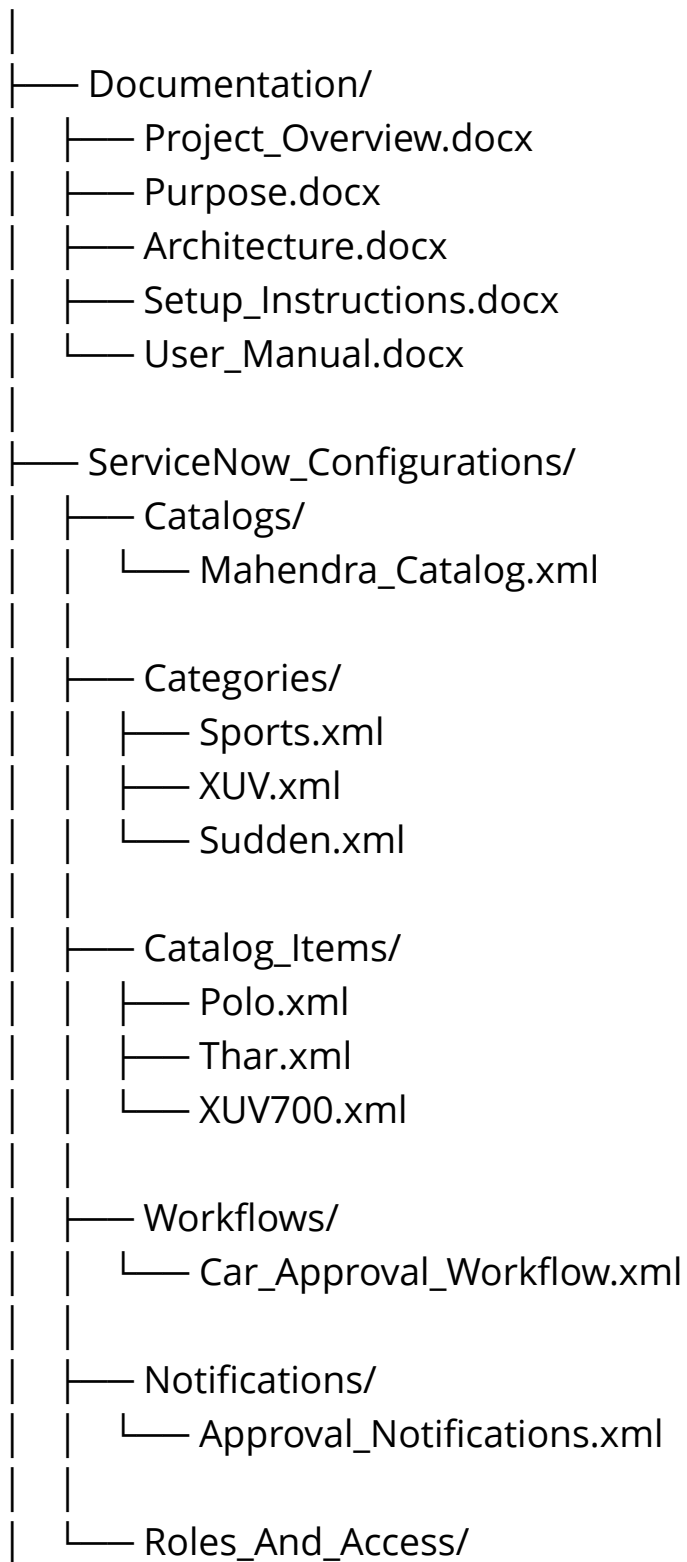
- Customers can check request progress under "My Requests" in the portal.
- Salespersons and supervisors can view and act on pending approvals from their dashboards.

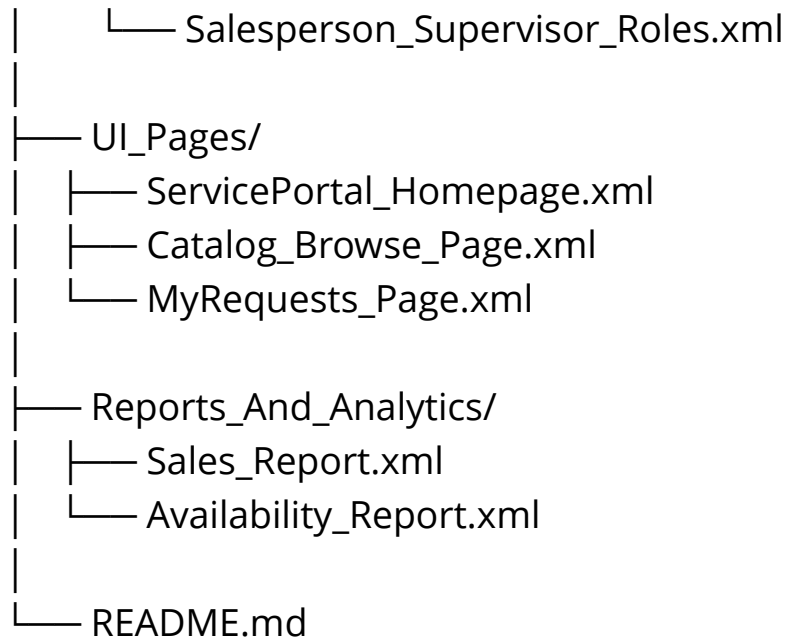
- **Completion**

- If approved, the request is marked Ready for Pickup / Completed.
- If rejected, the request is marked Deployment Failed / Closed Incomplete, and notification is sent to the requester.

5. Folder Structure:

Automated-Car-Catalog-System/





6. Organization Description

The Automated Car Catalog System is designed for a showroom environment where multiple stakeholders interact to manage car catalogs, process customer requests, and oversee approvals. The organization consists of three main roles: Administrators, Salespersons, and Supervisors, each with defined responsibilities to ensure smooth operations.

- **Administrators:**

- Responsible for managing the system setup.
- Add, update, or remove catalogs, categories, and car details.
- Configure workflows, notifications, and roles.
- Generate reports and analytics for management.

- **Salespersons:**

- First point of contact with customers.
- Receive customer requests (car bookings, inquiries, test drives).

- Provide car details and approve/reject requests at the first level.
- Forward approved requests to supervisors.
- **Supervisors (Managers):**
 - Handle second-level approvals.
 - Oversee final decision-making for bookings.
 - Monitor sales performance and customer satisfaction.
 - Provide feedback to administrators for system improvements.
- **Customers:**
 - End-users who browse the digital catalog via the Service Portal.
 - Add cars to cart, submit requests, or book test drives.
 - Track request status in real-time.

7. Running the Application

1. Customer View (End User)

1. Log in to the Service Portal (sp).
2. Navigate to the Mahendra Catalog.
3. Browse available car categories (e.g., Sports, XUV, Sudden).
4. Select a car (e.g., Polo, Thar, XUV700) and view details (price, specifications, availability).
5. Click Add to Cart → then Checkout → Submit Request.
6. Track request status under My Requests.

2. Salesperson View (First Approval)

- Log in to ServiceNow with Salesperson role.
- Navigate to Approvals → view pending customer requests.
- Approve or Reject the request:
 - If Approved → request moves to Supervisor.

- If Rejected → request status becomes *Closed Incomplete* and customer gets a notification.

3. Supervisor View (Second Approval)

- Log in with Supervisor role.
- Go to Approvals → see requests forwarded by salespersons.
- Take action:
 - If Approved → request is marked *Ready for Pickup / Completed* and customer is notified.
 - If Rejected → request is marked *Closed Incomplete*, customer notified.

4. Administrator View

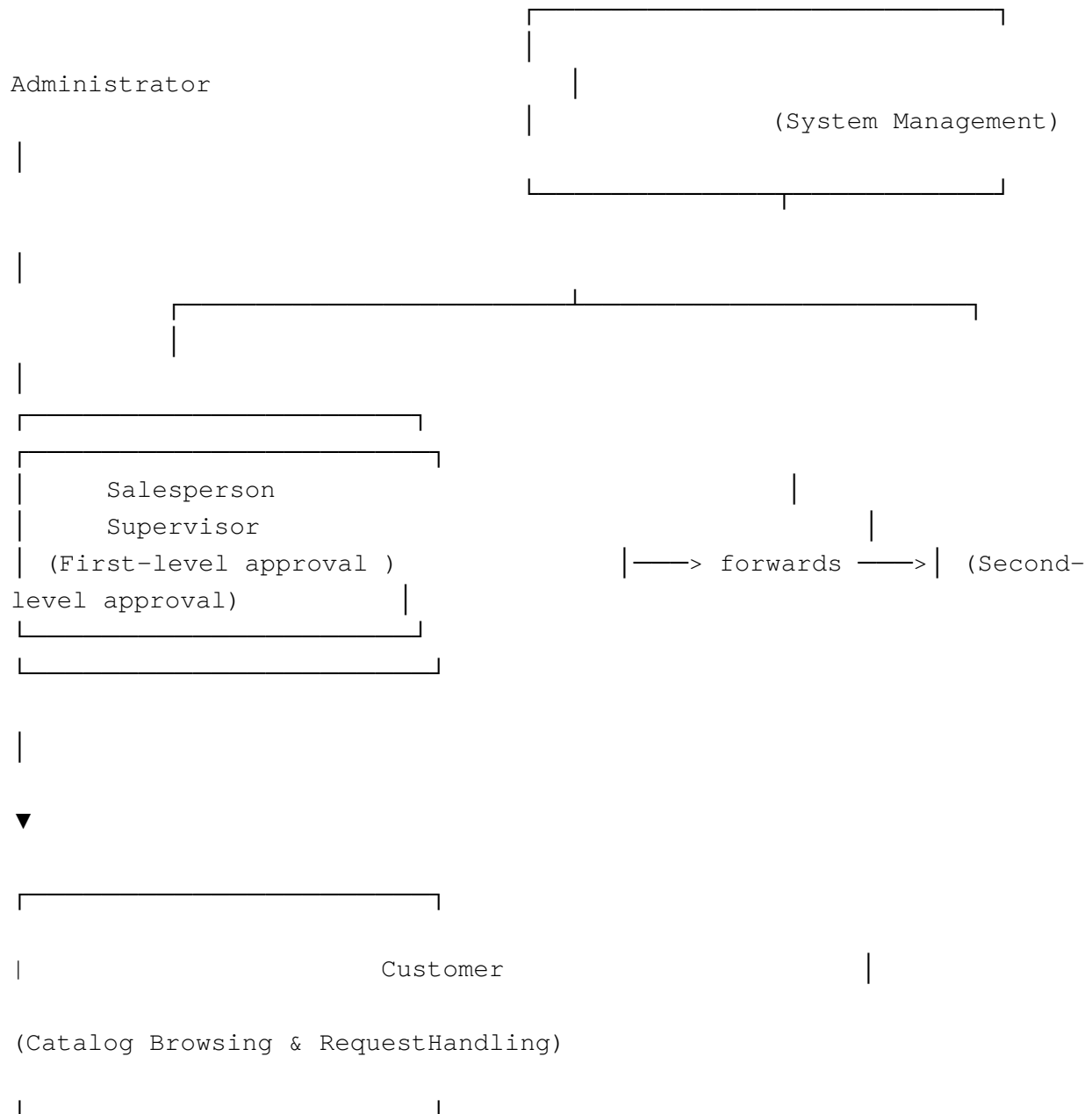
1. Log in with Admin role.
2. Manage catalogs, categories, and items in Service Catalog.
3. Update or add new cars to the Mahendra Catalog.
4. Monitor system activity, run reports, and adjust workflows as needed.

System Behavior in Action

- **Automation:** Workflow automatically routes requests → Salesperson → Supervisor.
- **Notifications:** At each stage (approval/rejection), customers and staff receive notifications.
- **Transparency:** Customers can always see the live status of their requests in the portal.
- **Efficiency:** Manual follow-ups are eliminated through workflow-driven approvals.

8. Organization Structure

Hierarchical Representation



Explanation of Structure

- The Administrator is at the top, ensuring system configurations and smooth functioning.

- Salespersons directly interact with customers and act as the first approval authority.
- Supervisors provide the final approval/rejection, ensuring quality control.
- Customers are the service users who interact with the catalog system via the Service Portal.

9. Authentication Mechanism

1. Login Page

- Users access the system through the Service Portal (sp) login page.
- They must enter a valid username and password provided in the ServiceNow instance.

2. ServiceNow Authentication Options (extendable if needed):

- **Basic Login** (default) – User ID and password stored in the instance.
- **SSO** (Single Sign-On) – Can integrate with enterprise authentication providers.
- **Multi-Factor Authentication** (MFA) – Optional for stronger security (e.g., OTP/email verification).

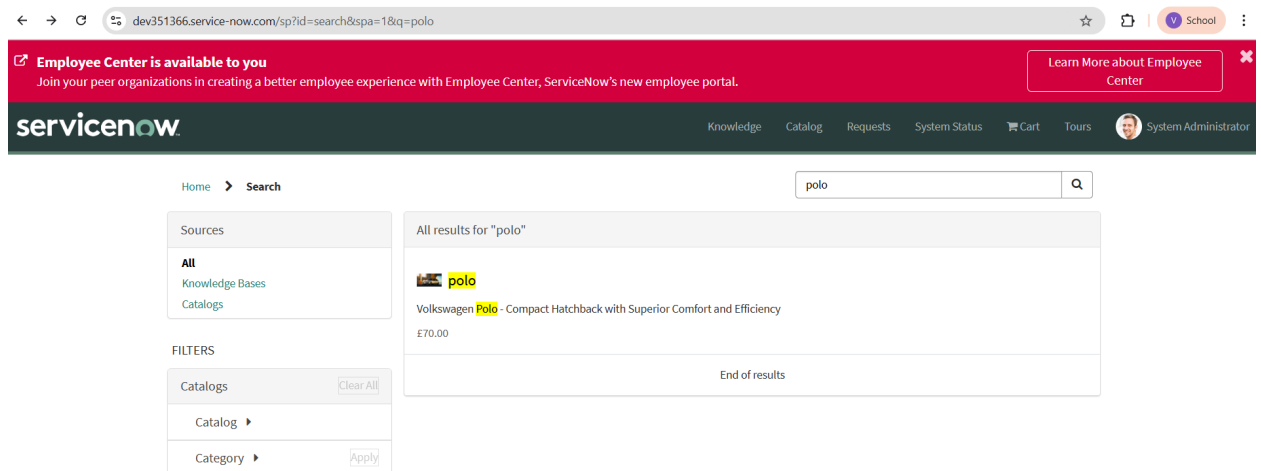
3. Role-Based Access Control (RBAC)

- Once logged in, access is restricted based on the user's role:
 - **Administrator** → Full system access (catalog management, workflow setup, reporting).
 - **Salesperson** → Can view catalog, process first-level approvals.
 - **Supervisor** → Can handle second-level approvals, monitor requests.
 - **Customer** → Can only browse catalog, add items to cart, and submit requests.

10. User Interface

Customer Interface

- **Homepage / Catalog Browse Page:**
 - Displays all car categories (e.g., Sports, XUV, Sudden).
 - Each category shows a list of available cars with images, model name, price, and short specs.
- **Car Details Page:**
 - Full specifications, availability, images, and price.
 - Option to Add to Cart or Request Booking/Test Drive.
- **My Requests Page:**
 - Shows status of all submitted requests (Pending, Approved, Rejected, Completed).
 - Allows customers to track requests in real-time.



After Request is Approved

dev351366.service-now.com/sp?id=sc_request&is_new_order=true&table=sc_request&sys_id=a297ead9c35cb210633d971d0501319b

School

Employee Center is available to you

Join your peer organizations in creating a better employee experience with Employee Center, ServiceNow's new employee portal.

Learn More about Employee Center

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KnowledgeCatalogRequestsSystem StatusCartToursSystem Administrator

Home > Request Summary

Search Catalog

Submitted : 2025-09-29 05:41:31
Request Number : REQ0010002
Requested for : Abraham Lincoln
Estimated Delivery : 2025-09-29

Item	Delivery Date	Stage	Price (each)	Quantity	Total
polo	2025-09-29	Request Approved	£70.00	--	£70.00
					Total: £70.00

11. Screenshots

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AllFavoritesHistoryWorkspacesAdmin

Catalog - Mahendra

Search

UpdateDelete

CatalogMahendra

* TitleMahendra

Manager

Editors

DescriptionIt is a car showroom.

Desktop imageClick to add...

'Catalog Home' Page

'Continue Shopping' page

ApplicationGlobal

Active

Enable Wish List

UpdateDelete

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All Favorites History Workspaces Admin

Catalog Item - polo

Search

Copy Try It Update Edit in Catalog Builder Delete

Name

polo

Application

Global

Catalogs

Mahendra

Active

☒

Category

Sudden

Fulfillment automation level

Unspecified

State

-- None --

Checked out

-- None --

Owner

System Administrator

Item Details

Process Engine

Picture

Pricing

Portal Settings

Short description

Volkswagen Polo - Compact Hatchback with Superior Comfort and Efficiency

Description

B I U ↶ ↷ Verdana 8pt

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.

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All Favorites History Workspaces Admin

Catalog Item - Thar

Search

Copy Try It Update Edit in Catalog Builder Delete

Name

Thar

Application

Global

Catalogs

Mahendra

Active

☒

Category

XUV

Fulfillment automation level

Unspecified

State

-- None --

Checked out

-- None --

Owner

System Administrator

Item Details

Process Engine

Picture

Pricing

Portal Settings

Short description

Mahindra Thar - 4x4 Off-Road SUV with Modern Features

Description

B I U ↶ ↷ Verdana 8pt

The Mahindra Thar is a rugged, off-road SUV built for adventure and performance. With a 2.0L mStallion petrol engine or a 2.2L mHawk diesel engine, it offers the perfect balance between power and fuel efficiency. The Thar comes with modern features like a touchscreen infotainment system, automatic climate control, and advanced safety features such as ABS and dual airbags. Its 4x4 drivetrain, high ground clearance, and water-wading capability make it a perfect choice for both city driving and off-road expeditions. Available in multiple trims, the Thar is designed to be the ultimate combination of style, comfort, and functionality.

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AllFavoritesHistoryWorkspacesAdmin

Catalog Item - XUV700

Search

CopyTry ItUpdateEdit in Catalog BuilderDelete

NameXUV700

ApplicationGlobal

CatalogsMahendra

Active

CategorySports

Fulfillment automation levelUnspecified

State-- None --

Checked out-- None --

OwnerSystem Administrator

Item DetailsProcess EnginePicturePricingPortal Settings

Short descriptionMahindra XUV700 - The Ultimate SUV Experience.

Description

B I U ↶ ↷ Verdana 8pt

The Mahindra XUV700 is a premium, high-performance SUV known for its advanced technology, robust build, and superior comfort. Featuring a powerful turbo-petrol engine, it delivers an exhilarating driving experience. With futuristic design elements, a spacious interior, and cutting-edge safety features like ADAS, the XUV700 is built to offer an extraordinary ride. Key highlights include a 10.25-inch digital cockpit, panoramic sunroof, 7-seater option, and superior connectivity with Alexa built-in. Whether it's for city driving or off-road adventures, the XUV700 redefines the SUV experience.

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AllFavoritesHistoryWorkspacesAdmin

User - sales person

Search

UpdateSet PasswordDelete

Primary email device created for sales person

User ID01

First namesales person

Last name

Title

Department

Password needs reset

Locked out

Active

Web service access only

Internal Integration User

Email

Language-- None --

Calendar integrationOutlook

Time zoneSystem (America/Los_Angeles)

Date formatSystem (yyyy-MM-dd)

Business phone

Mobile phone

PhotoClick to add...

UpdateSet PasswordDelete

Related Links

[View linked accounts](#)

[View Subscriptions](#)

[Reset a password](#)

Entitled Custom TablesRoles (1)GroupsDelegatesSubscriptionsUser Client Certificates

Role

Search

Actions on selected rows...

Edit...

User = sales person

Role	State	Inherited	Inheritance Count
emp1	Active	false	

<<<1 to 1 of 1>>>

<

Group showroom

Update

Delete

Primary email device created for sales person3

Name

showroom

Group email

Manager

Abraham Lincoln

Parent

Description

Update

Delete

Roles

Group Members (3)

Groups

User

Search

Actions on selected rows...

New

Edit...

Group = showroom

User

sales person

sales person3

sales person2

<<

<

1

>

>>

to 3 of 3

<

Table cars fulfillment

Delete

Update

Delete All Records

A table is a collection of records in the database. Each record corresponds to a row in a table, and each field on a record corresponds to a column on that table. Applications use tables and records to manage data and processes. [More Info](#)

* Label

cars fulfillment

* Name

u_cars_fulfillment

Extends table

Task

Application

Global

Columns

Controls

Application Access

Table Columns

for text

Search

1

to 20 of 71

New

Dictionary Entries

Column label	Type	Reference	Max length	Default value	Display
Domain Path	Domain Path	(empty)	255	/	false
Contract	Reference	Contract	32		false
Delivery task	Reference	Execution Plan Task	32		false
Approval	String	(empty)	40	not requested	false
Priority	Integer	(empty)	40	4	false
Comments and Work notes	Journal List	(empty)	4,000		false
Task type	System Class Name	(empty)	80	javascript:current.getTableName();	false
Assignment group	Reference	Group	32		false

Workflow

Open Record

Name

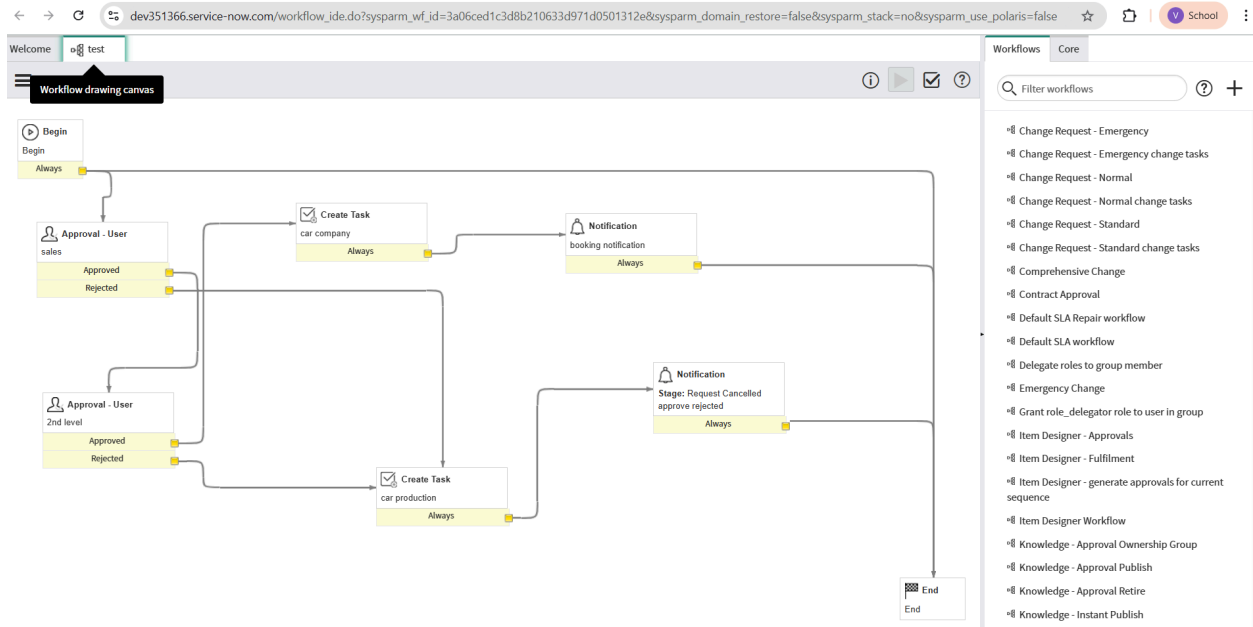
test

Application

Global

Table

sc_req_item



Demo Link :

https://drive.google.com/file/d/1aRzqlEhrNqRvzl9NUWobl0krW_Md0Xm/view?usp=drivesdk

12. Future Enhancement:

The Automated Car Catalog System is designed to improve showroom operations, but there are several enhancements that can make it even more powerful, scalable, and user-friendly in the future:

1. Integration with Payment Gateway

- Enable customers to make online payments for bookings or reservations directly through the portal.
- Supports secure transactions and instant confirmation of orders.

2. Advanced Search and Filtering

- Add AI-powered search to help customers find cars based on features, budget, fuel type, and preferences.
- Enable comparison features for multiple cars side by side.

3. Mobile Application Support

- Develop a mobile app for Android and iOS to allow customers and sales staff to access the catalog on the go.
- Push notifications for approvals, bookings, and updates.

4. Customer Feedback and Ratings

- Allow customers to rate cars and provide feedback on services or test drives.
- Helps showroom management improve customer satisfaction and decision-making.

5. Inventory Management Integration

- Integrate with real-time inventory systems to automatically update stock levels.
- Generate alerts for low stock or new arrivals.

6. Analytics & AI Insights

- Incorporate predictive analytics to forecast car demand and sales trends.
- Generate reports on customer preferences, popular models, and seasonal demand.

7. Chatbot Support

- Implement a virtual assistant or chatbot to guide customers, answer queries, and help them book test drives.
- Reduces manual interaction load on salespersons.

8. Enhanced Security & Authentication

- Implement Multi-Factor Authentication (MFA) for additional security.
- Role-based audit trails to track all actions by admins, salespersons, and supervisors.

9. Multi-Showroom Support

- Extend the system to support multiple showrooms under one platform.
- Centralized dashboard to track cars, sales, and requests across locations.

10. Integration with CRM & Marketing Tools

- Connect the system to Customer Relationship Management (CRM) platforms for better customer tracking.
- Use data to send targeted promotions, reminders, and marketing campaigns