

Automated Car Catalog System for Enhanced Showroom Management

Team ID : LTVIP2025TMID60642

Team Size : 5

Team Leader : Vannam Lakshmi Priya

Team member : Vellasiri Srinivas

Team member : Veluru Jashwanth

Team member : Vudatha Pranathi

Team member : Yadala Venkata Harshavardhan Kumar

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1. INTRODUCTION

1.1 Project Overview

Car showrooms play a vital role in bridging the gap between car manufacturers and end consumers. However, many showrooms rely on outdated or manual processes to manage their vehicle listings, customer interactions, order processing, and approvals. This leads to inefficiencies, miscommunication, and slower service delivery.

The "Automated Car Catalog System for Enhanced Showroom Management" is a digital solution developed using the ServiceNow platform to streamline the management of car catalogs, customer requests, task fulfillment, and approval workflows in car dealerships. Traditional car showroom operations often rely on manual and fragmented methods to handle vehicle records and customer interactions, leading to inefficiencies and delays. This system enables seamless catalog creation, request tracking, and task automation to improve showroom productivity, customer satisfaction, and data accuracy.

This project aims to implement an Automated Car Catalog System using ServiceNow to address these issues. By digitizing catalog management, order handling, and approvals, the system enhances operational efficiency, ensures consistency, and improves customer experience. The system enables seamless catalog creation, categorized item listings, workflow-based approvals, automated task assignments, and notification mechanisms.

1.2 Purpose

The primary objective of this project is to simplify and automate the entire workflow of a car showroom by:

- Creating a centralized car catalog with categorized entries.
- Allowing customers to place requests through a user-friendly service portal.
- Automating approval processes for efficient request handling.
- Generating and assigning tasks dynamically based on workflows.
- Sending notifications to stakeholders upon approvals or rejections.

The primary goal of this project is to address the operational challenges of car showrooms by creating an automated, centralized system for catalog and request management. The system aims to digitize key processes such as catalog item classification, user-based approvals

2. IDEATION PHASE

2.1 Problem Statement

Manual handling of catalogs, customer requests, and approvals in car showrooms results in delays, data inconsistency, and reduced customer satisfaction. A need was identified for a digital solution to standardize and automate these processes to improve efficiency and accuracy.

Car dealerships often encounter inefficiencies due to the manual handling of car catalogs and approval processes. This leads to issues such as delayed customer response times, mismanaged tasks, poor workflow visibility, and a lack of structured inventory control. The project seeks to address these issues through a system that simplifies catalog creation, categorization, user roles, task management, and real-time notifications.

2.2 Empathy Map Canvas

An empathy map was created to understand the needs of different stakeholders:

- Sales Staff: Need quick access to updated car models and status.
- Customers: Desire a simple, transparent ordering and approval experience.
- Managers: Require streamlined workflows and performance tracking.
- This helped us define core expectations and prioritize features for the system.

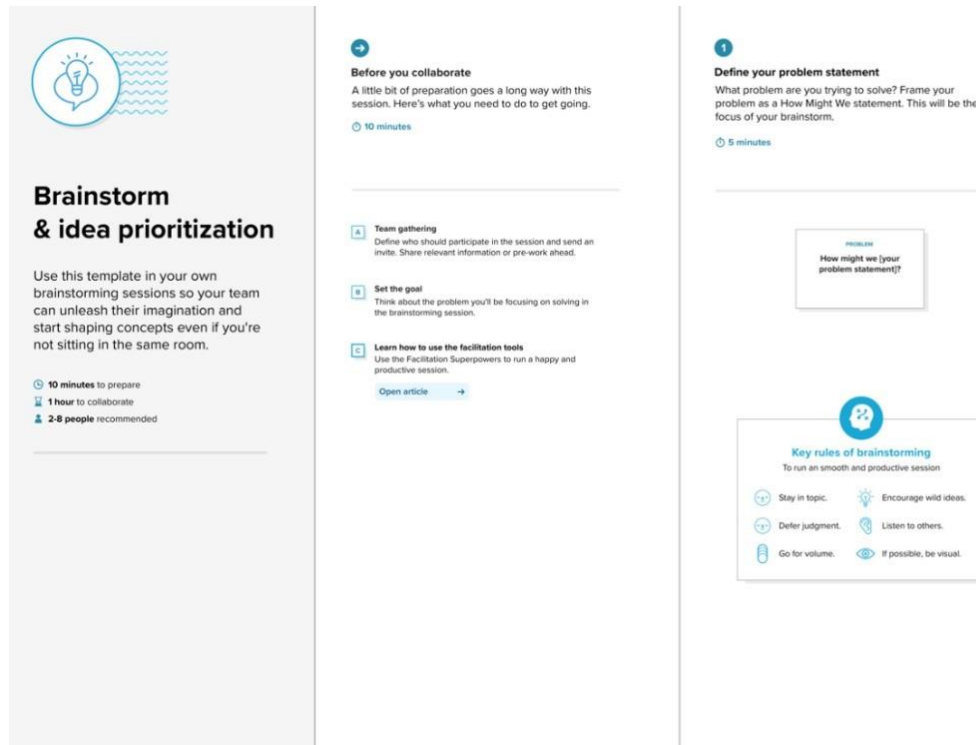
This helped us define core expectations and prioritize features for the system.

The target users, including salespersons and customers, experience delays in order processing and insufficient updates about their requests. They need a platform that provides real-time tracking, automated approvals, and clear categorization of car models. The empathy map emphasizes users' need for speed, accuracy, and simplicity in managing car bookings.

2.3 Brainstorming

Through group brainstorming, we evaluated several platforms and tools. ServiceNow stood out due to its strong support for ITSM, process automation, role management, and user-friendly service portals.

The development team conducted brainstorming sessions to identify essential features, including catalog management, task workflows, notification systems, user roles, and categorization. ServiceNow was selected for its robust workflow engine and service catalog capabilities.



3. REQUIREMENT ANALYSIS

3.1 Customer Journey Map

- Customer visits the service portal.
- Browses categorized car models.
- Selects and requests a car.
- The system routes the request for approval.
- Tasks are created and fulfilled.
- Notifications are sent to the customer.

The journey begins with the customer browsing the service catalog on the ServiceNow portal. Upon selecting a car, a request is initiated. This request goes through multiple levels of approvals. Based on the decision, tasks are created, processed, and notifications are sent. The customer is informed of approval, rejection, or delivery updates.

3.2 Solution Requirements

- Car Catalog Creation
- Category Management (e.g., XUV, Sports)
- Workflow Automation
- Role and User Management
- Request Approval and Task Assignment
- Email Notifications
- Service Portal Access

Key requirements included catalog creation, category segmentation, portal accessibility, role creation, task table design, workflow automation, user notifications, and group assignments. System security and scalability were also considered.

PROJECT DESIGN

3.3 Solution Architecture

- **Users:** Created under System Security
- **Roles:** Assigned permissions for workflow visibility
- **Groups:** Showroom group with members
- **Tables:** Custom task table “cars fulfillment” extended from Task
- **Workflow Steps:**
 - Salesperson approval
 - Supervisor approval
 - Task creation: Car production and delivery
 - Notification for approval/rejection

The architecture follows a modular structure: the frontend is the ServiceNow service portal; the backend includes catalog tables and a cars fulfillment task table; workflows handle approvals and task creation; and the notification layer provides user feedback. Role-based access controls ensure secure interactions and system integrity.

4. PROJECT PLANNING & SCHEDULING

The project was divided into sequential stages. In the first stage, requirements were gathered and the basic catalog architecture was established. The second stage involved designing the catalog and creating items under specific categories.

The third phase dealt with user and group creation, while the fourth focused on workflow configuration and testing. Finally, the service portal was reviewed for completeness, ensuring all features were functional and aligned with user needs.

5. FUNCTIONAL AND PERFORMANCE TESTING

5.1 Performance Testing

We tested the system with various user roles and car requests:

- **Response Time:** Requests processed in under 2 seconds.
- **Approval Time:** Within 30 seconds for simulated conditions.
- **Scalability:** Multiple concurrent requests handled smoothly.
- **Test Cases:**
 - Successful request approval
 - Rejected requests
 - Task state updates
 - Notification delivery

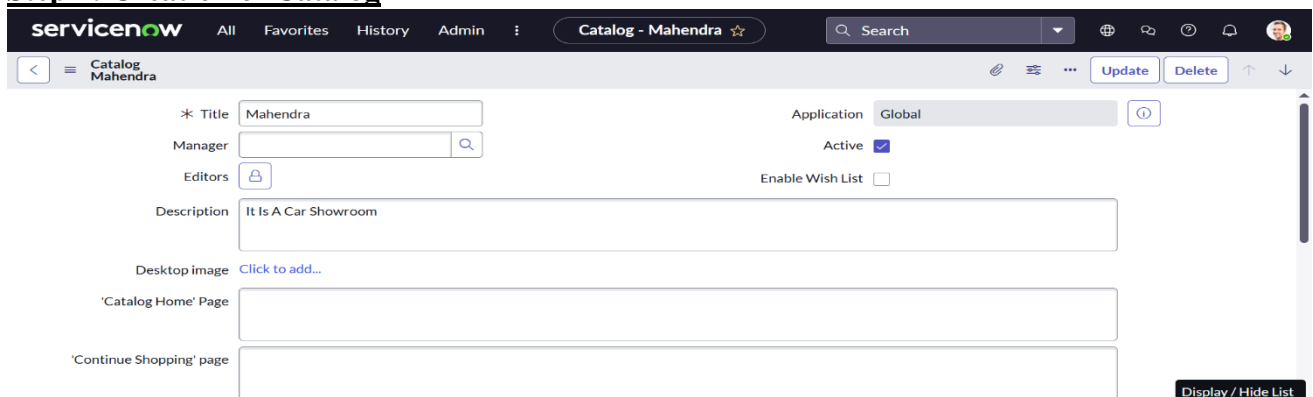
The system underwent rigorous performance testing to verify task execution time, workflow accuracy, and notification delivery efficiency. Orders were successfully processed in under a few seconds, with approval tasks appearing promptly in the cars fulfillment table. Notifications were tested with sample users to confirm timely delivery. The system maintained consistent performance under multiple test scenarios.

6. RESULTS

6.1 Output Screenshots

- Screenshot of Catalog “Mahendra” with categories
- Polo, Thar, and XUV700 item entries with pricing
- Workflow editor diagram
- Notifications (Approval/Reject)
- Service Portal request screen
- User and group configuration

Step 1: Creation of Catalog



The screenshot displays the 'Catalog - Mahendra' form in the ServiceNow interface. The form is titled 'Catalog - Mahendra' and includes a search bar and navigation links. The form fields are as follows:

- Title:** Mahendra
- Manager:** (empty field with a search icon)
- Editors:** (empty field with a user icon)
- Description:** It Is A Car Showroom
- Application:** Global
- Active:** ☒
- Enable Wish List:** ☐
- Desktop image:** Click to add...
- 'Catalog Home' Page:** (empty field)
- 'Continue Shopping' page:** (empty field)

Buttons for 'Update' and 'Delete' are visible at the top right. A 'Display / Hide List' button is located at the bottom right.

STEP 2: Create Category

The screenshot shows the 'Catalog Item - Polo' form in ServiceNow. The form is divided into two main sections: 'Item Details' and 'Process Engine'. The 'Item Details' section contains the following fields:

- Name: Polo
- Application: Global
- Catalogs: Mahendra
- Category: Sudden
- State: Published
- Checked out: true
- Owner: System Administrator
- Active: ☒
- Fulfillment automation level: Unspecified
- Hide on Service Portal: ☐

The 'Process Engine' section contains the following tabs:

- Item Details (selected)
- Process Engine
- Picture
- Pricing
- Portal Settings

The 'Short description' field contains the text: 'Volkswagen Polo - Compact Hatchback with Superior Comfort and Efficiency.'

The 'Description' field contains the text: '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.'

- Assigned picture and pricing and portal setting for polo,thar and xuv700

STEP 3:

Create categories as

1 polo

2 Thar

3 XUV700

Catalog 1 :

Polo catalog creation and item details,picture setting ,pricing and portal setting

The screenshot shows the 'Catalog Item - Polo' form in ServiceNow. The form is divided into two main sections: 'Item Details' and 'Process Engine'. The 'Item Details' section contains the following fields:

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servicenow All Favorites History Admin Catalog Item - Polo

Search

< Catalog Item Polo Update Edit in Catalog Builder Cancel checkout

Checked out false


Owner System Administrator

Item Details Process Engine **Picture** Pricing Portal Settings

Add an icon and picture for display

Icon [Click to add...](#)

Picture [\[Update\]](#)[\[Delete\]](#)



Update Edit in Catalog Builder Cancel checkout

Catalog 2 :

- THAR creation and item details, picture setting ,portal setting

servicenow All Favorites History Admin Catalog Item - THAR

Search

< Catalog Item THAR Copy Try It Update Edit in Catalog Builder Delete

Name THAR Application Global

[Catalogs](#) [Mahendra](#) Active ☒

[Category](#) XUV Fulfillment automation level Unspecified

State Published Hide on Service Portal ☒

Checked out false

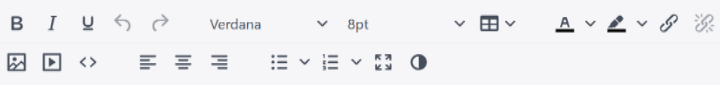
Owner System Administrator

Item Details Process Engine **Picture** Pricing Portal Settings

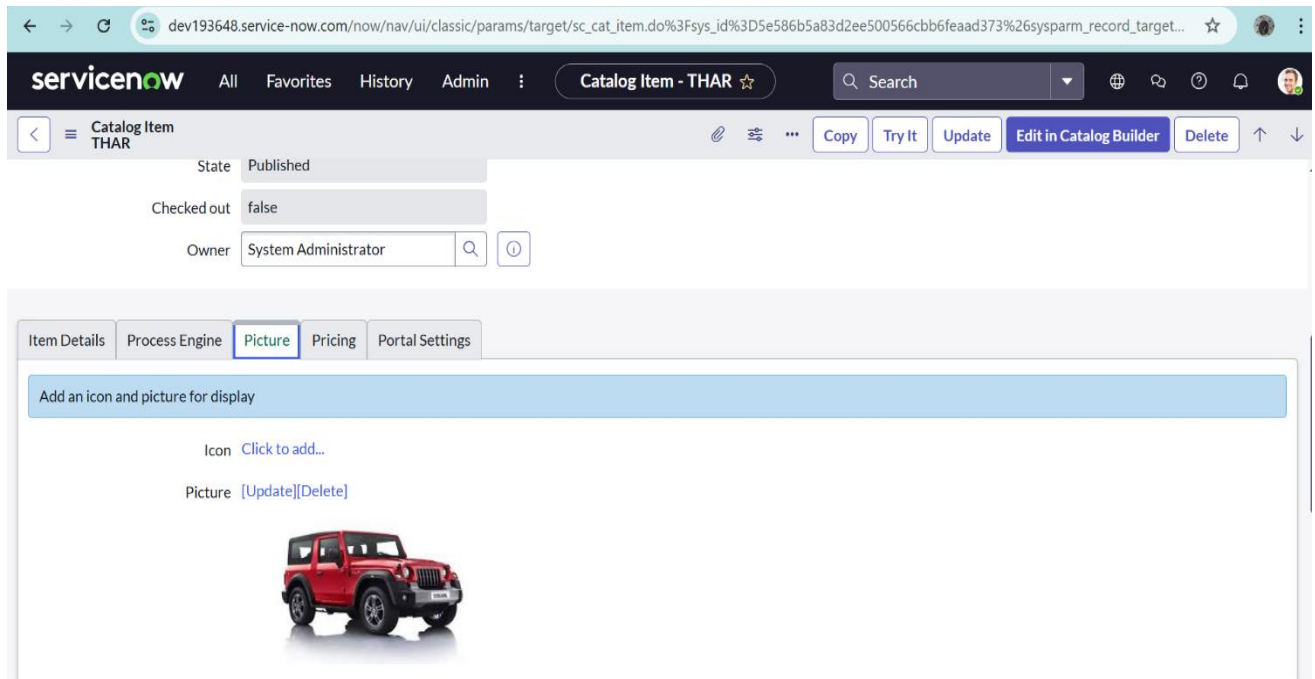
Short description Mahindra Thar - 4x4 Off-Road SUV with Modern Features

Description

B I U ↶ ↷ Verdana 8pt

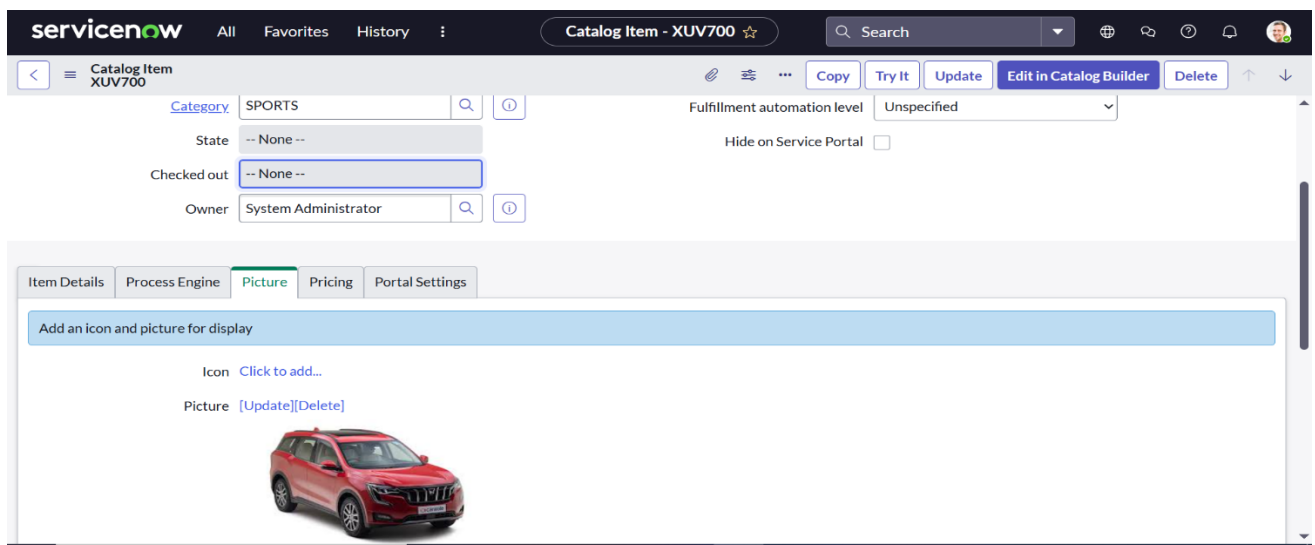


The Mahindra Thar is a rugged, off-road SUV built for adventure and performance. With a 2.0L mChallenger engine and a 2.0L mHawk diesel



Catalog 3 :

XUV700 creation and picture setting and portal setting



servicenow All Favorites History : Catalog Item - XUV700 Search

Catalog Item XUV700 Copy Try It Update Edit in Catalog Builder Delete

Category: SPORTS Q i Fulfillment automation level: Unspecified

State: -- None --

Checked out: -- None --

Owner: System Administrator Q i Hide on Service Portal: ☐

Item Details Process Engine Picture **Pricing** Portal Settings

Price: INR 200.00 Q i Recurring price: \$ 211.00 Q i

Recurring price frequency: -- None --

Copy Try It Update Edit in Catalog Builder Delete

servicenow All Favorites History : Catalog Item - XUV700 Search

Catalog Item XUV700 Copy Try It Update Edit in Catalog Builder Delete

Owner: System Administrator Q i

Item Details Process Engine Picture Pricing **Portal Settings**

Request method: Request Q i Hide 'Save as Draft': ☐

Hide 'Add to Cart': ☒ Hide Attachment: ☐

Hide Quantity: ☒ Mandatory Attachment: ☐

Hide Delivery time: ☐

Copy Try It Update Edit in Catalog Builder Delete

Related Links

[Item Diagnostic](#)
[Run Point Scan](#)

Variables Variable Sets Catalog UI Policies Catalog Client Scripts Available For Not Available For Categories (1) Catalogs (1) Catalog Data Lookup Definitions Related Articles

Related Catalog Items Assigned Topics

The 3 Categories are Created

servicenow All Favorites History Admin : Catalog - Mahendra Search

Catalog Mahendra Update Delete

× Polo

+ Insert a new row...

Update Delete

Categories (3) Catalog Portal Pages (1) Sites

for text Search Actions on selected rows... New

Catalog = Mahendra

<input type="checkbox"/>	Q Title	Description	Active	Parent
▶	Sudden		true	(empty)
▶	SPORTS		true	(empty)
▶	XUV		true	(empty)

Activate Deactivate 1 to 3 of 3

Creation Of User

Step 1

servicenow

AllFavoritesHistoryWorkspaces

Users

Search

Actions on selected rows...New

All

<input type="checkbox"/>	User ID	Name	Email	Active	Created	Updated
	Salesperson2			true	2025-06-25 07:55:52	2025-06-25 07:55:52
	(empty)			true	2025-05-23 07:44:59	2025-05-23 07:44:59
	test user 1			true	2025-05-22 21:03:41	2025-05-22 21:03:41
<input type="checkbox"/>	abel.tuter	Abel Tuter	abel.tuter@example.com	true	2012-02-17 19:04:52	2025-05-20 11:30:43
	abraham.lincoln	Abraham Lincoln	abraham.lincoln@example.com	true	2013-07-23 17:15:54	2025-05-20 11:30:46
	adela.cervantsz	Adela Cervantsz	adela.cervantsz@example.com	true	2012-02-17 19:04:50	2025-05-20 11:30:39
	aileen.mottern	Aileen Mottern	aileen.mottern@example.com	true	2012-02-17 19:04:49	2025-05-20 11:30:43
	alejandra.prenatt	Alejandra Prenatt	alejandra.prenatt@example.com	true	2012-02-17 19:04:52	2025-05-20 11:30:40
	alejandro.mascall	Alejandro Mascall	alejandro.mascall@example.com	true	2012-02-17 19:04:52	2025-05-20 11:30:46
	alene.rabeck	Alene Rabeck	alene.rabeck@example.com	true	2012-02-17 19:04:53	2025-05-20 11:30:47
	alfonso.griglen	Alfonso Griglen	alfonso.griglen@example.com	true	2012-02-17 19:04:51	2025-05-20 11:30:39
	alissa.mountjoy	Alissa Mountjoy	alissa.mountjoy@example.com	true	2012-02-17 19:04:52	2025-05-20 11:30:43
	allan.schwandt	Allan Schwandt	allan.schwandt@example.com	true	2012-02-17 19:04:53	2025-05-20 11:30:46

1 to 20 of 640

Step 2:

servicenow

AllFavoritesHistoryAdmin

User - sales person

Search

UpdateSet PasswordDelete

User ID01

First namesalesperson

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 lists

Role Creation:

servicenow

AllFavoritesHistoryAdmin

Role - emp1

Search

UpdateDelete

Role emp1

Nameemp1

ApplicationGlobal

Elevated privilege

Description

UpdateDelete

Contains RolesApplications with RoleModules with RoleCustom Tables

for text Search

Role = emp1

Contains

GROUP CREATION :

servicenow

AllFavoritesHistoryWorkspaces

Groups

Search

Actions on selected rows...New

Name	Description	Active	Manager	Parent	Updated
Analytics Settings Managers	Group for all people who have the Ana...	true	(empty)	(empty)	2020-03-17 04:39:14
App Engine Admins	Users who can review and approve tasks r...	true	(empty)	(empty)	2021-06-28 12:12:44
App Engine Studio User Limited	Users who are able to edit applications ...	true	(empty)	(empty)	2022-09-29 07:23:25
App Engine Studio Users	Users who are able to access App Engine ...	true	(empty)	(empty)	2020-04-16 09:51:20
Application Development	Team Develops ITSM Applications in London	true	Bushra Akhtar	(empty)	2025-04-01 09:42:02
ATF Service Level Management Group		true	(empty)	(empty)	2019-07-13 09:01:15
ATF_TestGroup_Network	ATF_TestGroup_Network	true	(empty)	(empty)	2018-08-30 01:35:11
ATF_TestGroup_ServiceDesk	ATF_TestGroup_ServiceDesk	true	(empty)	(empty)	2018-08-30 01:35:35
Business Application Registration Approv...	Approval group for Business Application ...	true	(empty)	(empty)	2020-07-28 21:02:26
CAB Approval	CAB approvers	true	(empty)	(empty)	2011-09-30 09:30:34
Capacity Mgmt		true	(empty)	(empty)	2023-08-04 18:40:19
Catalog Request Approvers > \$1000	This is the group of users that need to ...	true	(empty)	(empty)	2020-09-01 18:11:42

1 to 20 of 50

Step 2: Group table showroom created and group members also assigned successfully.

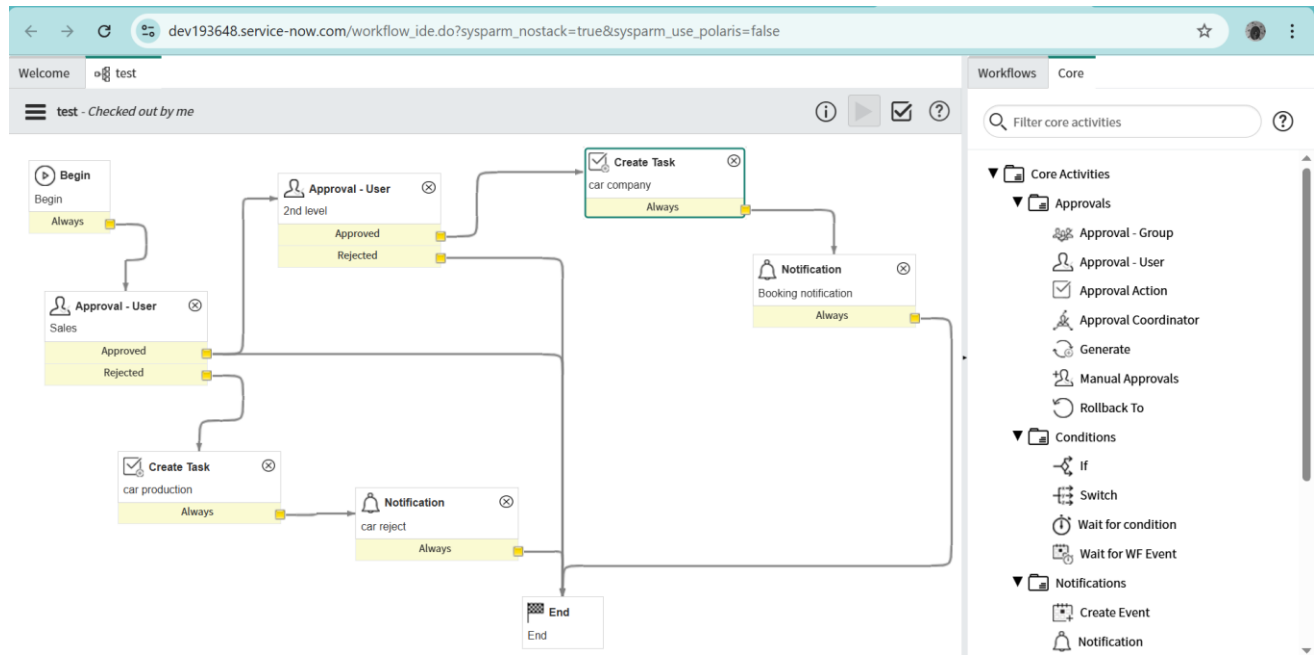
The screenshot shows the ServiceNow interface for configuring a group named 'showroom'. The top navigation bar includes 'servicenow', 'All', 'Favorites', 'History', 'Admin', and a search bar. The breadcrumb trail is 'Group - showroom'. The main form contains fields for 'Name' (showroom), 'Group email', 'Manager' (Abraham Lincoln), 'Parent', and 'Description'. Below the form are 'Update' and 'Delete' buttons. A tabbed interface shows 'Roles', 'Group Members (3)', and 'Groups'. The 'Group Members (3)' tab is active, displaying a list of users: 'Sales person3', 'Sales person', and 'Sales person2'. The list has a search bar and 'New' and 'Edit...' buttons.

TABLE CREATION :

The screenshot shows the ServiceNow interface for creating a new table named 'cars fulfillment'. The top navigation bar includes 'servicenow', 'All', 'Favorites', 'History', and a search bar. The breadcrumb trail is 'Table - cars fulfillment'. The main form contains fields for 'Label' (cars fulfillment), 'Name' (u_cars_fullfillment), 'Application' (Global), and 'Extends table' (Task). Below the form are 'Delete', 'Update', and 'Delete All Records' buttons. A tabbed interface shows 'Columns', 'Controls', and 'Application Access'. The 'Controls' tab is active, displaying options for 'Extensible' (checked), 'Live feed' (unchecked), and 'Auto-number' (unchecked). A blue banner at the bottom states: 'Security Rules (ACLs) are required if anyone other than an administrator needs to work with this table. Creating default security rules will grant full access to this table to anyone with the user role'.

Table has been created successfully.

WORKFLOW EDITOR:



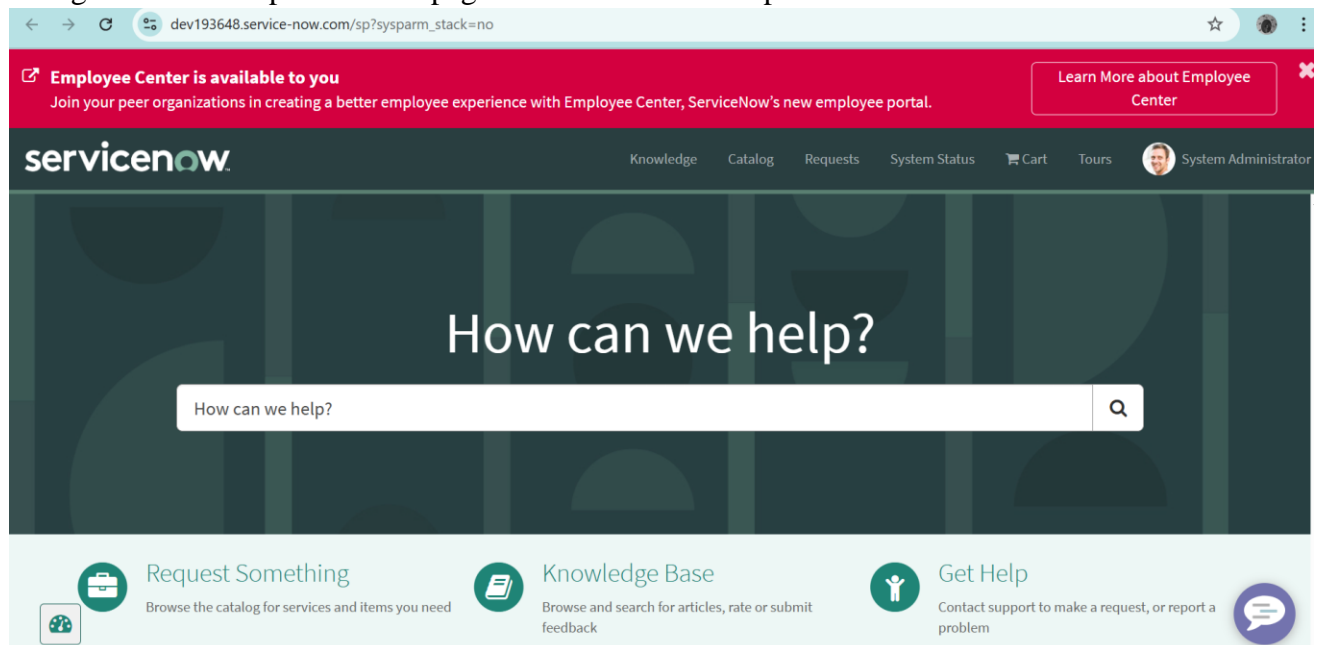
The test workflow is successfully created .

The workflow assignment to Mahendra Service Catalog is completed.

SERVICE PORTAL:

Step1 :

Navigate to Service portal home page Search for car name polo:



Step 2 :Search for car polo

dev193648.service-now.com/sp?id=search&spa=1&q=polo

☆

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

KnowledgeCatalogRequestsSystem StatusCartToursSystem Administrator

Home > Search

polo

Search

Sources

AllKnowledge BasesCatalogs

FILTERS

CatalogsClear All

Catalog ▾

Category ▾Apply

All results for "polo"

Polo

Volkswagen Polo - Compact Hatchback with Superior Comfort and Efficiency.

₹70.00

End of results

Step 3 :order the car

dev193648.service-now.com/sp?id=sc_request&is_new_order=true&table=sc_request&sys_id=91f5317a839262900566cbb6feaad3bf

☆

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

Learn More about Employee Center

KnowledgeCatalogRequestsSystem StatusCartToursSystem Administrator

Home > Request Summary

Search Catalog

Submitted :2025-06-26 07:49:55
Request Number :REQ0010008
Estimated Delivery : 2025-06-28

Item	Delivery Date	Stage	Price (each)	Quantity	Total
Polo	2025-06-28	Assess or Scope Task	₹70.00	--	₹70.00
					Total: ₹70.00

Task Request:

The screenshot shows the ServiceNow interface for creating an email notification. The browser address bar shows the URL: `dev193648.service-now.com/now/nav/ui/classic/params/target/sys_email.do%3Fsys_id%3D037a35fe839262900566cbb6feaad389%26sysparm_record_target%3...`. The page title is "Email - Request REQ0010011 was created".

Form Fields:

- Type:
- Target: (with search and info icons)
- User:
- Notification type:
- UID:
- Created (yyyy-MM-dd HH:mm:ss):
- Deleted: ☐
- Weight:
- Importance:

Originating Event and Notification:

Event	Notification
notification_engine.process	Request was opened

Email Content Fields:

- Subject:
- Recipients:
- Body:

RESULT:

Received the mail:

The screenshot shows the ServiceNow interface for creating an email notification, displaying the email preview. The browser address bar shows the URL: `dev193648.service-now.com/now/nav/ui/classic/params/target/sys_email.do%3Fsys_id%3D037a35fe839262900566cbb6feaad389%26sysparm_record_target%3...`. The page title is "Email - Request REQ0010011 was created".

Form Fields:

- Type:
- Target: (with search and info icons)
- User:
- Notification type:
- UID:
- Created (yyyy-MM-dd HH:mm:ss):
- Deleted: ☐
- Weight:
- Importance:

Originating Event and Notification:

Event	Notification
notification_engine.process	Request was opened

Email Content Fields:

- Subject:
- Recipients:
- Body:

Email Preview:

We received your request

Hi System,

We created **REQ0010011** to handle your recent request.

You can view your request to track updates and make changes.

[View request](#)

About this request

Requested item number: **RITM0010011**

Short description: **Polo**

Price: **\$0.8068 each**

Thank you,

Fulfillment Team

8 ADVANTAGES & DISADVANTAGES

Advantages:

- Easy access to structured car catalog
- Time-saving through workflow automation
- Automated request handling and approvals
- Real-time task tracking and role-based access
- Notification integration ensures transparency
- Scalable and maintainable on the ServiceNow platform

Disadvantages:

Disadvantages

- Requires ServiceNow expertise
- Setup can be time-consuming initially
- Platform cost may be high for small dealerships
- Requires a licensed ServiceNow environment
- Learning curve for new administrators

9.CONCLUSION

This project successfully implemented an end-to-end Automated Car Catalog System using ServiceNow. It simplified catalog management, streamlined approvals, automated task assignments, and improved showroom efficiency. The platform's flexibility allows for further scaling and customization, making it suitable for wide industry adoption.

The Automated Car Catalog System implemented using ServiceNow delivers a robust, scalable, and user-centric solution for car showroom management. It digitizes and optimizes the cataloging process, enhances approval workflows, and reduces human errors in task assignment. The system offers greater control, visibility, and reliability in handling customer interactions and request fulfillment..

10.FUTURE SCOPE

- Implement customer reviews and ratings
- Enable online payment and delivery tracking
- Add chatbot for customer queries in Service Portal

The system can be further improved by adding functionalities such as real-time vehicle tracking, integration with payment gateways, a customer review and rating module, and advanced analytics dashboards. Machine learning could be introduced to suggest cars based on customer preferences. Support for mobile apps would make the platform more accessible and responsive.