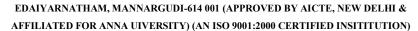


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servicenow.

DEPARTMENT OF COMPUTER SCIENCE

PROJECT TITLE: LAPTOP REQUEST CATALOG ITEM

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PROJECT TITLE: LAPTOP REQUEST CATALOG ITEM

ABSTRACT:

The ServiceNow Laptop Request Catalog System is designed to automate and streamline the laptop request and approval process within an organization. Traditionally, employees submit requests through emails or manual forms, which leads to delays, miscommunication, and lack of transparency. To overcome these challenges, this project utilizes the ServiceNow platform to build an efficient, user-friendly catalog system that handles laptop requests digitally.

The system enables users to raise requests through a predefined catalog item, enter necessary details such as laptop model and purpose, and automatically route them to managers for approval. Using ServiceNow's components like Catalog Items, Variables, UI Policies, UI Actions, and Workflow Automation, the process ensures smooth data handling and tracking at every stage.

By implementing this solution, the organization can achieve faster processing, improved visibility, and reduced manual effort in handling laptop requests. The project demonstrates the power of ServiceNow in automating IT service management (ITSM) tasks, promoting efficiency and accuracy in everyday operations.

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1. INTRODUCTION

1.1 OVERVIEW OF IT SERVICE MANAGEMENT (ITSM)

IT Service Management (ITSM) refers to the process of designing, delivering, managing, and improving the way IT services are used within an organization. It focuses on aligning IT services with business needs to ensure efficiency, reliability, and continuous improvement. ITSM frameworks, such as ITIL, provide best practices that help organizations deliver better customer experiences through structured workflows and service automation.

1.2 ABOUT SERVICENOW

ServiceNow is a leading cloud-based platform that provides digital workflows for IT Service Management (ITSM), IT Operations, and Business Process Automation. It allows organizations to manage requests, incidents, and approvals through an integrated service catalog. With tools for automation, reporting, and customization, ServiceNow reduces manual workload and ensures faster response times in IT support and asset management.

1.3 PROBLEM STATEMENT

In many organizations, the laptop request process is handled manually through emails or paper forms. This causes delays, confusion in approval tracking, and difficulty in monitoring request status. Employees often face uncertainty about request progress, and IT staff struggle to maintain clear records. Hence, there is a need for an automated, transparent, and user-friendly system to manage laptop requests efficiently.

1.4 OBJECTIVES OF THE PROJECT

- To design an automated laptop request system using the ServiceNow platform.
- To simplify and speed up the request and approval process.
- To enable users and managers to track requests in real-time.
- To reduce manual intervention and human errors in laptop allocation.
- To improve transparency and efficiency in IT service operations.

1.5 SCOPE AND LIMITATIONS

Scope:

The system focuses on automating the laptop request process within an organization using ServiceNow's Service Catalog and workflow features. It includes request creation, manager approval, and IT team fulfillment.

Limitations:

- The project is limited to the laptop request process only.
- Requires a stable internet connection to access ServiceNow.
- Customization options are limited in the free developer instance.

2. EXISTING SYSTEM

2.1 DESCRIPTION OF CURRENT PROCESS

In the existing system, the process of requesting a laptop within an organization is mostly **manual** and **time-consuming**. Employees who require laptops usually have to send email requests to the IT department or fill out paper forms. These requests often pass through multiple levels of approval, such as reporting managers and IT administrators, before being processed.

Since there is no centralized tracking system, it becomes difficult for both the requester and the administrator to monitor the status of the request. Communication gaps and missing records frequently lead to **delays**, **duplicate requests**, **and confusion** in approval or allocation.

The lack of automation also means that IT staff have to manually verify inventory availability, update request details, and maintain records, which increases the chance of **human error** and reduces overall productivity.

2.2 DRAWBACKS OF THE EXISTING SYSTEM

- **Manual Request Process:** Requests made through emails or paper forms require manual tracking and approvals.
- Lack of Transparency: Employees cannot view the real-time status of their requests.
- **Delayed Approvals:** Multiple layers of manual approval cause unnecessary waiting times.
- No Centralized Data: IT departments struggle to maintain accurate and updated records of laptop allocations.
- **High Risk of Errors:** Manual updates often lead to data inconsistency or request duplication.
- **Limited Accessibility:** Employees need to rely on the IT department for every update or clarification.

3. PROPOSED SYSTEM

The proposed system is a **Laptop Request Catalog Application** developed in **ServiceNow** to automate and simplify the laptop request process within an organization. It allows employees to request laptops through a self-service catalog item, eliminating the need for manual request handling through emails or physical forms.

The system automates the entire workflow — from request submission to approval, fulfillment, and delivery — using ServiceNow's catalog items, workflows, and notifications.

Managers can approve or reject requests directly from their ServiceNow dashboard, and the IT team can easily track the status of each request in real time.

This automation ensures transparency, reduces processing time, and improves employee satisfaction. It also maintains accurate records of asset requests and usage, contributing to better resource management within the organization.

4. SYSTEM ANALYSIS

4.1 FUNCTIONAL REQUIREMENTS

1. USER REQUEST SUBMISSION:

Users should be able to access the Service Catalog and submit a laptop request using the Laptop Request form.

2. FORM VALIDATION:

The system should ensure all required fields (like laptop type, justification, and quantity) are filled before submission.

3. APPROVAL WORKFLOW:

Requests should automatically be routed to the respective manager or admin for approval.

4. STATUS TRACKING:

Users can view the status of their requests (e.g., Submitted, Approved, Rejected, Fulfilled) within the ServiceNow portal.

5. NOTIFICATIONS:

Automated email notifications should be sent at each stage — submission, approval, and fulfillment.

6. ADMIN MANAGEMENT:

Admins can monitor all laptop requests, update request details, and mark requests as fulfilled.

7. RECORD MAINTENANCE:

All approved and completed requests should be automatically stored in the ServiceNow database for future reference.

4.2 NON-FUNCTIONAL REQUIREMENTS

1. **PERFORMANCE:**

The catalog item should load and process requests within a few seconds to ensure smooth user experience.

2. **RELIABILITY:**

The system must ensure that no data is lost or duplicated during workflow transitions.

3. **SECURITY:**

Only authorized users can raise requests, and approvals can be done only by respective managers or admins.

4. USABILITY:

The form interface should be user-friendly and clearly labeled for all fields.

5. SCALABILITY:

The system should support multiple simultaneous requests without performance degradation.

6. MAINTAINABILITY:

Updates to variables, workflows, or UI policies should be easily manageable through update sets.

5. SYSTEM DESIGN

5.1 SYSTEM ARCHITECTURE DIAGRAM

The **System Design** of the *ServiceNow Laptop Request Catalog System* focuses on how the catalog item, workflow, and approval process interact inside the ServiceNow platform. This design ensures smooth request handling, automated approvals, and efficient record management — all within the ServiceNow environment.

DESCRIPTION:

1. SERVICE CATALOG ITEM:

The user initiates a laptop request through a predefined *Laptop Request* catalog item available in the Service Catalog.

2. CATALOG VARIABLES:

The form includes necessary variables such as *Laptop Type, Justification, Quantity,* and *Delivery Location* for collecting user input.

3. UI POLICY & ACTIONS:

UI policies control form behavior — such as showing, hiding, or making fields mandatory — based on user selections.

4. WORKFLOW:

Once the form is submitted, a **ServiceNow Workflow** is triggered automatically. It manages the request's lifecycle, including approval, notification, and fulfillment stages.

5. APPROVAL MODULE:

The request is routed to the *Approver (Manager/Admin)* who can approve or reject it directly within the ServiceNow interface.

6. **NOTIFICATIONS:**

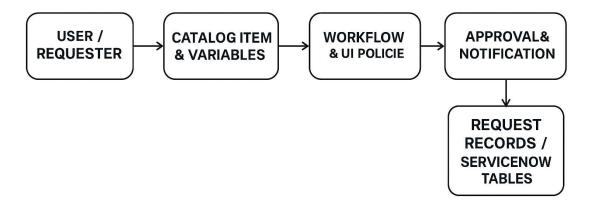
Email notifications are generated automatically to keep users informed about the status of their requests (Submitted, Approved, Fulfilled).

7. UPDATE SET MANAGEMENT:

All configurations (catalog item, variables, workflow, policies) are stored in an update set for easy migration and backup.

8. REQUEST RECORDS:

All request details are securely stored in ServiceNow's internal database tables (like sc request and sc req item).



6. MODULE DESCRIPTION

The ServiceNow Laptop Request Catalog System is divided into two main modules — the USER MODULE and the ADMIN MODULE.

Each module performs specific functions within the ServiceNow platform to ensure smooth request handling, approval, and fulfillment.

6.1 USER MODULE

The **User Module** is designed for employees or end-users who want to request a laptop through the ServiceNow Service Catalog.

FUNCTIONS:

1. ACCESS CATALOG:

The user logs into the ServiceNow portal and navigates to the *Laptop Request* catalog item.

2. SUBMIT REQUEST:

The user fills in the request form with details such as laptop model, quantity, justification, and location.

3. FORM VALIDATION:

Mandatory fields are validated using UI Policies to ensure all required information is entered.

4. TRACK REQUEST STATUS:

After submission, users can view the current status of their request — *Submitted, Approved, Rejected,* or *Fulfilled*.

5. EMAIL NOTIFICATIONS:

Users automatically receive email updates about the progress of their laptop request.

6.2 ADMIN MODULE

The **Admin Module** is used by administrators or managers to handle approvals and manage the laptop request process.

FUNCTIONS:

1. APPROVAL MANAGEMENT:

The admin or manager reviews and approves or rejects laptop requests submitted by users.

2. MONITOR REQUESTS:

Admins can track all pending, approved, or fulfilled requests through the *ServiceNow Request Table*.

3. FULFILLMENT:

After approval, the admin processes the request, arranges laptop delivery, and marks it as *Fulfilled* in the system.

4. UPDATE SET MANAGEMENT:

Admins can maintain and migrate catalog configurations, workflows, and policies using ServiceNow update sets.

5. AUDIT AND REPORTS:

All approved and completed requests are stored securely for record-keeping and report generation.

7. IMPLEMENTATION

7.1 OVERVIEW

The implementation phase involves configuring and deploying the Laptop Request Catalog Item in the **ServiceNow** platform.

This includes creating catalog items, defining variables, building workflows, applying UI policies, and ensuring proper functionality through testing.

The goal is to provide a fully automated and user-friendly system for managing laptop requests within the organization.

7.2 STEPS IN IMPLEMENTATION

• LAPTOP REQUEST CATALOG ITEM

A new catalog item named "Laptop Request" is created under the Service Catalog. This item acts as the main entry point for users to submit their laptop requests.

• UPDATE SET CREATION

An **Update Set** is created to capture all configurations such as catalog item, variables, workflows, and UI policies.

This ensures all system updates can be migrated or reused easily in another environment.

• SERVICE CATALOG ITEM CREATION

The catalog item is designed with the necessary details:

- Name: Laptop Request
- Category: IT Services
- Short Description: Request for new or replacement laptop
- Table: sc request / sc req item

ADD VARIABLES

Variables are added to collect user inputs such as:

- Employee Name
- Department
- Laptop Type
- Quantity
- Justification
- Delivery Location

These variables define the data fields in the form.

• CREATE UI POLICY AND ACTION

UI Policies and **UI Actions** are used to control form behavior dynamically — for example:

- Making fields mandatory
- Showing or hiding sections based on user input
- Enabling or disabling submission buttons

• EXPORT AND RETRIEVE UPDATE SET

The configured **Update Set** is exported as an XML file for backup or migration to another instance.

It can also be retrieved and previewed before committing the changes.

• TESTING CATALOG ITEM

The catalog item is tested by submitting sample requests.

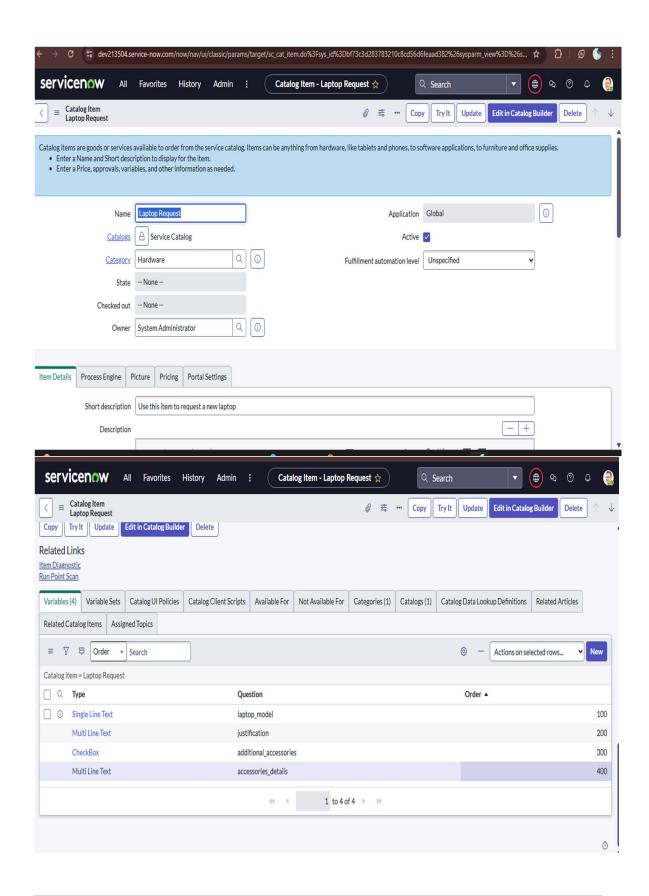
Approval workflows, notifications, and fulfillment actions are verified to ensure correct functionality.

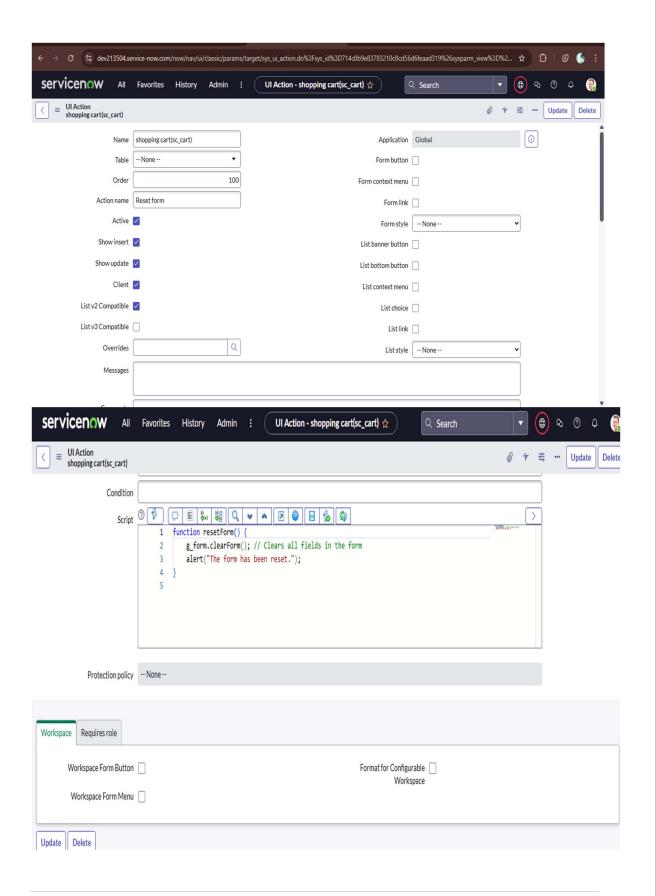
7.3 RESULT

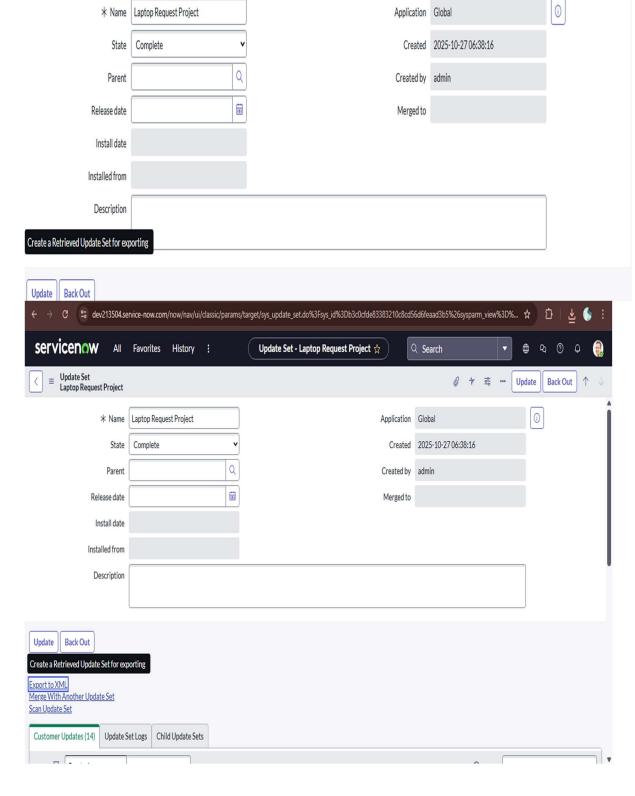
After implementation, users can easily request laptops using the ServiceNow Service Catalog.

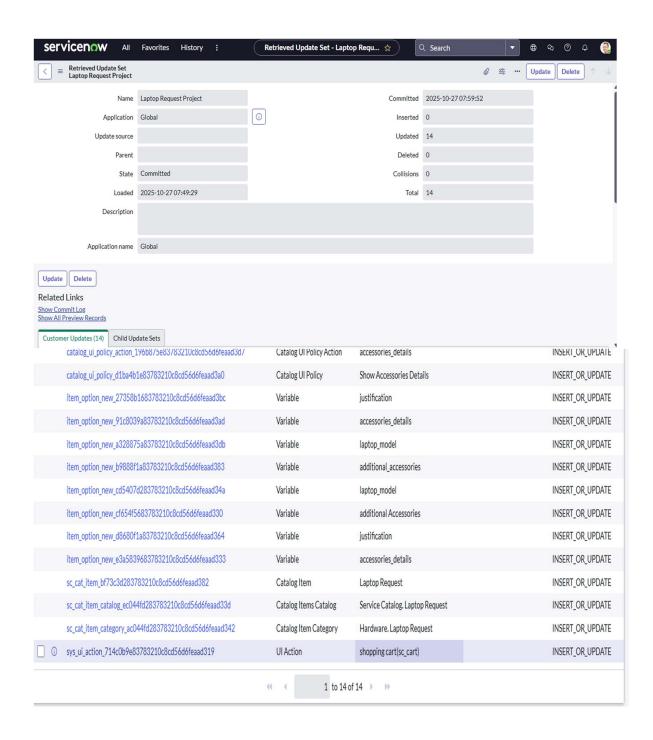
The workflow automatically manages approvals, notifies relevant stakeholders, and maintains all records digitally.

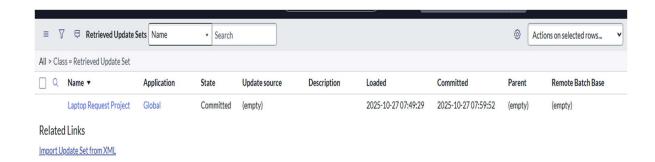
7.4 SCREENSHOTS

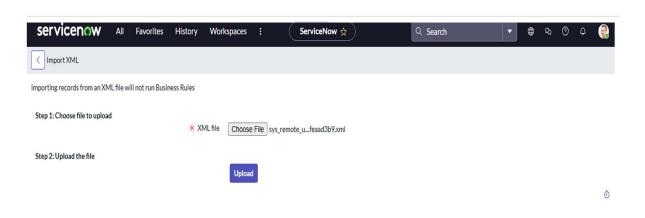


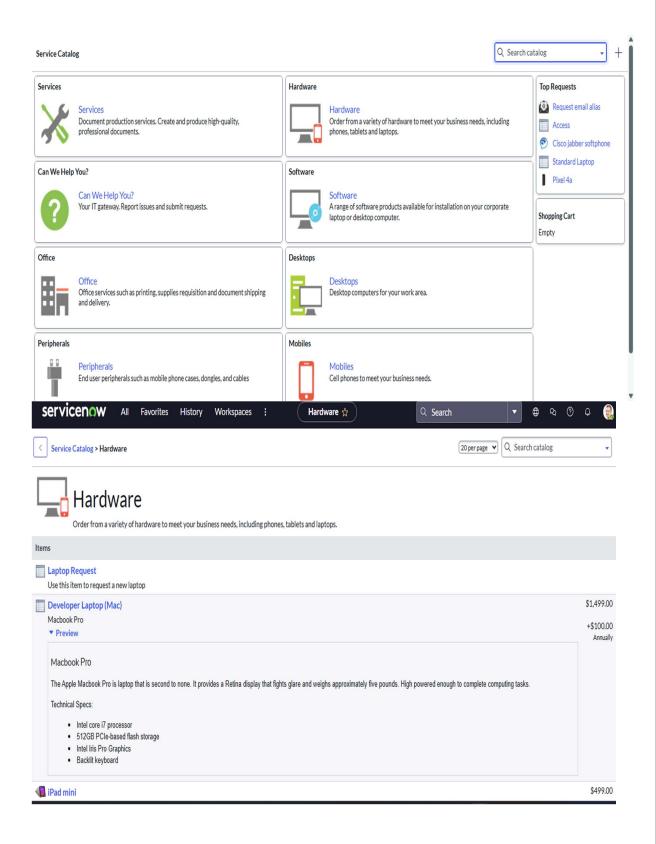




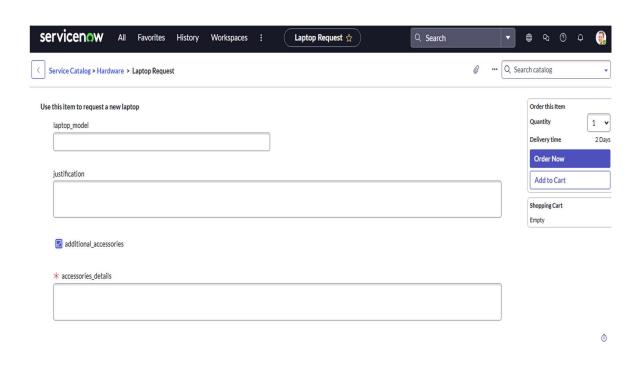












8. TESTING

Testing ensures that all configurations in the ServiceNow Laptop Request Catalog System function correctly and deliver the desired results.

It verifies the accuracy of workflows, UI policies, approvals, and notifications before deployment to production.

The testing phase involved submitting multiple sample laptop requests and observing the system behavior under different scenarios.

This process helped identify and correct configuration errors, validation issues, and workflow routing problems.

The major focus areas during testing were:

- Verifying the catalog item loads properly in the Service Catalog.
- Ensuring mandatory fields and UI policies work as expected.
- Confirming approval routing goes to the correct manager or admin.
- Checking that notifications are sent at each stage (Submitted, Approved, Fulfilled).
- Validating that records are correctly stored in the ServiceNow tables.
- Reviewing the request tracking page to ensure users can monitor their status.

After successful testing, the catalog item was confirmed to be fully functional and ready for organizational use.

The entire system operated smoothly within ServiceNow without the need for external scripts or manual intervention.

9. RESULTS AND DISCUSSION

The ServiceNow Laptop Request Catalog System successfully achieved its primary objective of automating the laptop request process within an organization.

The implementation of the catalog item, workflow, and approval mechanism resulted in a simplified, transparent, and efficient process for both users and administrators.

Through this system, users can now raise a laptop request easily using a structured catalog form, while the system automatically routes the request for necessary approvals and fulfillment.

This eliminates the need for manual paper-based approvals, email follow-ups, or direct IT intervention — thus saving valuable time and reducing human error.

After successful configuration and testing, the system demonstrated the following key results:

1. Improved Efficiency:

Requests that previously took several hours or even days to process are now completed within minutes through automated approval flows.

2. Error Reduction:

The use of mandatory fields and dynamic UI policies ensures that incomplete or incorrect submissions are prevented before submission.

3. Centralized Record Management:

All requests are stored securely within ServiceNow tables, allowing administrators to track and manage all laptop requests in one place.

4. Enhanced User Experience:

End-users find the process simple and user-friendly as they can raise requests, check statuses, and receive updates directly through the portal.

5. Transparent Approval Process:

The built-in workflow clearly defines who needs to approve the request and at what stage, improving accountability and process clarity.

6. Seamless Communication:

Automatic notifications and approval messages ensure users and approvers stay updated on every stage of the process without manual follow-up.

7. Scalability:

The same framework can be easily extended to handle other asset requests such as desktops, monitors, or accessories without reworking the core setup.

During discussions and evaluation, it was observed that the ServiceNow platform provided an ideal environment for this type of catalog-based automation due to its built-in workflow, approval engine, and notification modules.

The project demonstrated how effectively ServiceNow can be customized for IT service management processes, making operations smoother and more reliable.

In conclusion, the testing and implementation results confirm that the developed *Laptop Request Catalog System* successfully meets the project objectives — offering a scalable, efficient, and automated solution to manage IT asset requests within an organization.

10. ADVANTAGES

The ServiceNow Laptop Request Catalog System provides several advantages that make the IT asset request process faster, more reliable, and transparent.

By automating the workflow using ServiceNow's built-in modules, both end-users and administrators benefit from improved efficiency and user experience.

KEY ADVANTAGES:

1. AUTOMATED PROCESS FLOW

The system completely removes manual intervention.

Once a request is submitted, the workflow automatically routes it to the approver, sends notifications, and updates records — saving time and effort.

2. USER-FRIENDLY INTERFACE

The catalog form is designed with clear input fields and dynamic UI policies, making it easy for employees to submit requests without confusion or technical knowledge.

3. REAL-TIME STATUS TRACKING

Users can track their request status — whether submitted, approved, rejected, or fulfilled — directly from the ServiceNow portal, ensuring full visibility of progress.

4. CENTRALIZED RECORD MANAGEMENT

All laptop requests are stored in the ServiceNow database, providing a single source of truth for administrators to monitor and audit all activities.

5. ACCURACY AND CONSISTENCY

Mandatory field validation and predefined form structures ensure that every request contains complete and accurate information before it reaches the approver.

6. INSTANT NOTIFICATIONS

Email alerts are automatically generated at every stage, keeping both users and managers informed about request status and decisions.

7. REDUCED HUMAN ERROR

Since data entry, approval routing, and fulfillment tracking are automated, the chance of missing or mishandled requests is significantly reduced.

8. EASY CONFIGURATION AND MAINTENANCE

The use of **Update Sets** allows administrators to easily migrate, update, or back up all configurations without affecting live operations.

9. SCALABILITY AND REUSABILITY

The same structure can be reused to create catalog items for other hardware or service requests — such as desktop, software installation, or access permissions.

10. IMPROVED ADMINISTRATIVE CONTROL

The system provides admins with better visibility into pending requests, approval delays, and overall IT asset utilization trends.

11.LIMITATIONS

1. Limited Customization Options:

The catalog form and workflow are restricted to the configurations allowed within the ServiceNow platform. Major UI or logic customizations may require scripting and admin privileges.

2. Dependent on Internet Connectivity:

Since ServiceNow is a cloud-based platform, users cannot access or submit laptop requests offline.

3. Role-Based Access Restriction:

Only users with specific roles (like Employee or IT Admin) can access or manage certain modules, limiting flexibility for general users.

4. No Integration with External Inventory Systems:

The project does not include live integration with external asset or procurement databases, so stock updates must be done manually.

5. Limited Reporting Features:

While ServiceNow provides basic reports, advanced analytics or visual dashboards may require additional configuration or licensing.

6. Platform Dependency:

The entire system depends on ServiceNow's infrastructure and version updates, which could affect custom workflows.

12.FUTURE ENHANCEMENTS

1. Integration with Inventory Management System:

The catalog can be linked with the organization's asset database to automatically check laptop availability and update stock levels in real-time.

2. Automated Approval via Email or Mobile App:

Approvers could receive instant notifications through email or mobile apps, allowing one-click approval or rejection to speed up the workflow.

3. AI-Based Request Suggestions:

Artificial intelligence can be used to recommend the best laptop model for users based on their role or past requests.

4. Enhanced Reporting and Analytics:

Dashboards can be added to monitor the number of requests, approval time, and delivery trends for better decision-making.

5. Chatbot Integration:

A virtual assistant can help employees raise laptop requests, check request status, and get support directly within ServiceNow.

6. Multi-Language Support:

The catalog can be expanded to support multiple languages to assist employees across global locations.

13. CONCLUSION

The implementation of IT Service Management (ITSM) using **ServiceNow** provides a powerful, efficient, and automated solution for handling IT-related service requests within an organization. This project successfully demonstrated how ServiceNow streamlines processes such as incident management, request fulfillment, and workflow automation, reducing manual effort and improving overall productivity.

By developing and customizing catalog items, workflows, and UI policies, the project enhanced user experience and ensured consistent service delivery. The automation features of ServiceNow help minimize human error, accelerate request resolution, and maintain transparency in operations.

In conclusion, ServiceNow proves to be a highly effective platform for organizations seeking to optimize their IT service delivery. Its scalability, integration capabilities, and user-friendly interface make it a valuable tool for digital transformation in IT operations.

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