



M.A.M COLLEGE OF ENGINEERING AND TECHNOLOGY

Siruganur, Tiruchirappalli.

Department of
INFORMATION TECHNOLOGY

A Project on

STREAMLINING TICKET ASSIGNMENT FOR EFFICIENT SUPPORT OPERATIONS

NM ID :

TEAM ID : NM2025TMID07584

TEAM SIZE : 04

GROUP MEMBER'S NAME WITH REG. NO :

SIVASABARI.R – 812022205049 (Team Leader)

SRIKANNIGAPRIYADHARSHINI.R-812022205050(Team Member)

SUBASHINI.S - 812022205051(Team Member)

SURIYA .P.B – 812022205052(Team Member)



CERTIFICATE

*This is to certify that the bonafide record of this work is done by Selvan/Selvi:..... Reg.No..... Of IV-Year VII- semester in **Information Technology** For NM1051 – ServiceNow Administrator Laboratory during the academic Year 2025-2026.*



Faculty in Charge

HoD

Submitted for the University Practical Examination held on.....

INTERNAL EXAMINER

EXTERNAL EXAMINER

TABLE OF CONTENTS

S.NO	CONTENT	PAGE NO
1	IDEATION PHASE Problem Statement Empathy Map Canvas	3 4 5
2	PERFORMANCE & TESTING Procedure/ Implementation Steps Testing Screenshots	9 10 15
3	PROJECT DESGIN PHASE Output Screenshots Conclusion	19 22

IDEATION PHASE

Problem Statement

The objective of this initiative is to implement an automated system for ticket routing at ABC Corporation, aimed at improving operational efficiency by accurately assigning support tickets to the appropriate teams. This solution aims to reduce delays in issue resolution, enhance customer satisfaction, and optimize resource utilization within the support department.

Problem Definition

The current manual ticket routing process at ABC Corporation presents several operational challenges. Due to the reliance on human intervention, tickets are often misclassified or delayed before reaching the appropriate support team. This inefficiency not only slows down issue resolution but also contributes to an uneven workload distribution and decreased productivity across teams. Furthermore, inconsistent ticket handling leads to lower customer satisfaction and an increased backlog of unresolved issues.

Therefore, there is a need for an **automated ticket routing system** capable of accurately classifying support tickets and assigning them to the appropriate teams in real-time. The system should minimize manual dependency, reduce routing errors, and enhance overall operational efficiency, enabling ABC Corporation to deliver faster and more reliable customer support services.

Abstract

The rapid growth of support requests in organizations often leads to inefficiencies in manual ticket management processes. At ABC Corporation, the current ticket routing method relies heavily on human intervention, resulting in delays, misclassification, and uneven workload distribution across support teams. This project aims to develop an **automated ticket routing system** that utilizes intelligent algorithms to categorize and assign support tickets to the appropriate teams with minimal human input. By automating the routing process, the solution seeks to improve operational efficiency, minimize response times, enhance customer satisfaction, and ensure optimal utilization of technical resources.

Empathy Map canvas

Section	Details
Says	"It takes too long for tickets to reach the right team." "We often get tickets that don't belong to our department."
Thinks	"If ticket routing was automated, we could respond faster." "Manual routing leads to confusion and missed deadlines."
Does	Reassigns tickets manually, follows up on misrouted issues, tracks ticket queues frequently.
Feels	Frustrated by delays, stressed by workload, eager for a more efficient and automated process.

EMPATHY MAP CANVAS

SAYS

"It takes too long for tickets to reach the right team."

"We often get tickets that don't belong to our department."

THINKS

"If ticket routing was automated, we could respond faster."

"Manual routing leads to confusion and missed deadlines."

DOES

- Reassigns tickets manually
- Follows up on misrouted issues
- Tracks ticket queues frequently

FEELS

- Frustrated by delays
- Stressed by workload
- Eager for a more efficient and automated process

INSIGHT

Users need a smart, automated system that ensures tickets reach the right group or agent based on category, priority, and skillset – minimizing human effort and errors.

Introduction

In modern enterprises, providing timely and effective customer support is a critical component of organizational success. However, as businesses scale, the volume of support requests increases exponentially, creating challenges in managing and resolving issues efficiently. ABC Corporation currently employs a manual ticket routing process in which support personnel review, categorize, and assign incoming tickets to relevant teams. This approach is not only time-consuming but also prone to human error and inconsistency, leading to delays in issue resolution and reduced customer satisfaction.

To address these challenges, this project proposes the implementation of an automated ticket routing system. The system will leverage rule-based logic or machine learning techniques to analyze ticket content, identify its nature, and automatically direct it to the most suitable team. By streamlining the routing process, ABC Corporation can significantly improve service delivery, reduce operational costs, and ensure faster resolution times, ultimately enhancing overall customer experience.

Objectives

The main objective of this project is to design and implement an **automated ticket routing system** that enhances the efficiency and accuracy of support operations at ABC Corporation. The specific objectives include:

1. **Automate** **Ticket** **Classification:**
Develop a system capable of automatically analyzing and categorizing incoming support tickets based on their content, type, and priority.
2. **Intelligent** **Ticket** **Assignment:**
Implement algorithms or predefined rules to automatically assign tickets to the most appropriate support team or personnel.
3. **Reduce** **Resolution** **Time:**
Minimize delays caused by manual ticket triage, thereby improving overall response and resolution times.
4. **Enhance** **Customer** **Satisfaction:**
Ensure that customer issues are handled quickly and accurately, leading to improved user experience and satisfaction.
5. **Optimize** **Resource** **Utilization:**
Distribute workload evenly among support teams to maximize productivity and prevent bottlenecks.
6. **Enable** **Data-Driven** **Insights:**
Generate analytical reports on ticket flow, team performance, and issue trends to support continuous improvement in the support process.

Scope

The scope of this project focuses on the **development, deployment, and evaluation** of an automated system for routing support tickets within ABC Corporation's existing helpdesk infrastructure.

In Scope:

- Development of a ticket classification and routing algorithm using rule-based logic or machine learning.
- Integration with existing ticket management or helpdesk software.
- Design of a user interface/dashboard for monitoring ticket assignments and performance metrics.
- Implementation of automated notifications and tracking mechanisms for assigned tickets.
- Evaluation of system performance in terms of accuracy, efficiency, and user satisfaction.

Out of Scope:

- End-to-end ticket resolution or response automation (the system focuses solely on routing).
- Integration with third-party platforms not currently used by ABC Corporation.
- Hardware upgrades or network infrastructure changes.

PERFORMANCE & TESTING

Procedure or Implementation steps

Phase 1 : Create Users

1. Open service now.
2. Click on All >> search for users
3. Select Users under system security
4. Click on new
5. Fill the following details to create a new user
6. Click on submit Create one more user:
7. Create another user with the following details
8. Click on submit

Phase 2 : Create Groups

1. Open service now.
2. Click on All >> search for groups
3. Select groups under system security
4. Click on new
5. Fill the following details to create a new group
6. Click on submit

Create one more group:

1. Create another group with the following details
2. Click on submit

Phase 3 : Create Roles

1. Create one more role:
2. Create another role with the following details
3. Click on submit

Phase 4 : Create Table

1. Open service now.
2. Click on All >> search for tables
3. Select tables under system definition
4. Click on new
5. Fill the following details to create a new table

Label : Operations related

Check the boxes Create module & Create mobile module

6. Under new menu name : Operations related
7. Under table columns give the columns

Phase 5 : Assign roles & users to certificate group

1. Open service now.
2. Click on All >> search for tables
3. Select tables under system definition
4. Select the certificates group
5. Under group members
6. Click on edit
7. Select Katherine Pierce and save
8. Click on roles
9. Select Certification_role and save

Phase 6 : Assign roles & users to platform group

1. Open service now.
2. Click on All >> search for tables
3. Select tables under system definition
4. Select the platform group
5. Under group members
6. Click on edit
7. Select Manne Niranjan and save
8. Click on roles
9. Select Platform_role and save

Phase 7 : Assign role to table

1. Open service now.
2. Click on All >> search for tables
3. Select operations related table
4. Click on the Application Access
5. Click on u_operations_related read operation
6. Click on the profile on top right side
7. Click on elevate role
8. Click on security admin and click on update
9. Under Requires role

10. Double click on insert a new row
11. Give platform role
12. And add certificate role
13. Click on update
14. Click on u_operations_related write operation
15. Under Requires role
16. Double click on insert a new row
17. Give platform role
18. And add certificate role

Phase 8 : Create ACL

1. Open service now.
2. Click on All >> search for ACL
3. Select Access Control(ACL) under system security
4. Click on new
5. Fill the following details to create a new ACL
6. Scroll down under requires role
7. Double click on insert a new row
8. Give admin role
9. Click on submit
10. Similarly create 4 acl for the following fields

Phase 9 : Create a Flow to Assign operations ticket to group

1. Open service now.
2. Click on All >> search for Flow Designer
3. Click on Flow Designer under Process Automation.
4. After opening Flow Designer Click on new and select Flow.
5. Under Flow properties Give Flow Name as “ Regarding Certificate”.
6. Application should be Global.
7. Select Run user as “ System user ” from that choice.
8. Click on Submit.

Next:

1. Click on Add a trigger
2. Select the trigger in that Search for “create or update a record” and select that.
3. Give the table name as “ Operations related ”.
4. Give the Condition as
Field : issue

Operator : is

Value : Regrading Certificates

5. After that click on Done.
6. Now under Actions.
7. Click on Add an action.
8. Select action in that search for “ Update Record ”.
9. In Record field drag the fields from the data navigation from left side
10. Table will be auto assigned after that
11. Give the field as “ Assigned to group ”
12. Give value as “ Certificates ”
13. Click on Done.
14. Click on Save to save the Flow.
15. Click on Activate.

Phase 10 : Create a Flow to Assign operations ticket to Platform group

1. Open service now.
2. Click on All >> search for Flow Designer
3. Click on Flow Designer under Process Automation.
4. After opening Flow Designer Click on new and select Flow.
5. Under Flow properties Give Flow Name as “ Regarding Platform ”.
6. Application should be Global.
7. Select Run user as “ System user ” from that choice.
8. Click on Submit.

Next:

1. Click on Add a trigger
2. Select the trigger in that Search for “create or update a record” and select that.
3. Give the table name as “ Operations related ”.
4. Give the Condition as

Field : issue

Operator : is

Value : Unable to login to platform

5. Click on New Criteria

Field : issue

Operator : is

Value : 404 Error

6. Click on New Criteria

Field : issue

Operator : is

Value : Regrading User expired

7. After that click on Done.
8. Now under Actions.
9. Click on Add an action.
10. Select action in that search for “Update Record ”.
11. In Record field drag the fields from the data navigation from left side
12. Table will be auto assigned after that
13. Give the field as “Assigned to group ”.
14. Give value as “Platform ”.
15. Click on Done.
16. Click on Save to save the Flow.
17. Click on Activate.

Screenshots:

Phase 1 : Create users

User ID: manne.niranjan
First name: Manne
Last name: Niranjan
Title:
Department:
Password needs reset:
Locked out:
Active:
Web service access only:
Internal Integration User:

Email: niranjanreddymanne2507@gr
Language: -- None --
Calendar integration: Outlook
Time zone: System (America/Los_Angeles)
Date format: System (yyyy-MM-dd)
Business phone:
Mobile phone:
Photo: Click to add...

Phase 2 : Create Groups

Name: certificates
Manager: Katherine Pierce
Description:
Group email:
Parent:

Phase 3 : Create roles

Certification_role

Name: Certification_role
Requires Subscription: Unspecified
Description: Can deal with certification issues
Application: Global
Elevated privilege:

Platform_role

Name: Platform_role
Requires Subscription: Unspecified
Description: Can deal with platform related issues
Application: Global
Elevated privilege:

Phase 4 : Create tables

Column label	Type	Reference	Max length	Default value	Display
Created by	String	(empty)	40		false
Created	Date/Time	(empty)	40		false
Sys ID	Sys ID (GUID)	(empty)	32		false
Updates	Integer	(empty)	40		false
Updated by	String	(empty)	40		false
Updated	Date/Time	(empty)	40		false
Assigned to group	Reference	Group	40		false
Assigned to user	Reference	User	32		false
Comment	String	(empty)	40		false
Issue	String	(empty)	40		false
Name	String	(empty)	40		false
Priority	String	(empty)	40		false
Service request No	String	(empty)	40	javascript:getNextObjNumberPadded();	false
Ticket raised Date	Date/Time	(empty)	40		false
Insert a new row...					

Phase 7 : Assign role to table

The screenshot shows the 'Access Control' section for the 'u_operations_related' table. At the top, there are buttons for Back, Refresh, Save, Delete, and a dropdown menu. Below the header, the title 'Access Control' and the table name 'u_operations_related' are displayed. A 'Definition' section contains a note about access control rules and three conditions. A 'More Info' link is present. The 'Requires role' section lists three roles: 'u_operations_related_user', 'Platform_role', and 'Certification_role'. An 'Insert a new row...' button is at the bottom.

Role	
u_operations_related_user	
Platform_role	
Certification_role	
Insert a new row...	

Phase 8 : Create ACL

* Type record

* Operation write

Active

Admin overrides

Protection policy -- None --

* Name Operations related [u_operations_related]

Description

Condition 4 records match condition

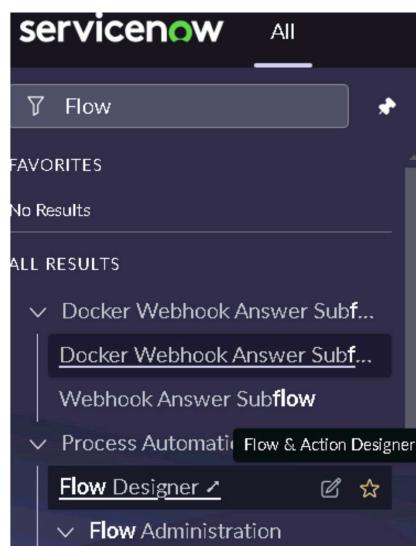
Add Filter Condition Add "OR" Clause

-- choose field -- -- oper -- -- value --

Application Global

<input type="checkbox"/>	u_operations_related.u_priority	write	record	true	admin	2024-04-16 22:32:12
	u_operations_related.u_ticket_raised_date	write	record	true	admin	2024-04-16 22:30:22
	u_operations_related.u_name	write	record	true	admin	2024-04-16 22:29:00
	u_operations_related.u_issue	write	record	true	admin	2024-04-16 22:23:31
	u_operations_related.u_service_request_no	write	record	true	admin	2024-04-16 22:17:14

Phase 9 : Create a Flow to Assign operations ticket to group



servicenow Flow Designer

Flows Subflows Actions Executions Connections Help

New ▾

Name	Internal name	Application	Status	Active	Updated	Updated by
Standard Laptop task	standard_laptop_task	Global	Published	true	2024-04-16 23:33:53	admin
Email Sending For P1	email_sending_for_p1	Global	Published	false	2024-04-16 04:22:31	admin
Daily Task Reminder	daily_taskReminder	Global	Draft	false	2024-04-16 00:00:00	admin

Flow properties

* Flow name

Description

Application

Protection

Run As

[Cancel](#) [Submit](#)

Trigger

Operations related Created or Updated Trigger: Created or Updated regarding certificates

Trigger

* Table

Condition All of these conditions must be met

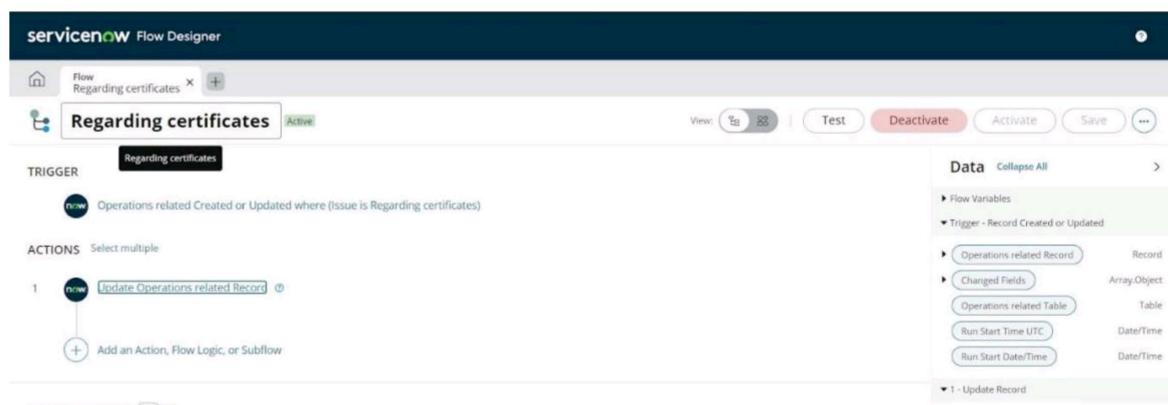
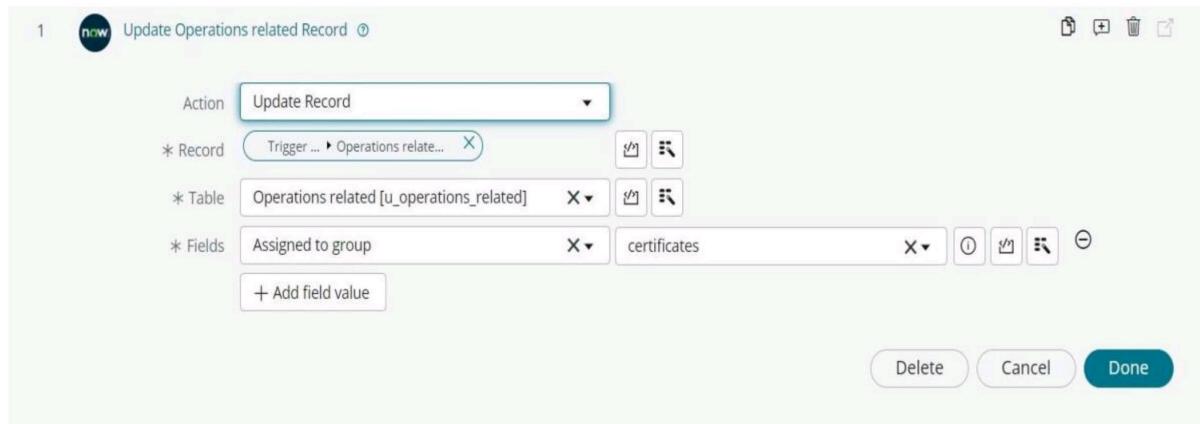
Issue Regarding certificates

Run Trigger

[Advanced Options ▾](#)

[Delete](#) [Cancel](#) [Done](#)

ACTIONS Select multiple



OUTPUT SCREENSHOT:

The screenshot shows the ServiceNow classic UI for creating a new record in the "operations related" table. The form includes fields for "service request number", "name", "assigned to group", "issue", "assigned to user", "comment", "priority", and "ticket raised date". A "Submit" button is at the bottom.

Platform Login Credentials - Student | ServiceNow Developers | operations related | regarding platform | Workflows | School

operations related - rms

service request number: [] assigned to user: []

name: rms comment: login problem

assigned to group: platform priority: []

issue: unable to login to platform ticket raised date: []

Update Delete

This screenshot shows a ServiceNow form titled 'operations related - rms'. It contains fields for service request number, name (set to 'rms'), assigned to group (set to 'platform'), issue ('unable to login to platform'), and comment ('login problem'). There are also fields for assigned to user, priority, and ticket raised date, which are currently empty. At the bottom are 'Update' and 'Delete' buttons.

Platform Login Credentials - Student | ServiceNow Developers | operations related | regarding platform | Workflows | School

operations related

name: Search Actions on selected rows... New

All	name	assigned to group	assigned to user	comment	issue	priority	service request number	ticket raised date
	siva	certificates	(empty)	certificate issue	regarding certificates		(empty)	
	rms	platform	(empty)	login problem	unable to login to platform		(empty)	

1 to 2 of 2

This screenshot shows a ServiceNow list view for 'operations related' records. It displays two entries: 'siva' and 'rms'. The 'siva' entry is associated with the 'certificates' group and has a comment about certificate issues. The 'rms' entry is associated with the 'platform' group and has a comment about login problems. The list includes columns for name, assigned to group, assigned to user, comment, issue, priority, service request number, and ticket raised date.

CONCLUSION:

The *Generative AI in Action* program provided a strong foundation in understanding the principles, applications, and transformative potential of generative artificial intelligence. Through its three modules—**Introduction to Generative AI**, **Crafting Precision Prompts with Generative AI**, and **Coding Simplified with Generative AI**—I gained both theoretical knowledge and practical experience in applying AI tools effectively. I learned how foundation and transformer models function and how prompt engineering can significantly enhance the quality and accuracy of AI-generated outputs. The hands-on activities allowed me to develop precise prompts, automate coding tasks, and create both creative and technical content using Python and AI-assisted tools. These experiences improved my coding proficiency, problem-solving skills, and ability to integrate AI-driven solutions into real-world projects. Overall, this program deepened my understanding of AI-driven innovation and strengthened my ability to apply generative AI across multiple industries. It equipped me with the skills and confidence to use AI responsibly and creatively to optimize processes, enhance productivity, and contribute to the growing field of artificial intelligence.