

OPTIMIZING USER GROUP AND ROLE MANAGEMENT WITH ACCESS CONTROL AND WORKFLOWS

1.INTRODUCTION

PROJECT TITLE: Optimizing User, Group, and Role Management with Access Control and Workflows

Optimizing user, group, and role management with access control and workflows is **crucial for enhancing security, streamlining operations, and improving overall system efficiency**. By carefully managing access rights through well-defined roles and permissions, organizations can ensure that users only access the resources they need, minimizing the risk of unauthorized access and data breaches. Furthermore, integrating workflows into this process automates tasks, reduces manual errors, and improves the speed and consistency of access provisioning and management.

1.1 Project Overview

Title:

Optimizing User, Group, and Role Management with Access Control and Workflows

Objective:

To design and implement an effective and secure management system in ServiceNow that:

- Organizes users, groups, and roles efficiently.
- Controls access to applications and data.
- Implements ACLs (Access Control Lists) and workflow automation to streamline IT processes.

Expected Outcomes:

- Streamlined user and access management.
- Improved security and compliance.

- Efficient handling of workflows through automated role and group assignments.
- Demonstrated understanding of ServiceNow's access control mechanisms.

1.2.Purpose

The purpose of this project is to design and implement secure and efficient user access management within the ServiceNow platform. It focuses on the creation and management of users, groups, roles, and the enforcement of access controls and workflows to ensure data integrity and system security.

Real-world Use:

- Prevent unauthorized access.
- Make sure users only see what they need.
- Automate user provisioning tasks.
- Maintain data security and compliance.

2. IDEATION PHASE

Team Id	LTVIP2025TMID30968
Project Name	Optimizing User, Group, and Role Management with Access Control and Workflows

2.1. Problem Statement

In a small project management team consisting of a Project Manager (Alice) and a Team Member (Bob), there is a need to efficiently manage project tasks and ensure accountability throughout the project lifecycle. The current system lacks clear role definitions, access controls, and a structured workflow, leading to confusion regarding task assignments and progress tracking.

Challenges:

- Defining Access Control Lists (ACLs) correctly for different users, groups, and roles.

- Assigning appropriate roles to users based on group memberships.
- Creating workflows that are both functional and efficient.

3. REQUIREMENT ANALYSIS

Team Id	LTVIP2025TMID30968
Project Name	Optimizing User, Group, and Role Management with Access Control and Workflows

3.2. Solution Requirement

ServiceNow is a **cloud-based workflow automation platform** that enables digital transformation by helping organizations manage digital workflows for enterprise operations.

ServiceNow Platform

The primary platform used for this project. It provides all the modules required to manage users, roles, groups, access, and workflows.

Functional Requirement

FR NO	Functional Requirement	Sub Requirement
FR-1	User Management	Create, update, deactivate users, and manage user profiles with roles and group memberships.
FR-2	Group Management	Create different groups. Add users to appropriate groups. Groups should reflect department/team structures.
FR-3	Role Management	Create custom roles if needed. Assign out-of-the-box and custom roles to users

		<p>or groups.</p> <p>Demonstrate role inheritance</p>
FR-4	Table Configuration	<p>Create custom tables.</p> <p>Provide relevant columns/fields.</p> <p>Configure the table for access control testing.</p>
FR-5	Assign Users to Groups	<p>Add individual users to the relevant groups using group membership.</p> <p>This should reflect in automatic role inheritance.</p>
FR-6	Assign Roles to Users	<p>Assign roles directly to users if group-level roles aren't suitable.</p> <p>Document which roles are assigned to which users.</p>
FR-7	Application Access Configuration	<p>Set up access for specific users/groups to particular applications.</p> <p>Configure access under “Application Access” tab or module.</p>
FR-8	Access Control List (ACL)	<p>Create ACL rules for the custom table or other tables.</p> <p>Define Read, Write, Create, Delete permissions.</p>
FR-9	Workflow Configuration	<p>Create a workflow to automate user/group approvals or access provisioning using Flow Designer.</p>

Non-Functional Requirement

FR NO	Non-Functional Requirement	Description
NFR-1	Usability	The interface must be user-friendly with clearly labeled modules (Users, Groups, Roles, ACL, etc.).
NFR-2	Security	Only authorized users should be able to: <ul style="list-style-type: none"> - Create users or roles - Assign roles to users - Modify access control rules (ACLs)
NFR-3	Reliability	It must recover from session or workflow errors gracefully with proper error messages.
NFR-4	Performance	The system should load user, group, role, and table data within 2 seconds under normal network conditions.
NFR-5	Availability	The system should ensure 99.9% uptime during working hours .It must recover from session or work flow errors gracefully with proper errors messages
NFR-6	Scalability	The solution should support managing at least 1000 users,100 groups and 500+ roles without

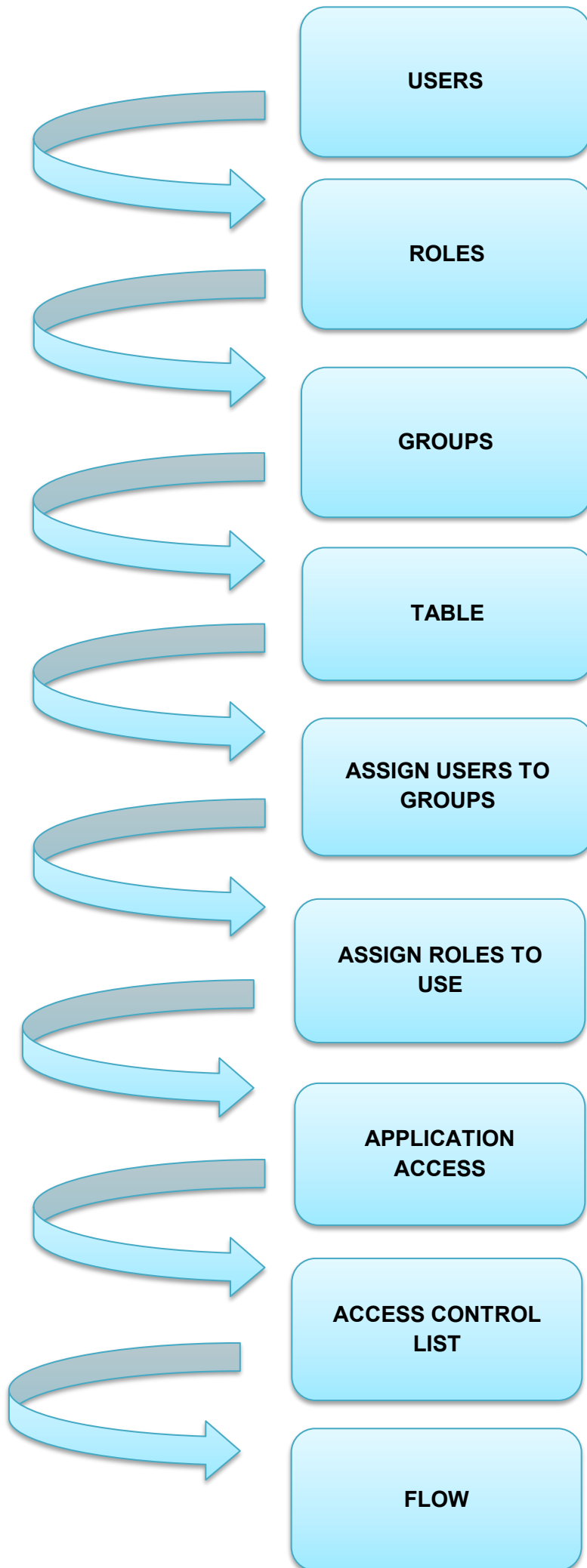
Data Flow Diagram:

A Data Flow Diagram (DFD) is a graphical representation used to show how data moves through a system. It illustrates:

- Where data comes from,
- How it is processed,
- Where it is stored, and
- How it flows between these parts.

In the Optimizing User, Group, and Role Management with Access Control and Workflows project:

- User/Admin inputs user details, roles, and group information into the system.
- The ServiceNow System processes access control rules and workflows based on defined roles and groups



Technology stack

The technology stack of ServiceNow consists of various layers and components that enable its platform to deliver powerful ITSM (IT Service Management), workflow automation, and enterprise applications.

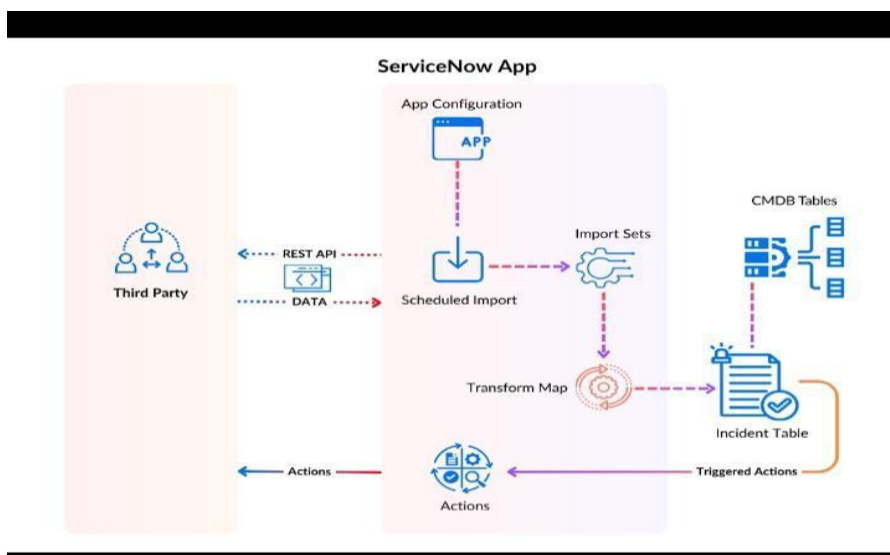
Team Id	LTVIP2025TMID30968
Project Name	Optimizing User, Group, and Role Management with Access Control and Workflows

Architecture of ServiceNow:

The **architecture of ServiceNow** is designed as a scalable, **cloud-based** platform built to support enterprise-level IT service management and business process automation.

Purpose:

- Manage incidents, problems, changes, and service requests efficiently.
- Monitor infrastructure and prevent service outages.
- Track and manage hardware and software assets through their lifecycle.



4.PROJECT DESIGN

Team Id	LTVIP2025TMID30968
Project Name	Optimizing User, Group, and Role Management with Access Control and Workflows

Proposed Solutions:

S.No	Parameter	Description
1	Problem Statement	In a small project management team consisting of a Project Manager (Alice) and a Team Member (Bob), there is a need to efficiently manage project tasks and ensure accountability throughout the project lifecycle. The current system lacks clear role definitions, access controls, and a structured workflow, leading to confusion regarding task assignments and progress tracking.
2	Idea/Solution Description	project involves designing and implementing a streamlined system within ServiceNow that automates and optimizes the management of users, groups, and roles, while enforcing access control and triggering appropriate workflows.
3	Novelty/Uniqueness	Uniqueness points: 1.Access ControlVisualization Too 2.IRole Expiry & Review Workflows 3.Custom Role Hierarchies 4.Dynamic Role Assignment Automation
4	Social Impact/Customer Satisfaction	Enhances both security and satisfaction, benefiting internal users (employees) and external customers by making systems faster, safer, and smarter.
5	Business Model	It supports scalable role-based access for enterprise systems, reducing manual effort and improving compliance.
6	Scalability of the solution	It highly scalable due to ServiceNow's cloud-native, multi-instance architecture, allowing seamless handling of increasing users

PROJECT: Optimizing User, Group, and Role Management with Access Control and Workflows

MILESTONE-1: USERS

USERS:User represents an individual who has access to the platform.

PURPOSE:User purpose is defined by the roles assigned to a user, which determine what they can see and do within the platform.

Activity-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

servicenow

AllFavorites

User - alice p

SearchGlobeHelpHelp?NotificationsProfile

User alice p

UpdateSet PasswordDelete

User IDalice

First namealice

Last namep

Title

Department

Password needs reset

Locked out

Active

Web service access only

Internal Integration User

Emailalice@gmail.com

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 TablesRolesGroupsDelegatesSubscriptionsUser Client Certificates

Table

Search

User = alice p

Table	Application	Role
<div>No records to display</div>		

7. Create one more user:
8. Create another user with the following details
9. Click on submit

servicenow All Favorites | **User - Bob p** ☆

< = User Bob p Update Set Password Delete

User ID: bob

First name: Bob

Last name: p

Title:

Department:

Email: bob@gmail.com

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...

☐ Password needs reset
☐ Locked out
☒ Active
☐ Web service access only
☐ Internal Integration User

Update Set Password Delete

Related Links
[View linked accounts](#)
[View Subscriptions](#)
[Reset a password](#)

Entitled Custom Tables Roles Groups Delegates Subscriptions User Client Certificates

= ▾ Table Search

User = Bob p

Table	Application	Role
 No records to display		

MILESTONE-2:GROUPS

GROUPS: Group is a set of users who share a common purpose. Groups may perform tasks such as approving change requests, resolving incidents, receiving email notifications, or performing work order tasks.

PURPOSE: Groups are designed to organize users based on their roles, responsibilities, or functions within an organization.

Activity-1: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

The screenshot shows the ServiceNow interface for creating a new group. The top navigation bar includes the ServiceNow logo, 'All', 'Favorites', and a breadcrumb 'Group - Project team'. The main form has the following fields:

- Name:
- Group email:
- Manager:
- Parent:
- Description:

Below the form are 'Update' and 'Delete' buttons. The 'Roles' tab is selected, showing a table with columns: Created, Role, Granted by, and Inherits. The table is empty, displaying 'No records to display'.

MILESTONE-3:ROLES

ROLES: Roles define the access and permissions users have within the platform.

PURPOSE: Roles are used to grant users specific permissions and access to different features and functionalities within the platform

Activity-1:Create Roles

Activity 1: Create roles

1. Open service now,
2. Click on All search for roles

3. Select roles under system security
4. Click on new
5. Fill the following details to create a new role

servicenow All Favorites **Group - Project team** ☆

< ≡ Group Project team [Update] [Delete] ↑ ↓

Name Group email [Email icon]

Manager [Search icon] Parent [Search icon]

Description

[Update] [Delete]

Roles Group Members Groups

≡ [Filter icon] [Comment icon] Created [Search] [Settings icon] [Edit...]

Group = Project team

Created	Role	Granted by	Inherits
No records to display			

Create one more role:

7. Create another role with the following details
8. Click on submit

The screenshot shows the ServiceNow interface for configuring a role named 'project member 2'. The top navigation bar includes the ServiceNow logo, 'All', 'Favorites', and a search bar containing 'Role - project mem...'. Below the navigation bar, the role name 'project member 2' is displayed with edit, delete, and sort icons. The configuration form includes fields for 'Name' (project member 2), 'Application' (Global), and 'Elevated privilege' (unchecked). A 'Description' field is also present. Below the form are 'Update' and 'Delete' buttons. A tabbed interface shows 'Contains Roles' as the active tab, with other tabs for 'Applications with Role', 'Modules with Role', and 'Custom Tables'. A search bar with the text 'for text' and a 'Search' button is located above a table. The table has a header row with a search icon and the text 'Contains'. The table body is empty, displaying a message 'No records to display' with a table icon.

MILESTONE-4: TABLE

TABLE: Tables are the fundamental structures for storing and organizing data

PURPOSE: Tables serve as the fundamental building blocks for organizing and managing data

Activity-1: 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: project table

Check the boxes Create module & Create mobile module

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

servicenow All Favorites History Workspaces Admin **Table - New Record** Search

Table New record Submit Cancel

ServiceNow recommends creating custom tables in scoped applications. To learn more about creating scoped applications, click [here](#).

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 Application

* Name Create module ☒

Extends table Create mobile module ☒

Add module to menu

New menu name

Remote Table ☐

Columns Controls Application Access

Table Columns Type Search

Dictionary Entries	Column label	Type	Reference	Max length	Default value	Display
<input type="checkbox"/>	project id	Integer				false

Create one more table:

9. Create another table as task table 2 and fill with following details.

10. Click on submit

4. Select the project team group
5. Under group members
6. Click on edit
7. Select alice p and bob p and save

servicenow All Favorites History Workspaces Admin Group - project team

Job to add or remove role(s) from user(s) of group has been queued

Name: Group email:

Manager: Parent:

Description:

Update Delete

Roles Group Members (2) Groups

User Search

Group - project team

User
alice p
bob p

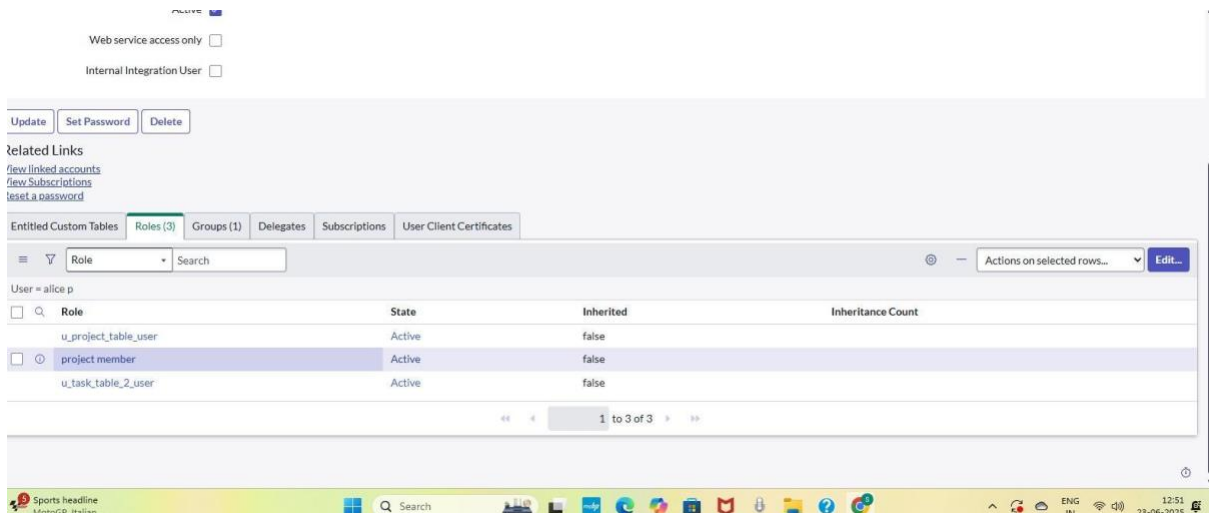
1 to 2 of 2

MILESTONE-6: ASSIGN ROLES TO USERS

PURPOSE: Assigning roles to users determines their access permissions and what they can do within the platform

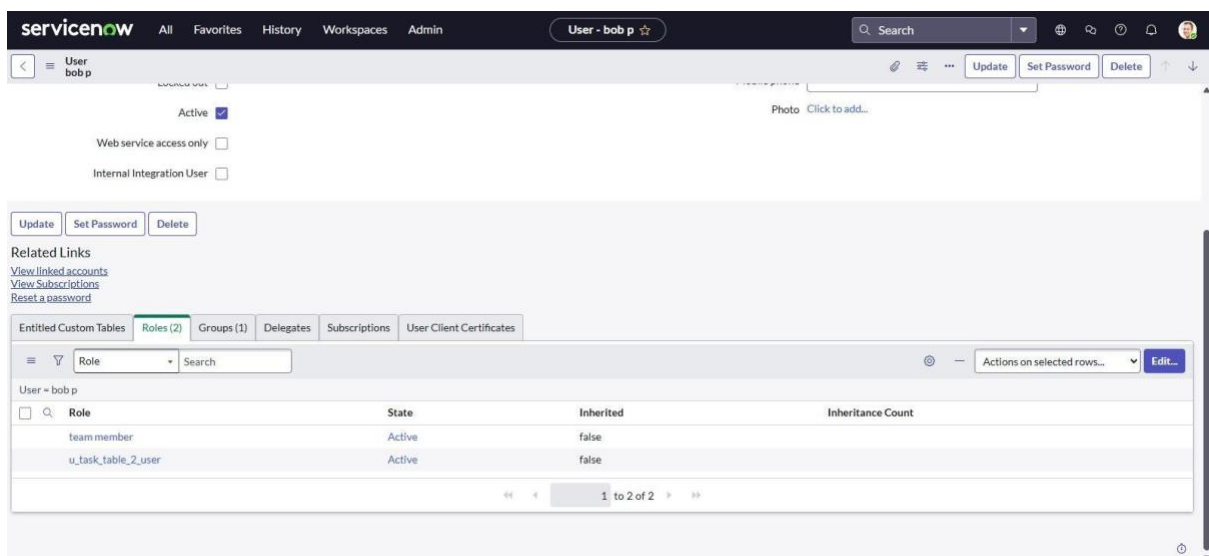
Activity-1: Assign Roles to Alice User

1. Open servicenow. Click on All >> search for user
2. Select tables under system definition
3. Select the project manager user
4. Under project manager
5. Click on edit
6. Select project member and save
7. click on edit add u_project_table role and u_task_table role
8. click on save and update the form.



Activity-2:Assign roles to bob user

- 1.Open servicenow.Click on All >> search for user
- 2.Select tables under system definition
- 3.Select the bob p user
- 4.Under team member
- 5.Click on edit
- 6.Select team member and give table role and save
- 7.Click on profile icon Impersonate user to bob
- 8.We can see the task table2.



MILESTONE-7:APPLICATION ACCESS

APPLICATION ACCESS:The mechanism that controls which applications and users can access specific tables and their data

PURPOSE:Application access settings control which applications and users can interact with the data and functionality of a specific application.

Activity-1:Assign table access to application

- 1.while creating a table it automatically create a application and module for that table
- 2.Go to application navigator search for search project table application
- 3.Click on edit module
- 4.Give project member roles to that application
- 5.Search for task table2 and click on edit application.
- 6.Give the project member and team member role for task table 2 application

The screenshot shows the 'Application Menu - project table' configuration page in ServiceNow. The page has a dark header with the ServiceNow logo and navigation tabs: All, Favorites, History, Workspaces, and Admin. The main title is 'Application Menu - project table'. Below the title, there is a search bar and buttons for 'Update' and 'Delete'. The page content is divided into several sections with blue headers:

- Section 1:** 'An application menu is a group of modules in the application navigator. Choose the roles that are required to access the application and add or remove modules in the related list below. [More Info](#)'. It contains a text field for 'Title' with the value 'project table', a dropdown for 'Application' set to 'Global', and a checkbox for 'Active' which is checked.
- Section 2:** 'Restricts access to the specified roles. Otherwise, all users can view the application menu when it is active.' It contains a 'Roles' section with a plus icon and the text 'project member'.
- Section 3:** 'Specifies the [menu category](#), which defines the navigation menu style. The default value is Custom Applications.' It contains a 'Category' dropdown set to 'Custom Applications'.
- Section 4:** 'The text that appears in a tooltip when a user points to this application menu'. It contains a 'Hint' text field and a 'Description' text area.

At the bottom of the page, there are 'Update' and 'Delete' buttons.

The screenshot shows the ServiceNow 'Application Menu' configuration page for 'task table 2'. The page includes a header with the ServiceNow logo and navigation tabs (All, Favorites, History, Workspaces, Admin). The main content area contains several sections:

- Title:** 'task table 2' (with a plus icon for adding more titles).
- Application:** 'Global' (with a plus icon for adding more applications).
- Active:** A checked checkbox.
- Restricts access to the specified roles. Otherwise, all users can view the application menu when it is active.**
- Roles:** A list of roles: 'u_task_table_2_user', 'project member', and 'team member'.
- Specifies the menu category, which defines the navigation menu style. The default value is Custom Applications.**
- Category:** 'Custom Applications' (with a search icon and a plus icon for adding more categories).
- The text that appears in a tooltip when a user points to this application menu.**
- Hint:** An empty text input field.
- Description:** An empty text input field.

At the bottom, there are 'Update' and 'Delete' buttons.

MILESTONE-8:ACCESS CONTROL LIST

ACL:It is a security rule that controls user access to platform resources, such as tables, fields, and even scripts

PURPOSE:Access Control Lists (ACLs) are used to manage and restrict user access to data within the platform.

Activity-1:Create ACL

- 1.Open service now.
- 2.Click on All >> search for ACL
- 3.Select Access Control(ACL) under system security
- 4.Click on elevate role
- 5.Click on new
- 6.Fill the following details to create a new ACL

Access Control
New record

Warning: A role, security attribute, data condition, script or ACL control via reference fields is required to properly secure access with this ACL.

* Type: record

* Operation: create

Decision Type: Allow If

Admin overrides: ☒

Protection policy: -- None --

* Name: task table 2 [u_task_table_2]

Description:

Applies To: No. of records matching the condition: 0@

Add Filter Condition Add OR Clause

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

Application: Global

Active: ☒

Advanced: ☐

fields

Conditions

7. Scroll down under requires role
8. Double click on insert a new row
9. Give task table and team member role
10. Click on submit
11. Similarly create 4 acl for the following fields

The screenshot shows the ServiceNow Access Controls interface. The browser tabs include 'Copy of Template - Google', 'ServiceNow Developers', 'ServiceNow', 'Access Controls (ServiceNow)', and 'ChatGPT'. The URL is 'dev196626.service-now.com/now/nav/ui/classic/params/target/sys_security_acl_list.do%3Fsysparm_query%3Dsys_created_on%3DToday%40javascript%3A%3B%3BbeginningOfToday...'. The page title is 'Access Controls'. The search bar contains 'Name'. The table has columns: Name, Decision Type, Operation, Type, Active, Updated by, and Updated. The table contains 14 records. A red box highlights the first four records, which all have 'u_task_table' in the Name field. A red arrow points to the record 'u_task_table_2u_assigned_to'.

Name	Decision Type	Operation	Type	Active	Updated by	Updated
u_leave_request	Allow if	delete	record	true	admin	2024-10-22 02:27:59
u_leave_request	Allow if	create	record	true	admin	2024-10-22 02:27:59
u_task_table	Allow if	read	record	true	admin	2024-10-22 04:21:28
u_task_table	Allow if	write	record	true	admin	2024-10-22 04:20:15
u_task_tableu_assigned_to	Allow if	write	record	true	admin	2024-10-22 04:33:53
u_task_tableu_due_date	Allow if	write	record	true	admin	2024-10-22 04:33:14
u_task_tableu_task_id	Allow if	write	record	true	admin	2024-10-22 04:27:47
u_task_tableu_task_name	Allow if	write	record	true	admin	2024-10-22 04:31:14
u_task_table_2	Allow if	write	record	true	admin	2024-10-22 21:05:07
u_task_table_2	Allow if	read	record	true	admin	2024-10-22 21:26:57
u_task_table_2	Allow if	read	record	true	admin	2024-10-22 21:05:07
u_task_table_2	Allow if	write	record	true	admin	2024-10-22 21:28:27
u_task_table_2	Allow if	create	record	true	admin	2024-10-22 21:05:06
u_task_table_2	Allow if	delete	record	true	admin	2024-10-22 21:05:07
u_task_table_2u_assigned_to	Allow if	write	record	true	admin	2024-10-22 21:31:20

Page 1 of 23

12. Click on profile on top right side

13. Click on impersonate user

14. Select bob user

15. Go to all and select task table2 in the application menu bar

16. Comment and status fields are have the edit access

The screenshot shows the ServiceNow interface for creating a new record in 'task table 2'. The browser's address bar shows 'servicenow'. The top navigation bar includes 'All', 'Favorites', and 'History'. The main header area displays 'task table 2 - Create Created' with a star icon. Below this, a breadcrumb trail shows '< task table 2 New record'. The form contains several input fields: 'assigned to' (a text box), 'task name' (a text box), 'task id' (a text box), 'due date' (a date picker), 'status' (a dropdown menu currently showing '-- None --'), and 'comments' (a text area). A 'Submit' button is located at the bottom left of the form. The bottom right corner of the form area has a small circular icon.

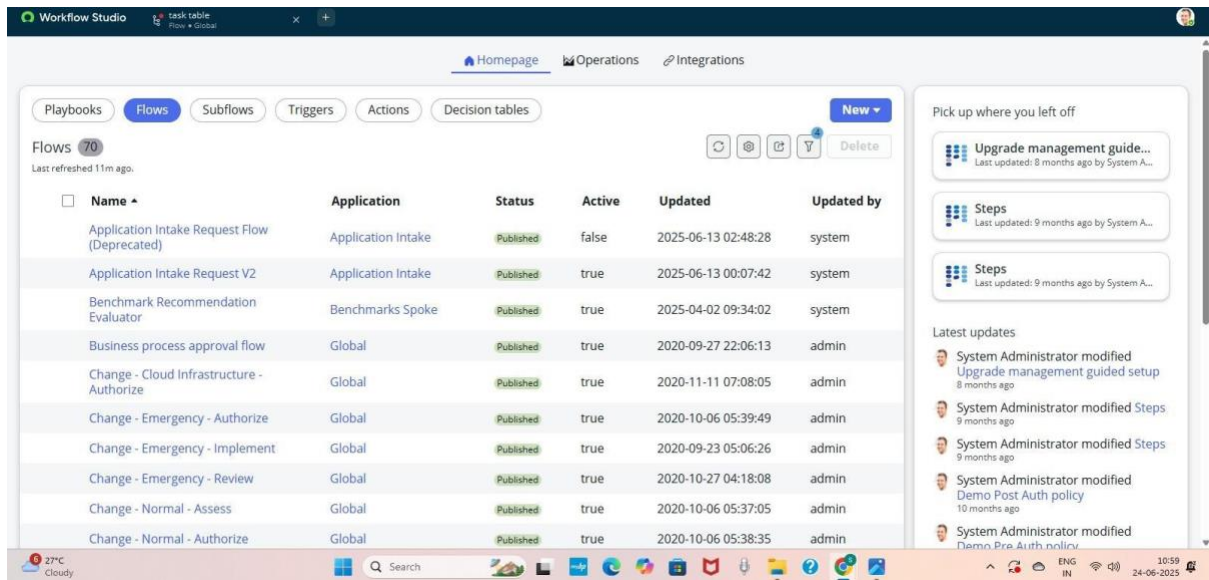
MILESTONE-9:FLOW

FLOW: Flow is a visual representation of an automated process.

PURPOSE: The purpose of a flow is to automate business processes by orchestrating a series of actions and logic.

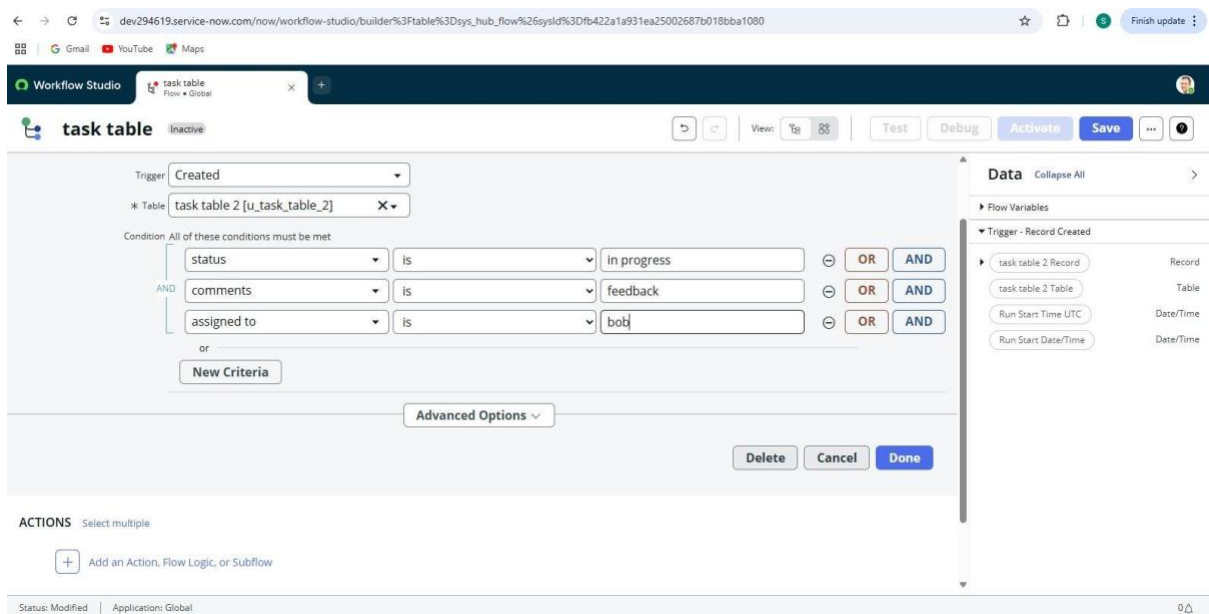
Activity-1: Create a Flow to Assign operations ticket to group

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 “ task table”.
6. Application should be Global.
7. Click build flow.



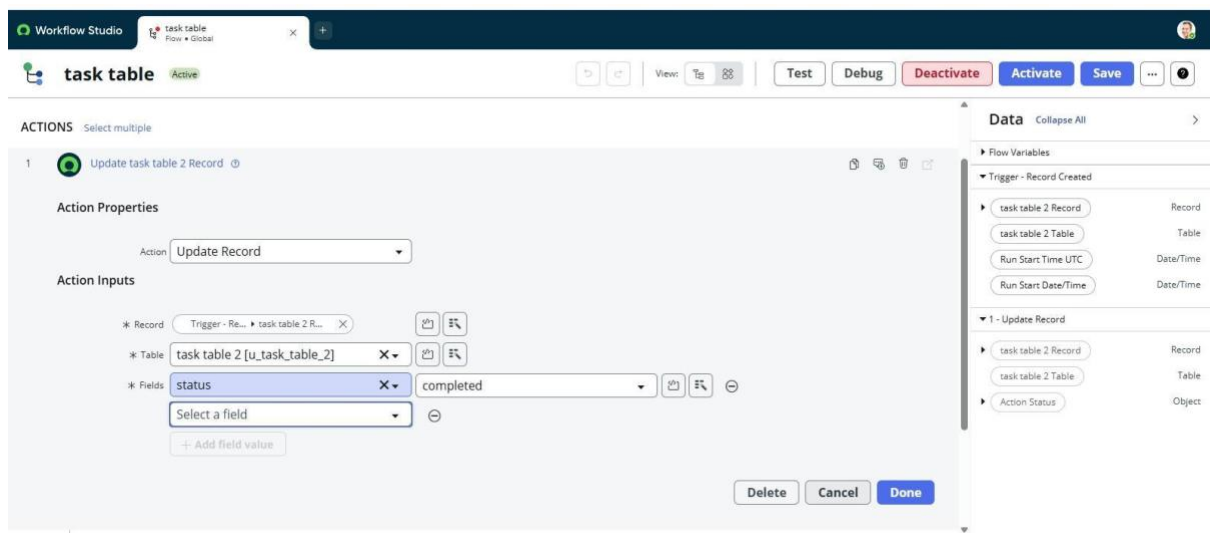
next step:

1. Click on Add a trigger
2. Select the trigger in that Search for "create record" and select that.
3. Give the table name as "task table".
4. Give the Condition as Field : status Operator :is Value : in progress
Field : comments Operator :is Value : feedback
Field : assigned to Operator :is Value : bob
5. After that click on Done



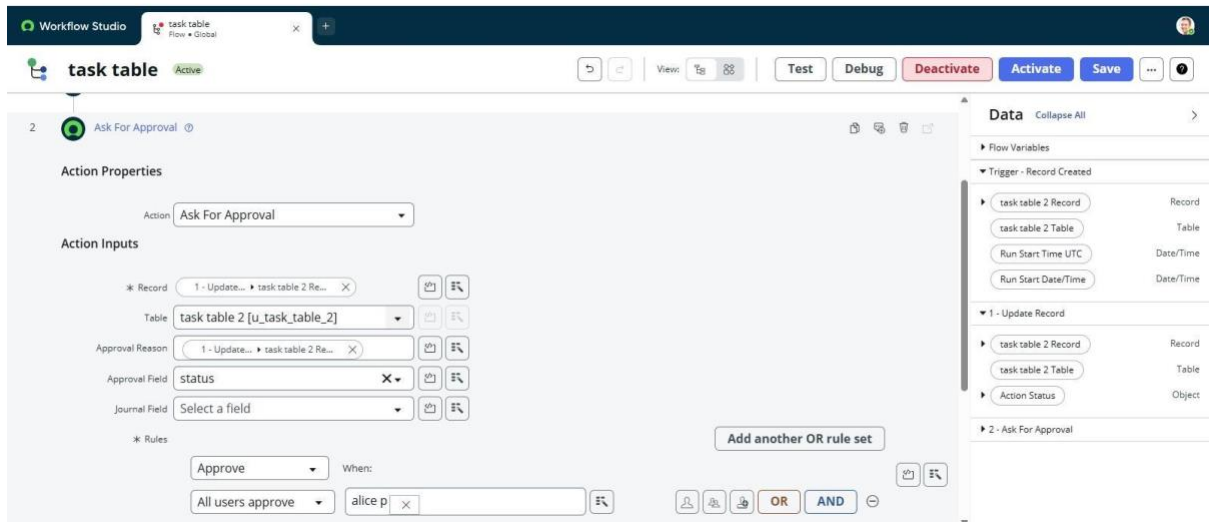
Next step:

1. Click on Add an action.
2. Select action in that ,search for “ update records”.
3. In Record field drag the fields from the data navigation from Right Side(Data pill)
4. Table will be auto assigned after that
5. Add fields as “status” and value as “completed”
6. Click on Done.

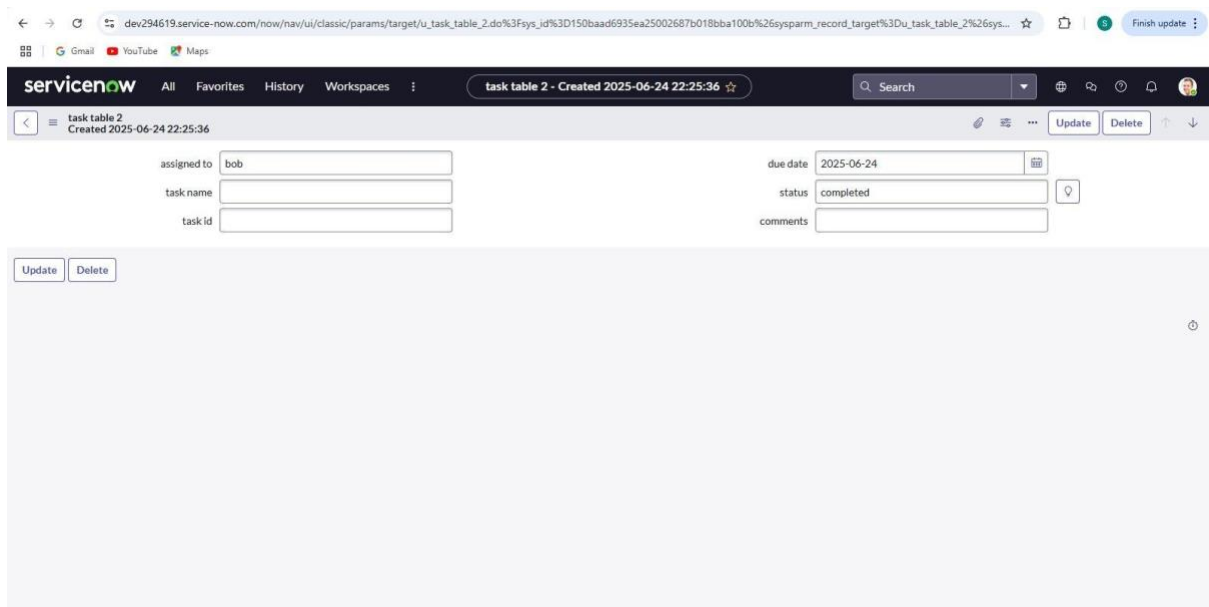


Next step:

1. Now under Actions.
2. Click on Add an action.
3. Select action in that ,search for “ ask for approval ”.
4. In Record field drag the fields from the data navigation from Right side
5. Table will be auto assigned after that
6. Give the approve field as “ status”
7. Give approver as alice p
8. Click on Done.



1. Go to application navigator search for task table.
2. Its status field is updated to completed



1. Go to application navigator and search for my approval
2. Click on my approval under the service desk.
3. Alice p got approval request then right click on requested then select approved

servicenow All Favorites History Workspaces Approvals Search

Approvals Created Search

State	Approver	Comments	Approval for
Search	Search	Search	Search
Approved	alice p		(empty)
Rejected	Fred Luddy		(empty)
Requested	Fred Luddy		(empty)
Requested	Fred Luddy		(empty)
Requested	Howard Johnson		CHG0000096
Requested	Ron Kettering		CHG0000096
Requested	Luke Wilson		CHG0000096
Requested	Christen Mitchell		CHG0000096
Requested	Bernard Laboy		CHG0000096
Requested	Howard Johnson		CHG0000095
Requested	Ron Kettering		CHG0000095
Requested	Luke Wilson		CHG0000095
Requested	Christen Mitchell		CHG0000095
Requested	Bernard Laboy		CHG0000095

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dev294619.servicenow.com/now/nav/ui/classic/params/target/sysapproval_approver_list.do%3Fsysparm_query%3D%26sysparm_first_row%3D1%26sysparm_view%3D

Finish update

servicenow All Favorites History Workspaces Admin Approvals Search

ServiceNow Service Management Approvals Created Search Actions on selected rows...

State	Approver	Comments	Approval for	Created
Approved	Don Goodliffe		CHG0000046	2024-08-29 07:52:40
Approved	Bow Ruggeri		CHG0000083	2024-08-29 07:52:45
Approved	Beth Anglin		CHG0000055	2024-08-29 07:52:33
Approved	Fred Luddy		CHG0000061	2024-08-29 07:52:50
Approved	ITIL User		CHG0000082	2024-08-29 07:52:47
Approved	Change Manager		STDCHG0000004	2015-07-01 08:59:06
Approved	David Loo		CHG0000042	2024-08-29 07:52:43
Approved	Don Goodliffe		CHG0000075	2024-08-29 07:52:51
Approved	Bow Ruggeri		CHG0000059	2024-08-30 06:27:41
Approved	Don Goodliffe		CHG0000056	2024-08-29 07:52:35
Approved	Fred Luddy		CHG0000040	2024-08-29 07:52:44
Approved	Fred Luddy		CHG0000063	2024-08-29 07:52:56
Approved	David Loo		CHG0000049	2024-08-30 06:27:41
Approved	ITIL User		CHG0000058	2024-08-30 06:27:41
Approved	Beth Anglin		CHG0000067	2024-08-29 07:52:36
Approved	ITIL User		CHG0000038	2024-08-29 07:52:40
Approved	Change Manager		STDCHG0000001	2015-06-29 03:52:34

5.PROJECT PLANNING & SCHEDULING

Functional Requirement	User Story	No.Of Activities	Team Members
USERS	As an administrator, I want to create and manage user accounts in ServiceNow so that users can access the required applications and perform their tasks.	1	T.Madhu Latha
GROUPS	As a system administrator, I want to create and manage user groups in ServiceNow so that I can organize users and assign roles or responsibilities efficiently.	1	T.Madhu Latha
ROLES	As a system administrator, I want to create and assign roles in ServiceNow so that users have the appropriate access to perform their tasks	1	U.Madhavi
TABLES	As a ServiceNow developer or admin, I want to create and manage custom tables so that I can store and organize application-specific data effectively	1	U.Madhavi
ASSIGN USERS TO GROUPS	As a ServiceNow administrator, I want to assign users to groups so that they inherit group roles and can participate in group-based workflows and assignments.	1	T.Neeraja
ASSIGN ROLES TO USERS	As a ServiceNow administrator, I want to assign roles to users so that they have the appropriate access to perform their tasks in the platform.	2	T.Neeraja
APPLICATION ACCESS	As a ServiceNow administrator, I want to control application access so that only authorized users can access specific applications and perform tasks	1	R.Yamuna

	securely.		
ACCESS CONTROL LIST	As a ServiceNow administrator, I want to create and configure Access Control Rules (ACLs) so that only authorized users can view or modify specific data in the system.	1	R.Yamuna
FLOW	As a ServiceNow administrator or developer, I want to create automated flows using Flow Designer so that repetitive tasks and processes can be streamlined without writing code.	1	R.Yamuna

Assigned tasks to the group members:

Dashboard

Internship

Support

Note: Request you to please click on "Tick mark " after assigning the activities for each milestone.

Assign Roles & Responsibilities to Team

→ Proceed to Workspace

Users	Create Users	*Tungana Madhulatha		
Groups	Create Groups	*Tungana Madhulatha		
Roles	Create Roles	*Undralia Madhavi		
Table	Create Table	*Undralia Madhavi		
Assign users to gr	Assign users to pi	*Teki Neeraja		
Assign roles to us	Assign roles to ali	*Teki Neeraja		
Assign roles to us	Assign roles to bc	*Teki Neeraja		
Application acces	Assign table acces	*Ruppa Yamuna		
Access control list	Create ACL	*Ruppa Yamuna		
Flow	Create a Flow to /	*Ruppa Yamuna		

+ ADD

6. FUNCTIONAL & PERFORMANCE TESTING

PROJECT: Optimizing User, Group, and Role Management with Access Control and Workflows

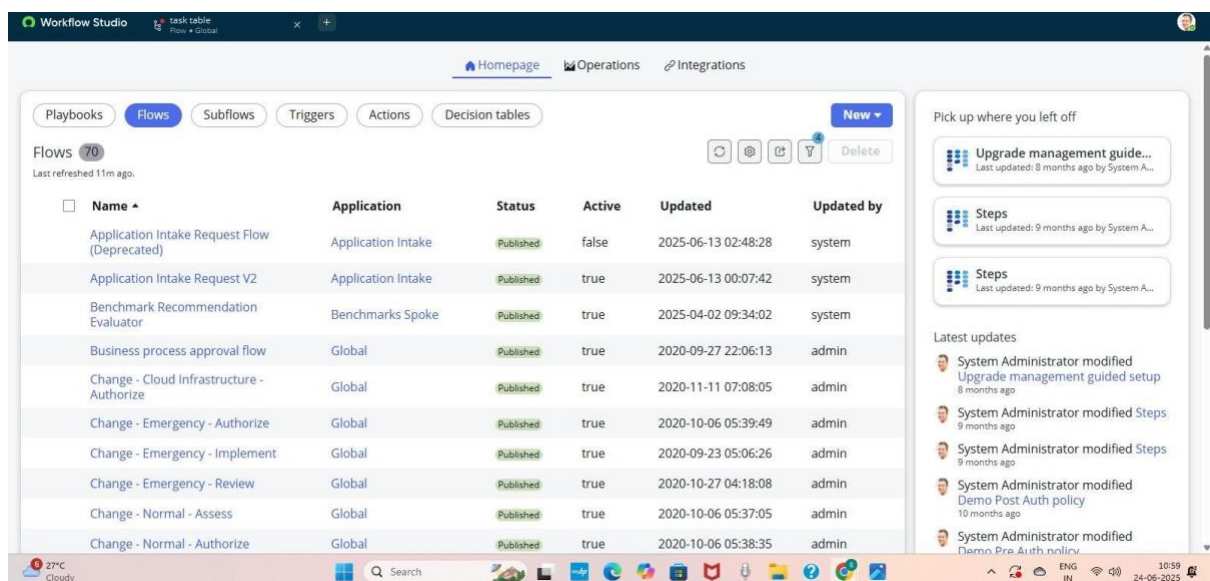
FLOW

FLOW:Flow is a visual representation of an automated process.

PURPOSE:The purpose of a flow is to automate business processes by orchestrating a series of actions and logic.

Activity-1:Create a Flow to Assign operations ticket to group

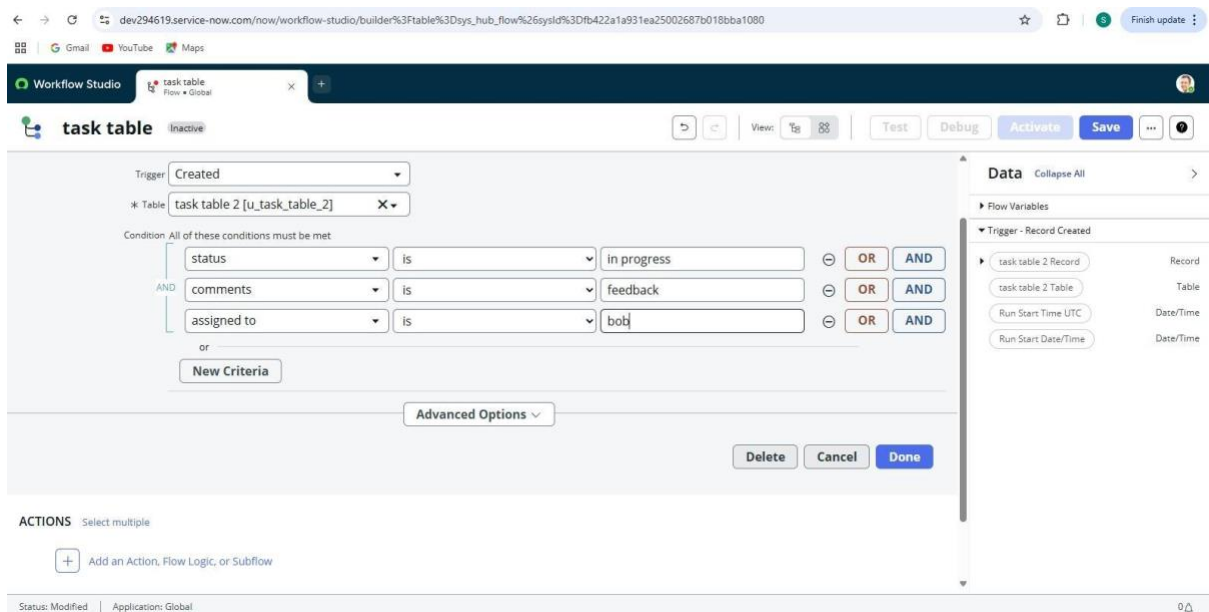
- 1.Open service now.
- 2.Click on All >> search for Flow Designer
- 3.Click on Flow Designer under Process Automation.
- 4.After opening Flow Designer Click on new and select Flow.
- 5.Under Flow properties Give Flow Name as “ task table”.
- 6.Application should be Global.
- 7.Click build flow. Ni



next step:

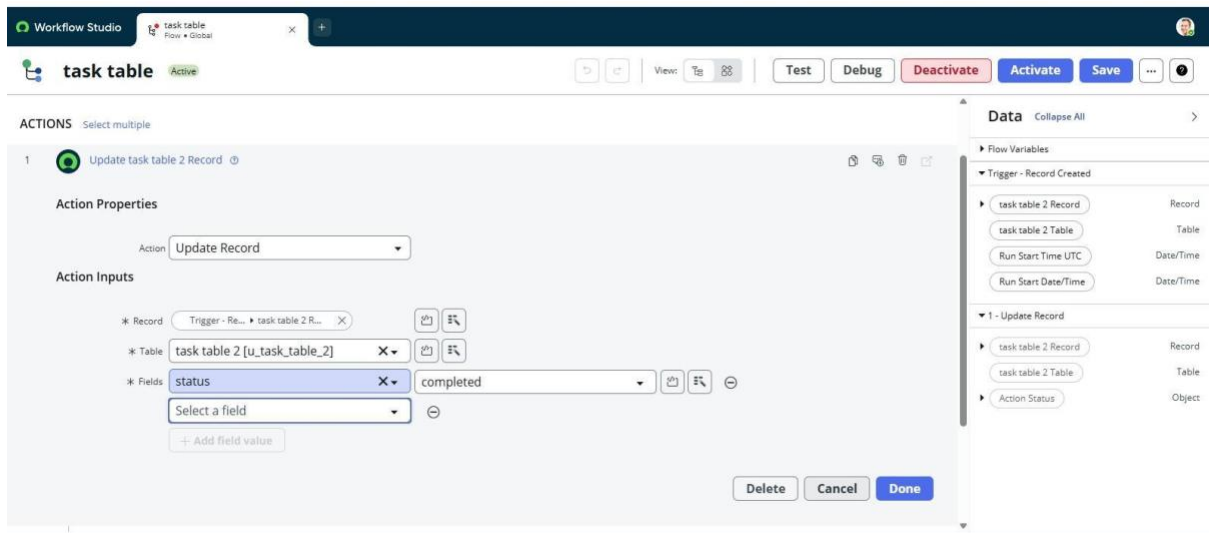
- 1.Click on Add a trigger

2. Select the trigger in that Search for “create record” and select that.
3. Give the table name as “task table”.
4. Give the Condition as Field : status Operator :is Value : in progress
Field : comments Operator :is Value : feedback
Field : assigned to Operator :is Value : bob
5. After that click on Done



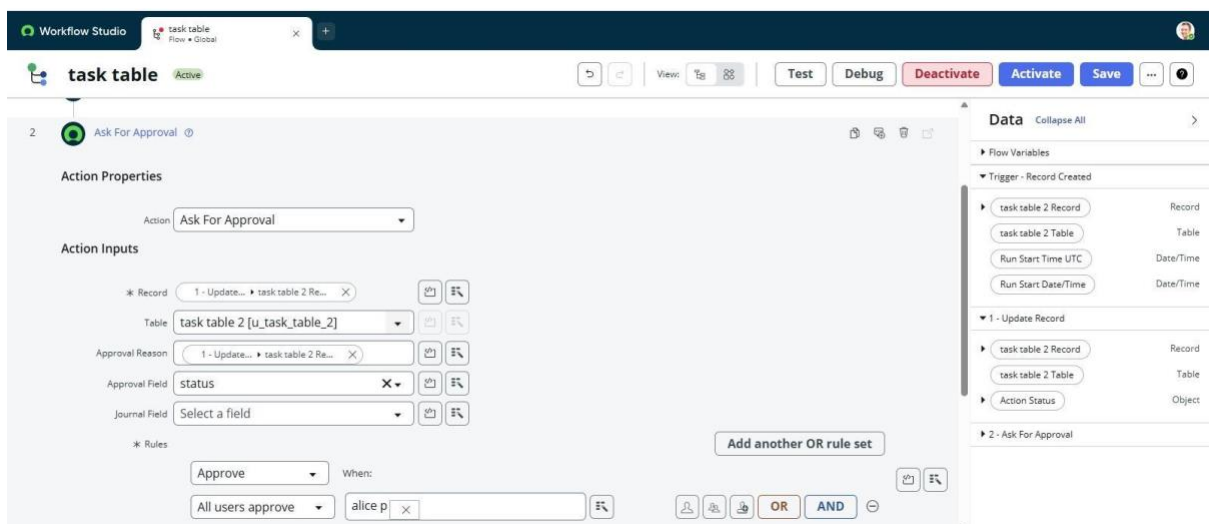
Next step:

1. Click on Add an action.
2. Select action in that ,search for “ update records”.
3. In Record field drag the fields from the data navigation from Right Side(Data pill)
4. Table will be auto assigned after that
5. Add fields as “status” and value as “completed”
6. Click on Done.



Next step:

1. Now under Actions.
2. Click on Add an action.
3. Select action in that, search for "ask for approval".
4. In Record field drag the fields from the data navigation from Right side
5. Table will be auto assigned after that
6. Give the approve field as "status"
7. Give approver as alice p
8. Click on Done.



1. Go to application navigator search for task table.

2.It status field is updated to completed

The screenshot shows a ServiceNow task form for 'task table 2'. The browser address bar displays a long URL. The ServiceNow header includes navigation links like 'All', 'Favorites', 'History', and 'Workspaces'. The task title is 'task table 2 - Created 2025-06-24 22:25:36'. The form fields are as follows:

Field	Value
assigned to	bob
task name	
task id	
due date	2025-06-24
status	completed
comments	

Buttons for 'Update' and 'Delete' are visible at the top right and bottom left of the form area.

- 1.Go to application navigator and search for my approval
- 2.Click on my approval under the service desk.
- 3.Alice p got approval request then right click on requested then select approved

dev294619.service-now.com/now/nav/ui/classic/params/target/sysapproval_approver_list.do%3Fsysparm_query%3D%26sysparm_first_row%3D1%26sysparm_view%3D

ServiceNow Service Management

Created

State	Approver	Comments	Approval for	Created
Approved	Don Goodliffe		CHG0000046	2024-08-29 07:52:40
Approved	Bow Ruggeri		CHG0000083	2024-08-29 07:52:45
Approved	Beth Anglin		CHG0000055	2024-08-29 07:52:33
Approved	Fred Luddy		CHG0000061	2024-08-29 07:52:50
Approved	ITIL User		CHG0000082	2024-08-29 07:52:47
Approved	Change Manager		STDCHG0000004	2015-07-01 08:59:06
Approved	David Loo		CHG0000042	2024-08-29 07:52:43
Approved	Don Goodliffe		CHG0000075	2024-08-29 07:52:51
Approved	Bow Ruggeri		CHG0000059	2024-08-30 06:27:41
Approved	Don Goodliffe		CHG0000056	2024-08-29 07:52:35
Approved	Fred Luddy		CHG0000040	2024-08-29 07:52:44
Approved	Fred Luddy		CHG0000063	2024-08-29 07:52:56
Approved	David Loo		CHG0000049	2024-08-30 06:27:41
Approved	ITIL User		CHG0000058	2024-08-30 06:27:41
Approved	Beth Anglin		CHG0000067	2024-08-29 07:52:36
Approved	ITIL User		CHG0000038	2024-08-29 07:52:40
Approved	Change Manager		STDCHG0000001	2015-06-29 03:52:34

- Preventing unauthorized access

- Ensuring role-based task visibility
- Streamlining user onboarding and access provisioning

servicenow All Favorites History Workspaces Admin **Group - project team** Search

Group project team Update Delete

Job to add or remove role(s) from user(s) of group has been queued

Name Group email Manager Parent Description

Update Delete

Roles Group Members (2) Groups

User Search Actions on selected rows... New Edit...

Group = project team

User
alice p
bob p

1 to 2 of 2

Web service access only ☐ Internal Integration User ☐

Update Set Password Delete

Related Links
[View linked accounts](#)
[View Subscriptions](#)
[Reset a password](#)

Entitled Custom Tables Roles (3) Groups (1) Delegates Subscriptions User Client Certificates

Role Search Actions on selected rows... Edit...

User = alice p

Role	State	Inherited	Inheritance Count
u_project_table_user	Active	false	
project member	Active	false	
u_task_table_2_user	Active	false	

1 to 3 of 3

Sports headline MotoGP, Italian... Search ENG IN 12:51 23-06-2025

servicenow

AllFavoritesHistoryWorkspacesAdmin

User - bob p

Search

UpdateSet PasswordDelete

User bob p

Active☒

Web service access only☐

Internal Integration User☐

UpdateSet PasswordDelete

Related Links

[View linked accounts](#)

[View Subscriptions](#)

[Reset a password](#)

Entitled Custom TablesRoles (2)Groups (1)DelegatesSubscriptionsUser Client Certificates

RoleSearch

Actions on selected rows...Edit...

User = bob p

Role	State	Inherited	Inheritance Count
team member	Active	false	
u_task_table_2_user	Active	false	

1 to 2 of 2

servicenow

AllFavoritesHistoryWorkspacesAdmin

Application Menu - project table

Search

UpdateDelete

Application Menu project table

An application menu is a group of modules in the application navigator. Choose the roles that are required to access the application and add or remove modules in the related list below. [More Info](#)

* Titleproject tableApplicationGlobalActive☒

Restricts access to the specified roles. Otherwise, all users can view the application menu when it is active.

Rolesproject member

Specifies the `menu.category`, which defines the navigation menu style. The default value is Custom Applications.

CategoryCustom Applications

The text that appears in a tooltip when a user points to this application menu

Hint

Description

UpdateDelete

servicenow

AllFavoritesHistoryWorkspacesAdmin

Application Menu - task table 2

Search

UpdateDelete

Application Menu

task table 2

An application menu is a group of modules in the application navigator. Choose the roles that are required to access the application and add or remove modules in the related list below.

* Titletask table 2ApplicationGlobalActive

Restricts access to the specified roles. Otherwise, all users can view the application menu when it is active.

Rolesu_task_table_2_user, project member, team member

Specifies the menu category, which defines the navigation menu style. The default value is Custom Applications.

CategoryCustom Applications

The text that appears in a tooltip when a user points to this application menu

Hint

Description

UpdateDelete

Access Control

New record

Warning: A role, security attribute, data condition, script or ACL control via reference fields is required to properly secure access with this ACL.

* Type recordApplicationGlobalActiveAdvanced

* Operation createDecision Type Allow IfAdmin overrides

Protection policyNone

* Name task table 2 [u_task_table_2]status

Description

Applies ToNo. of records matching the condition: 0

Add Filter ConditionAdd OR Clause

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

Conditions

Workflow Studio

task table

Flow # Global

HomepageOperationsIntegrations

PlaybooksFlowsSubflowsTriggersActionsDecision tables

New

Flows70

Last refreshed 11m ago.

Name	Application	Status	Active	Updated	Updated by
Application Intake Request Flow (Deprecated)	Application Intake	Published	false	2025-06-13 02:48:28	system
Application Intake Request V2	Application Intake	Published	true	2025-06-13 00:07:42	system
Benchmark Recommendation Evaluator	Benchmarks Spoke	Published	true	2025-04-02 09:34:02	system
Business process approval flow	Global	Published	true	2020-09-27 22:06:13	admin
Change - Cloud Infrastructure - Authorize	Global	Published	true	2020-11-11 07:08:05	admin
Change - Emergency - Authorize	Global	Published	true	2020-10-06 05:39:49	admin
Change - Emergency - Implement	Global	Published	true	2020-09-23 05:06:26	admin
Change - Emergency - Review	Global	Published	true	2020-10-27 04:18:08	admin
Change - Normal - Assess	Global	Published	true	2020-10-06 05:37:05	admin
Change - Normal - Authorize	Global	Published	true	2020-10-06 05:38:35	admin

Pick up where you left off

Upgrade management guide...
Last updated: 8 months ago by System A...

Steps
Last updated: 9 months ago by System A...

Steps
Last updated: 9 months ago by System A...

Latest updates

System Administrator modified Upgrade management guided setup
8 months ago

System Administrator modified Steps
9 months ago

System Administrator modified Steps
9 months ago

System Administrator modified Demo Post Auth policy
10 months ago

System Administrator modified Demo Pre Auth policy

27°C Cloudy

Search

10:59 24-06-2025

servicenow

All

Favorites

History

Workspaces

Approvals

Search

Approvals

Created

Search

State

Approver

Comments

Approval for

Search

Search

Search

Search

Approved

alice p

(empty)

Rejected

Fred Luddy

(empty)

Requested

Fred Luddy

(empty)

Requested

Fred Luddy

(empty)

Requested

Howard Johnson

CHG0000096

Requested

Ron Kettering

CHG0000096

Requested

Luke Wilson

CHG0000096

Requested

Christen Mitchell

CHG0000096

Requested

Bernard Laboy

CHG0000096

Requested

Howard Johnson

CHG0000095

Requested

Ron Kettering

CHG0000095

Requested

Luke Wilson

CHG0000095

Requested

Christen Mitchell

CHG0000095

Requested

Bernard Laboy

CHG0000095

dev294619.servicenow.com/now/nav/ui/classic/params/target/sysapproval_approver_list.do%3Fsysparm_query%3D%26sysparm_first_row%3D1%26sysparm_view%3D

☆🔖🟢 Finish update

🔍 Gmail🔍 YouTube🔍 Maps

servicenow

AllFavoritesHistoryWorkspacesAdmin

Approvals🔖

🔍 Search

🌐🔍🕒🔔👤

ServiceNowService Management

🔍 Created🔍 Search

🔍🔍🔍 Actions on selected rows...

All

🔍🔍

State

Approver

Comments

Approval for

Created

🟢 Approved

Don Goodliffe

CHG0000046

2024-08-29 07:52:40

🟢 Approved

Bow Ruggeri

CHG0000083

2024-08-29 07:52:45

🟢 Approved

Beth Anglin

CHG0000055

2024-08-29 07:52:33

🟢 Approved

Fred Luddy

CHG0000061

2024-08-29 07:52:50

🟢 Approved

ITIL User

CHG0000082

2024-08-29 07:52:47

🟢 Approved

Change Manager

STDCHG0000004

2015-07-01 08:59:06

🟢 Approved

David Loo

CHG0000042

2024-08-29 07:52:43

🟢 Approved

Don Goodliffe

CHG0000075

2024-08-29 07:52:51

🟢 Approved

Bow Ruggeri

CHG0000059

2024-08-30 06:27:41

🟢 Approved

Don Goodliffe

CHG0000056

2024-08-29 07:52:35

🟢 Approved

Fred Luddy

CHG0000040

2024-08-29 07:52:44

🟢 Approved

Fred Luddy

CHG0000063

2024-08-29 07:52:56

🟢 Approved

David Loo

CHG0000049

2024-08-30 06:27:41

🟢 Approved

ITIL User

CHG0000058

2024-08-30 06:27:41

🟢 Approved

Beth Anglin

CHG0000067

2024-08-29 07:52:36

🟢 Approved

ITIL User

CHG0000038

2024-08-29 07:52:40

🟢 Approved

Change Manager

STDCHG0000001

2015-06-29 03:52:34

ADVANTAGES AND DISADVANTAGES

ADVANTAGES:

- Granular control over user access using roles, groups, and ACLs.Reduces risk of unauthorized access to data and applications.
- Saves time by automating user-role assignments and access control.
- Easy to manage a large number of users via group and role hierarchy.
- Gives hands-on experience with ServiceNow administration.
- Teaches real-world ITSM (IT Service Management) best practices

DISADVANTAGES:

- Understanding ACLs, workflows, and role hierarchies can be confusing initially.
- If roles or ACLs are not defined properly, users may get more access than needed (violating the Principle of Least Privilege).
- As users and roles change over time, regular updates are needed to keep the system secure and efficient.
- Initial configuration of users, groups, roles, ACLs, and workflows can be time-intensive.

10. CONCLUSION :

The project "Optimizing User, Group, and Role Management with Access Control and Workflows" successfully demonstrated how to efficiently manage users, groups, and roles within the ServiceNow platform. Through structured workflows and the implementation of Access Control Lists (ACLs), the system ensures secure and scalable access management across applications and data tables.

By dividing the project into key modules—such as user creation, role assignment, group management, application access control, and ACL configuration—the project achieved its core goal: to enhance administrative efficiency while maintaining strict security and data integrity.

This scenario highlights a structured approach to project management, showcasing the roles of Alice and Bob within a defined workflow. With Alice's oversight and Bob's execution, the team effectively collaborates to ensure project success. The use of tables organizes key information, facilitating easy tracking of projects, tasks, and progress updates. Overall, this system promotes accountability, enhances communication, and leads to the successful completion of projects.