

Project Title

Optimizing User, Group and role management with access control and work flows.

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Problem Statement:

Managing users, groups, and roles becomes complex in large systems, leading to security risks, redundant tasks, and inefficiencies in access control and workflows.

Objective:

To design an optimized system that simplifies user, group, and role management, enforces secure access control, and automates workflows for better efficiency, scalability, and compliance.

Skills:

Identity and Access Management (IAM)

Role-Based Access Control (RBAC)

Workflow automation

Database management

Security policies and compliance awareness

Task initiation

Milestone 1 : Users

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

The screenshot shows the ServiceNow 'User' form for 'alice.p'. The 'User ID' field is highlighted with a red box. The form includes fields for First name, Last name, Title, Department, Email, Language, Calendar integration, Time zone, Date format, Business phone, and Mobile phone. There are also checkboxes for 'Password needs reset', 'Locked out', 'Active', 'Web service access only', and 'Internal Integration User'. The 'Active' checkbox is checked. The 'Update', 'Set Password', and 'Delete' buttons are visible at the bottom of the form.

Create one more user:

7.Create another user with the following details

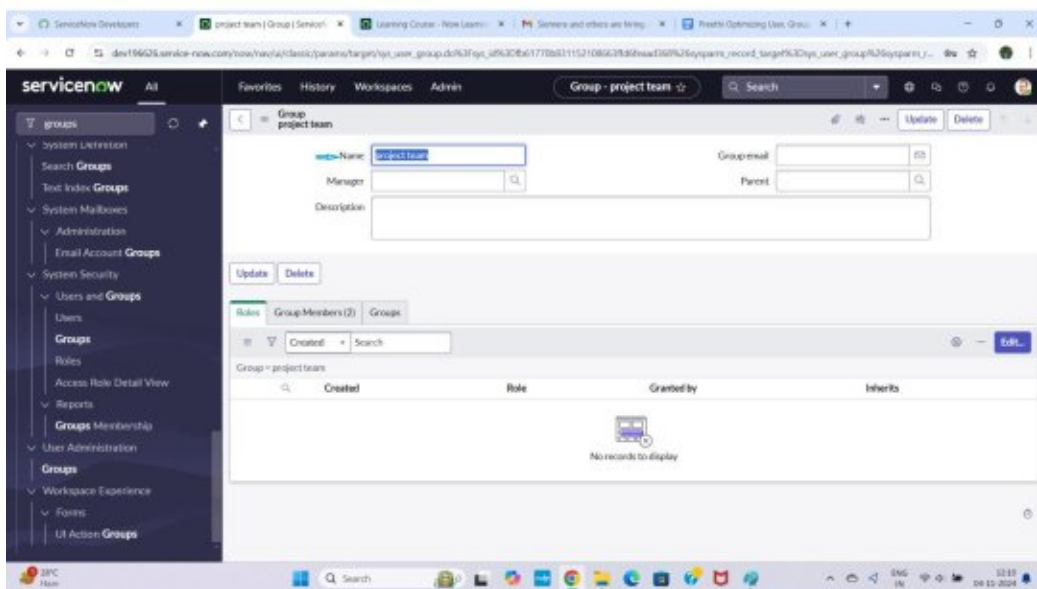
8.Click on submit

The screenshot shows the ServiceNow 'User' form for 'Bob.p'. The 'User ID' field is highlighted with a red box. The form includes fields for First name, Last name, Title, Department, Email, Language, Calendar integration, Time zone, Date format, Business phone, and Mobile phone. There are also checkboxes for 'Password needs reset', 'Locked out', 'Active', 'Web service access only', and 'Internal Integration User'. The 'Active' checkbox is checked. The 'Update', 'Set Password', and 'Delete' buttons are visible at the bottom of the form.

Milestone 2 : Groups

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

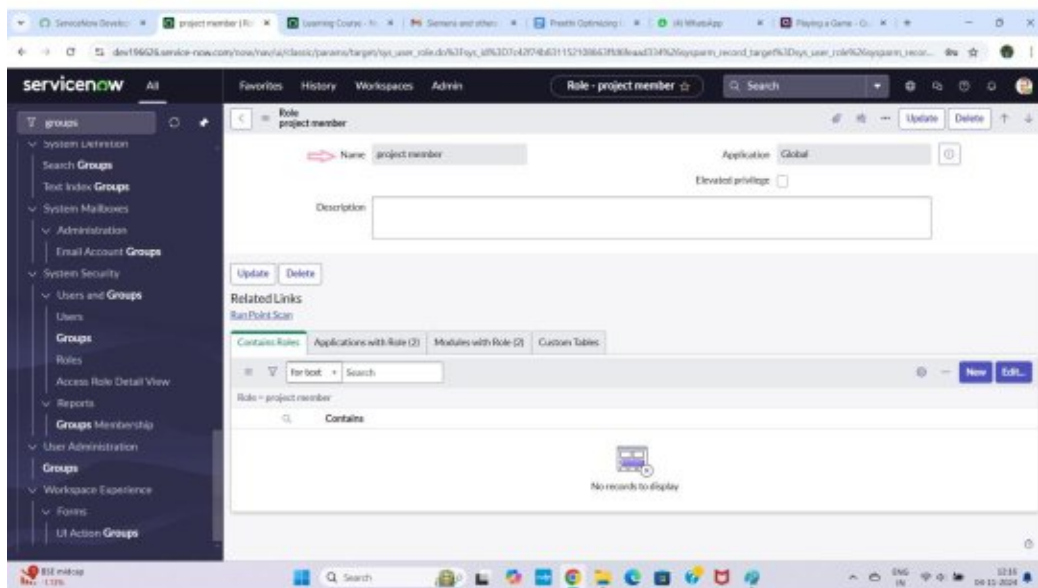


Milestone 3 : Roles

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
6. Click on submit



Create one more role:

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

Milestone 4 : Table 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

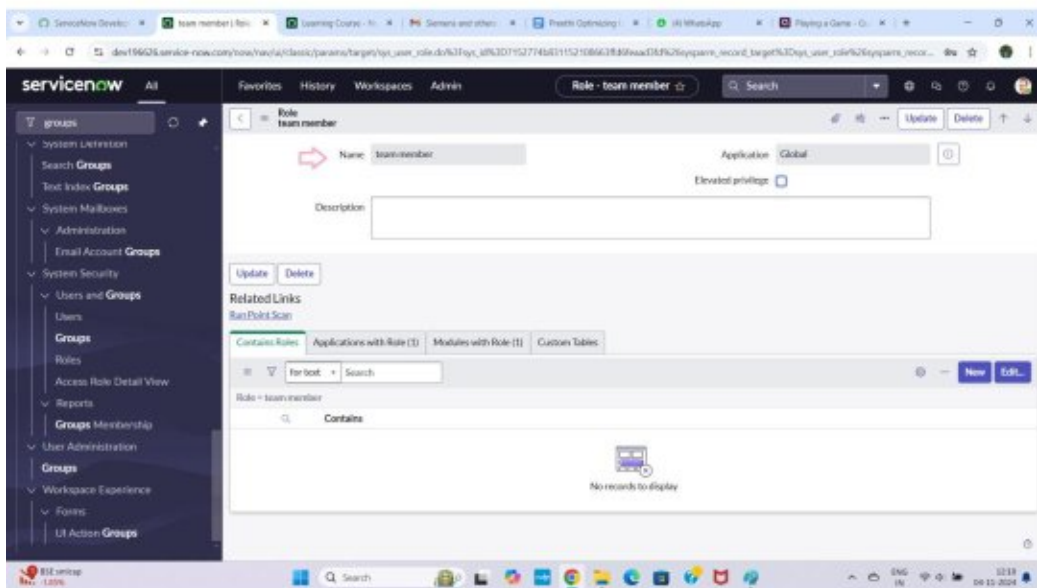
5. Fill the following details to create a new table

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



8. Click on submit

Table - New Record

* Name:

Extends table:

Create module: ☒

Create mobile module: ☒

Add module to menu:

New menu name:

Columns | Controls | Application Access

Table Columns for text Search

Column label	Type	Reference	Max length	Default value	Display
project id	Integer				false
project name	String				false
project manager	String				false
start date	Date				false
end date	Date				false
status	Choice				false
description	String				false

Create one more table:

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

10. Click on submit.

Table - task table 2

Table Columns: for text Search

Dictionary Entries

Column label	Type	Reference	Max length	Default value	Display
Updated by	String	(empty)	40		false
Updates	Integer	(empty)	40		false
Updated	Date/Time	(empty)	40		false
Sys ID	Sys ID (GUID)	(empty)	32		false
Created by	String	(empty)	40		false
Created	Date/Time	(empty)	40		false
task id	Integer				false
task name	String				false
assigned to	String				false
due date	Date				false
status	Choice				false
comments	String				false

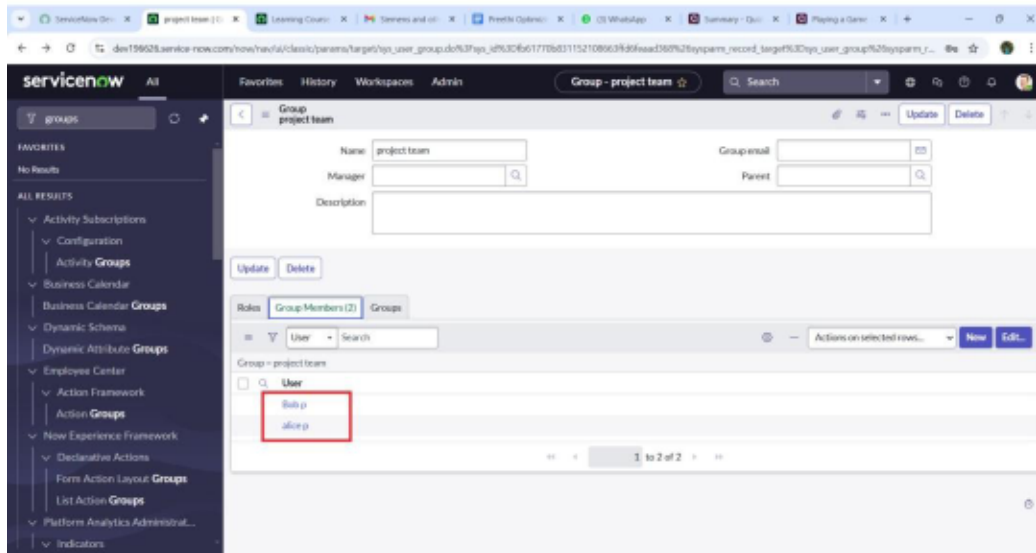
Insert a new row...

Buttons: Delete, Update, Delete All Records

Milestone 5 : Assign users to groups

Activity 1: Assign users to project team group

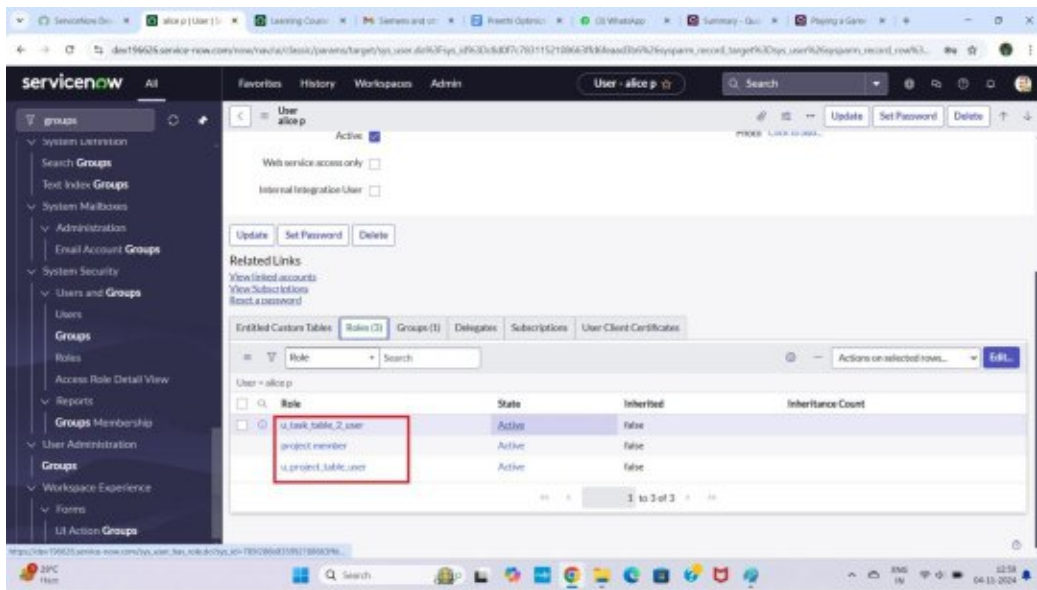
1. Open service now.
2. Click on All >> search for groups
3. Select tables under system definition
4. Select the project team group
5. Under group members
6. Click on edit
7. Select alice p and bob p and save



Milestone 6 : Assign roles to users

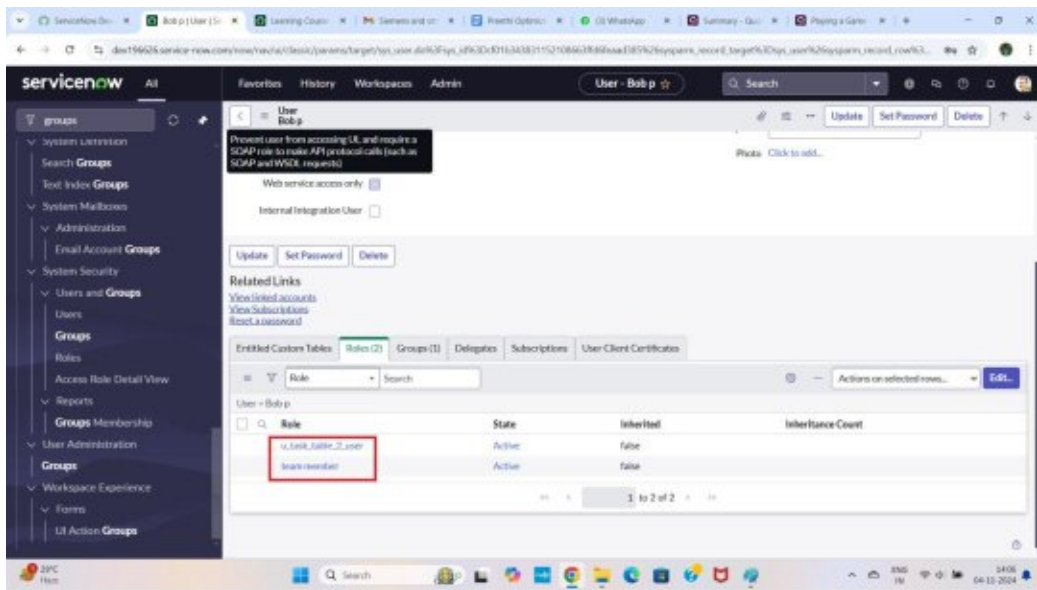
Activity 1: Assign roles to alice user

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

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

servicenow All Favorites History Admin Application Menu - project table Search

< = Application Menu project table Update Delete

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](#)

* Title Application

Active ☒

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

Roles project member

Specifies the [menu category](#), which defines the navigation menu style. The default value is Custom Applications.

Category

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

Hint

Description

Update Delete

Activate Windows
Go to Settings to activate Windows.

servicenow All Favorites History Admin Application Menu - task table 2 Search

< = Application Menu task table 2 Update Delete

* Title Application

Active ☒

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

Roles u_task_table_2_user, project member, team member

Specifies the [menu category](#), which defines the navigation menu style. The default value is Custom Applications.

Category

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

Hint

Description

Update Delete

Activate Windows
Go to Settings to activate Windows.

Modules Order Search Actions on selected rows... New

Milestone 8 :Access control list 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

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

* Type: record

* Operation: write

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: 1 @

Add Filter Condition Add *OR* Clause

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

Application: Global

Active: ☒

Advanced: ☐

holds

status

Conditions

Activate Windows
Go to Settings to activate Windows.

Access Control Rules have two decision types, and these types will behave differently depending on conditions.

- 6.Fill the following details to create a new ACL
- 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 table lists records with columns: Name, Decision Type, Operation, Type, Active, Updated by, and Updated. A red box highlights the 'u_task_table' records with 'u_assigned_to' in the Name field. A red arrow points to the 'u_task_table_2' record.

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_table.u_assigned_to	Allow If	write	record	true	admin	2024-10-22 04:33:53
u_task_table.u_dua_date	Allow If	write	record	true	admin	2024-10-22 04:33:14
u_task_table.u_task_id	Allow If	write	record	true	admin	2024-10-22 04:27:47
u_task_table.u_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_2.u_assigned_to	Allow If	write	record	true	admin	2024-10-22 21:31:20

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

task table 2 - Create Created

task id

task name

status -- None --

assigned to

comments

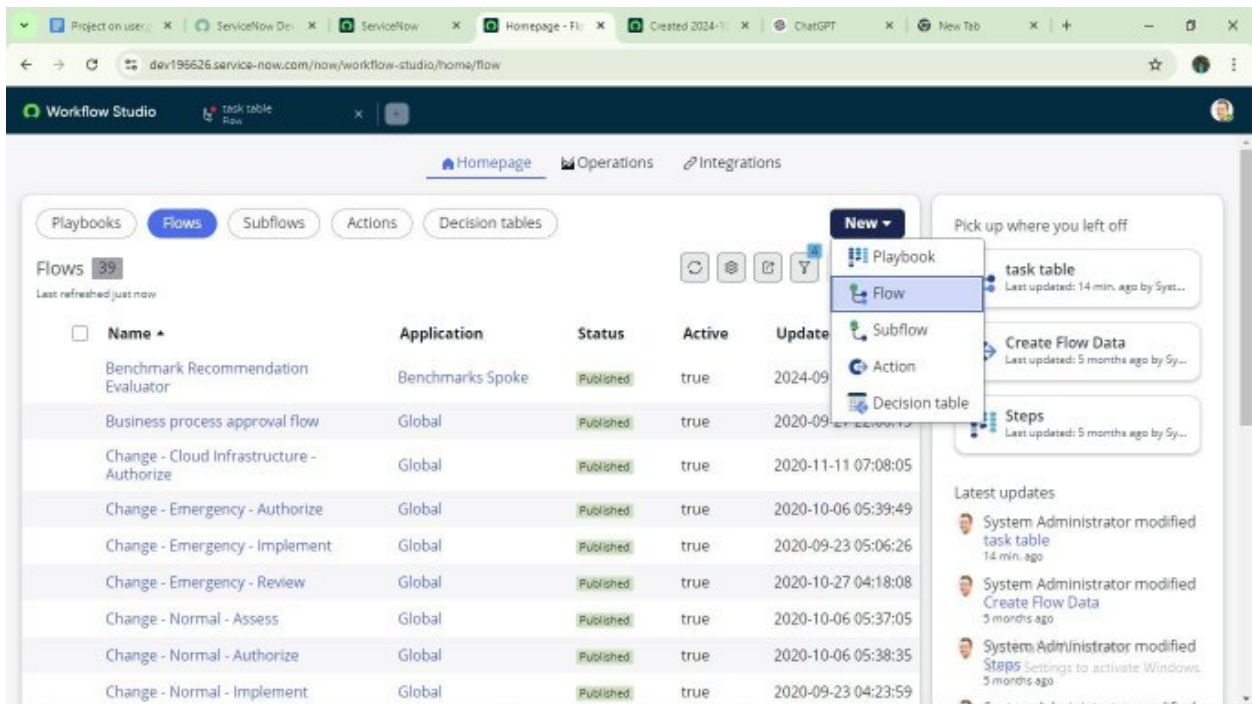
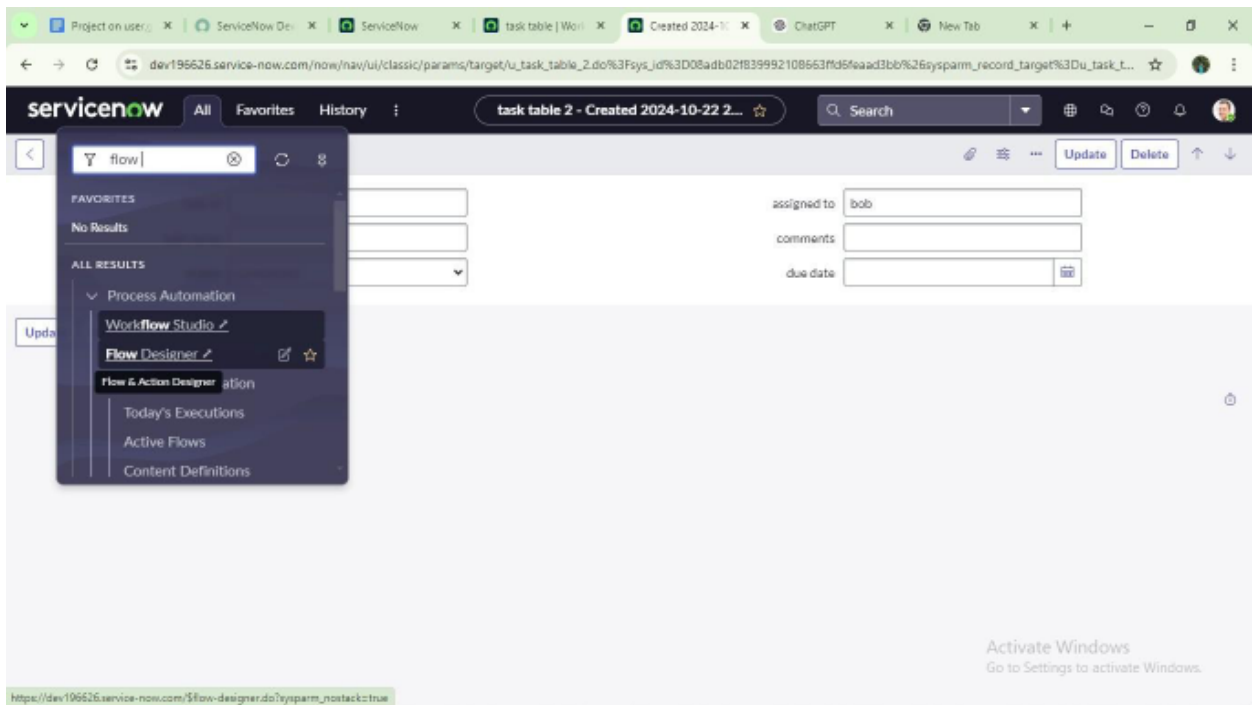
due date

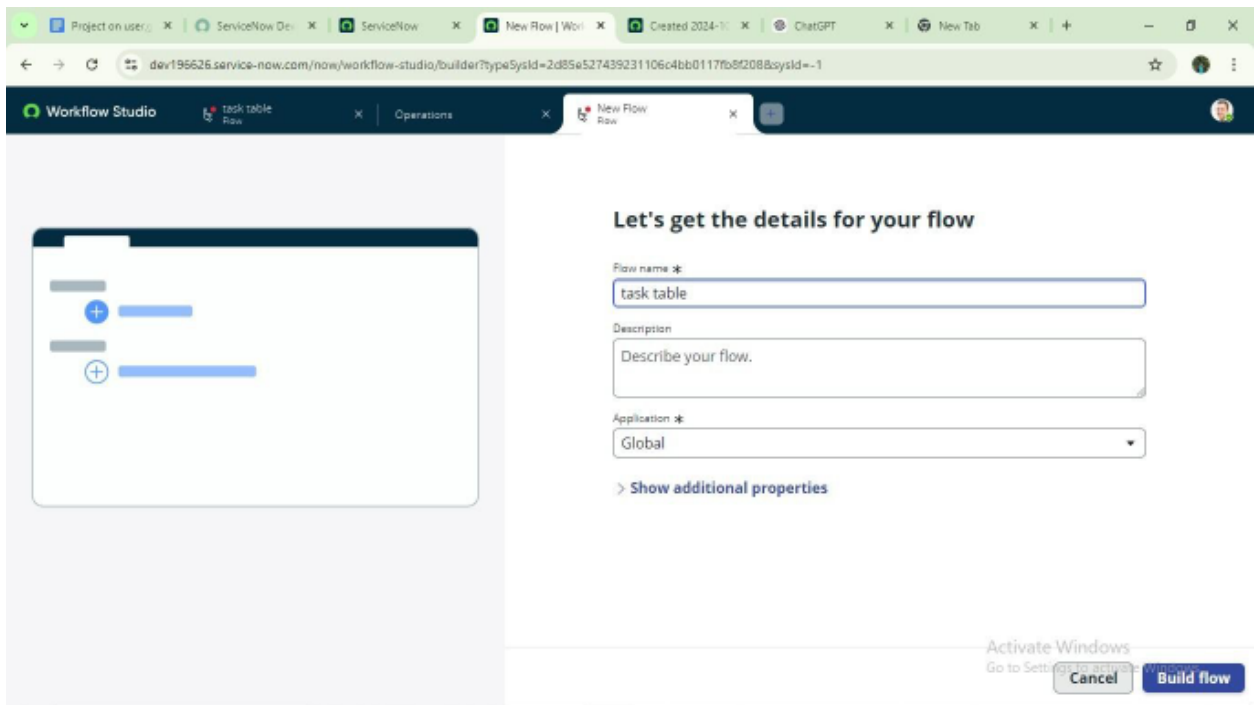
Submit

Milestone 9: Flow

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

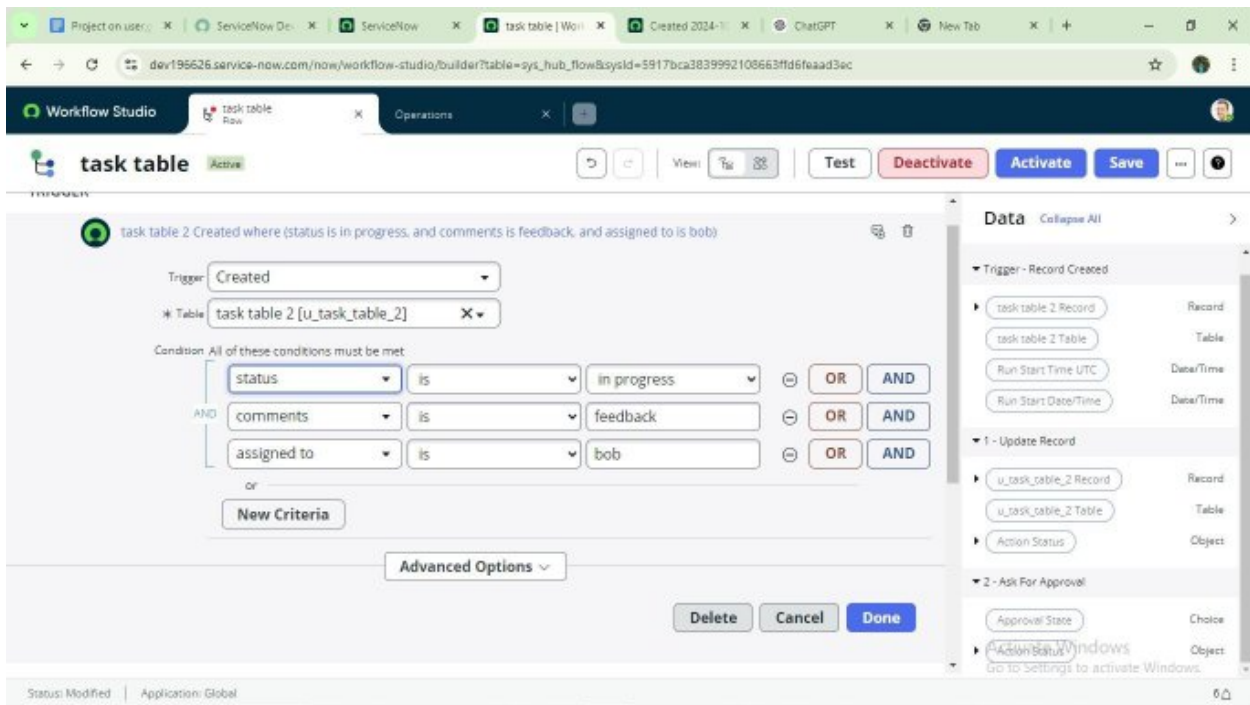
1. Open service now.
2. Click on All >> search for Flow Designer
3. Click on Flow Designer under Process Automation.
4. After opening Flow Designer Click on new and select Flow.
5. Under Flow properties Give Flow Name as " task table".
6. Application should be Global.
7. Click build flow.





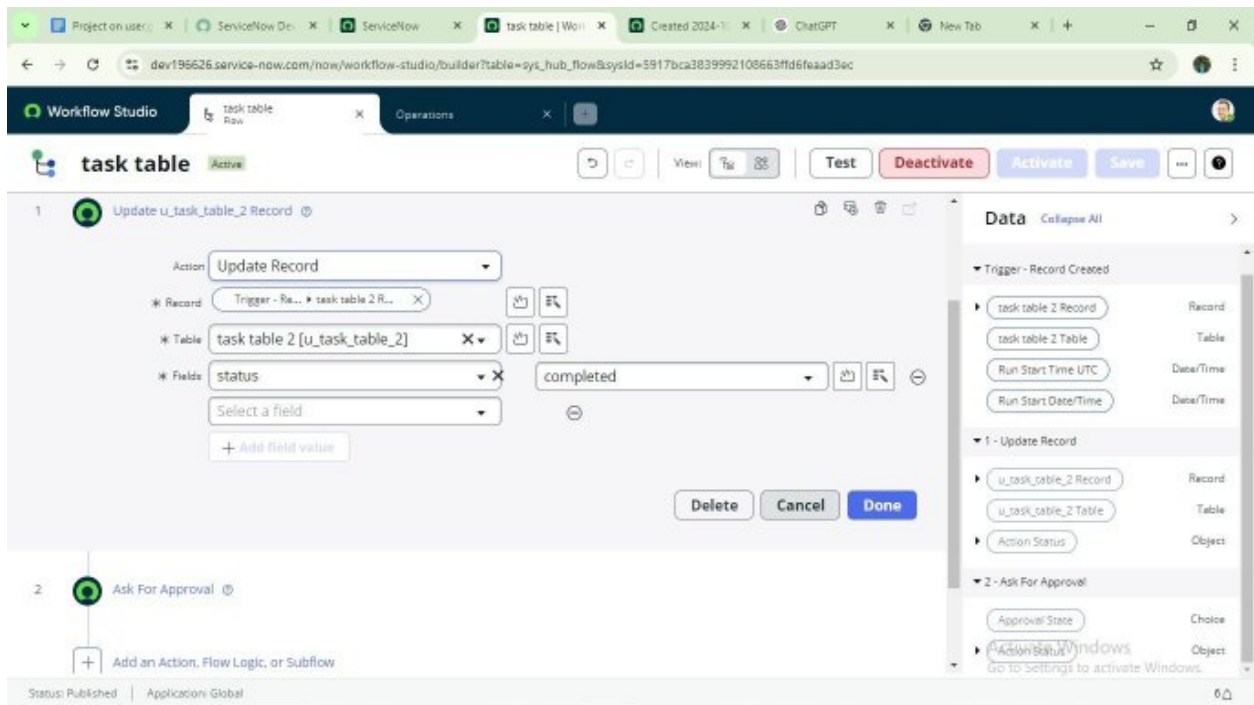
next step:

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.



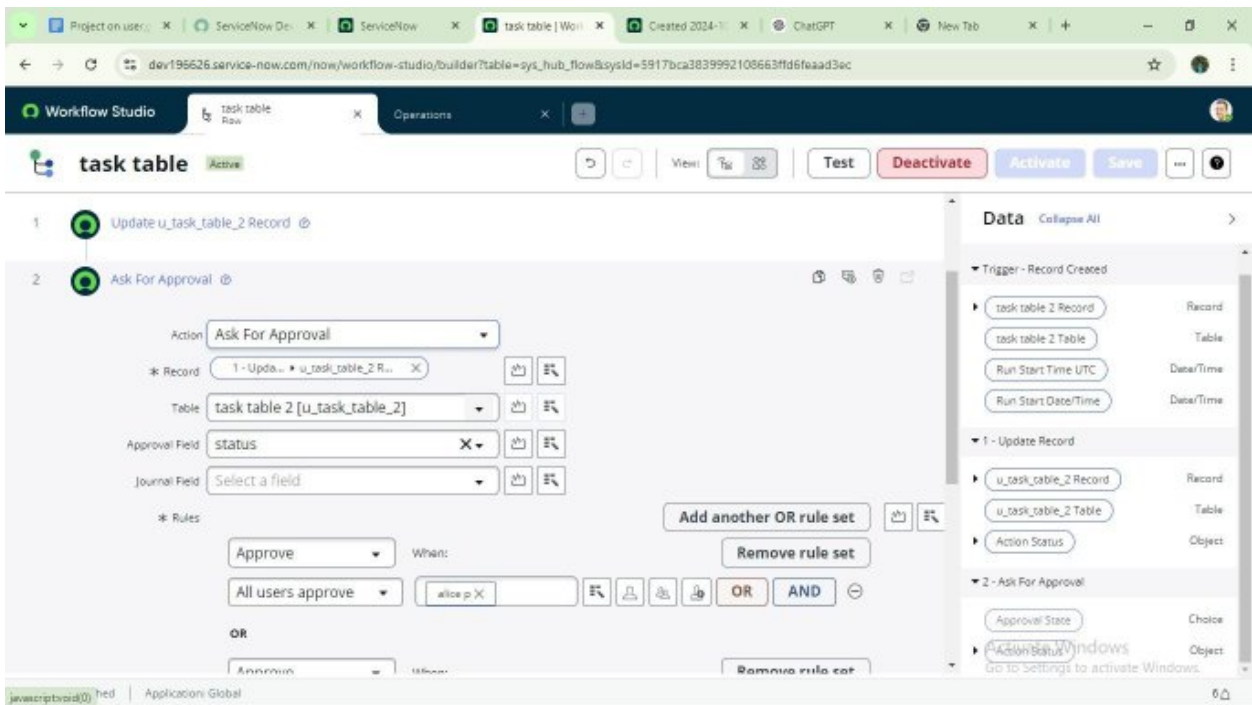
Next step:

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.



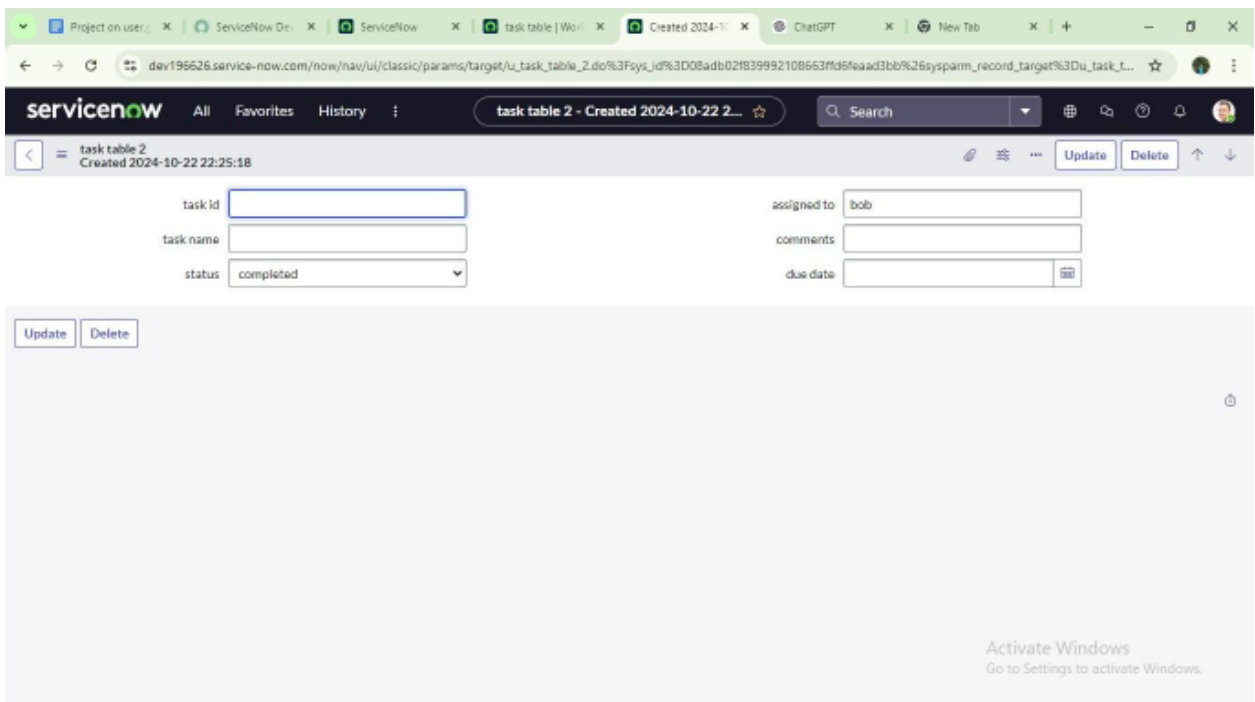
Next step:

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.



9.Go to application navigator search for task table.

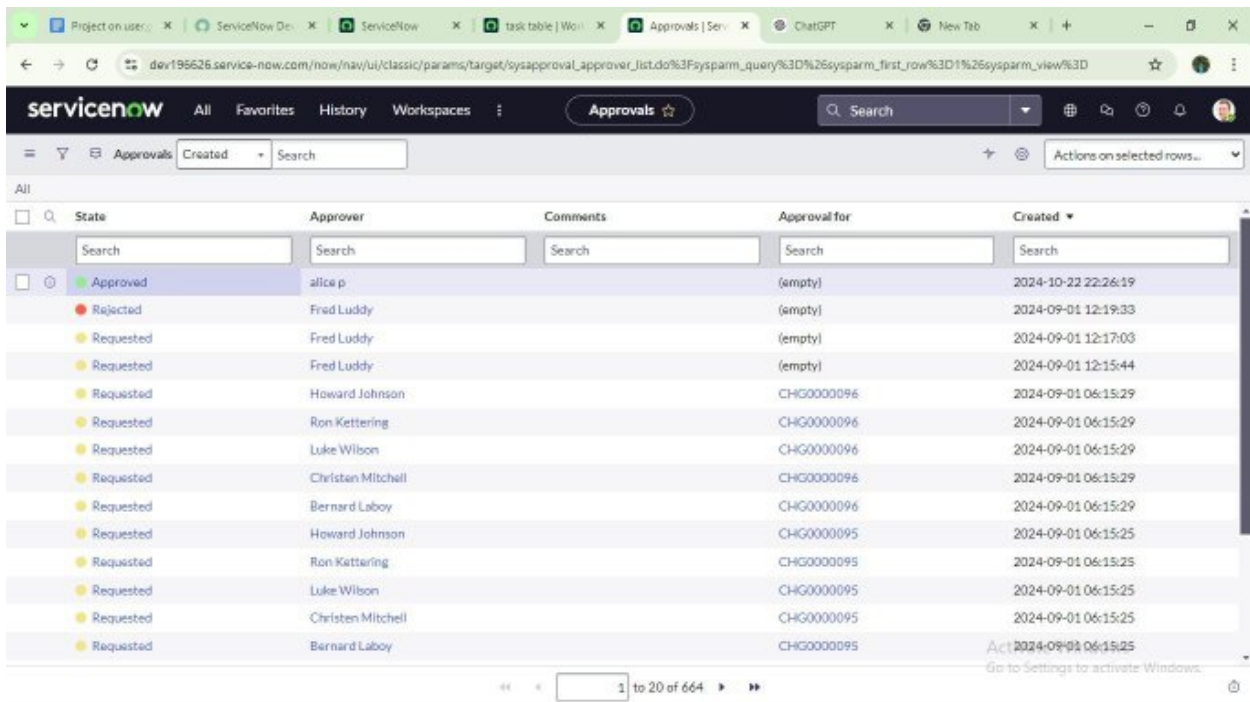
10.It status field is updated to completed



11.Go to application navigator and search for my approval

12.Click on my approval under the service desk.

13. Alice p got approval request then right click on requested then select approved



	State	Approver	Comments	Approval for	Created
<input type="checkbox"/>	Approved	alice p		(empty)	2024-10-22 22:26:19
<input type="checkbox"/>	Rejected	Fred Luddy		(empty)	2024-09-01 12:19:33
<input type="checkbox"/>	Requested	Fred Luddy		(empty)	2024-09-01 12:17:03
<input type="checkbox"/>	Requested	Fred Luddy		(empty)	2024-09-01 12:15:44
<input type="checkbox"/>	Requested	Howard Johnson		CHG0000096	2024-09-01 06:15:29
<input type="checkbox"/>	Requested	Ron Kettering		CHG0000096	2024-09-01 06:15:29
<input type="checkbox"/>	Requested	Luke Wilson		CHG0000096	2024-09-01 06:15:29
<input type="checkbox"/>	Requested	Christen Mitchell		CHG0000096	2024-09-01 06:15:29
<input type="checkbox"/>	Requested	Bernard Laboy		CHG0000096	2024-09-01 06:15:29
<input type="checkbox"/>	Requested	Howard Johnson		CHG0000095	2024-09-01 06:15:25
<input type="checkbox"/>	Requested	Ron Kettering		CHG0000095	2024-09-01 06:15:25
<input type="checkbox"/>	Requested	Luke Wilson		CHG0000095	2024-09-01 06:15:25
<input type="checkbox"/>	Requested	Christen Mitchell		CHG0000095	2024-09-01 06:15:25
<input type="checkbox"/>	Requested	Bernard Laboy		CHG0000095	2024-09-01 06:15:25

Conclusion :

Optimizing user, group, and role management with access control and workflows enhances security, reduces administrative overhead, and ensures efficient resource utilization. By implementing structured access policies and automated workflows, organizations can achieve better compliance, scalability, and seamless collaboration across systems.

