

Optimizing User , Group , And Role Management With Access Control And Workflows

Team Id: **NM2025TMID18989**

Team Members: **5**

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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

Objective :

1. Define User Roles Clearly: Establish distinct roles for Alice (Project Manager) and Bob (Team Member) to ensure clarity in responsibilities and access rights within the project management tool.

2. Implement Access Control Mechanisms: Create a system that restricts Bob's access to project creation and editing features while allowing him to view and update his assigned tasks, thereby preventing unauthorized changes.

3. Streamline Workflow Processes: Develop a structured workflow for task assignment and progress tracking, ensuring that Alice can easily assign tasks to Bob and monitor their completion in a timely manner.

Skills :

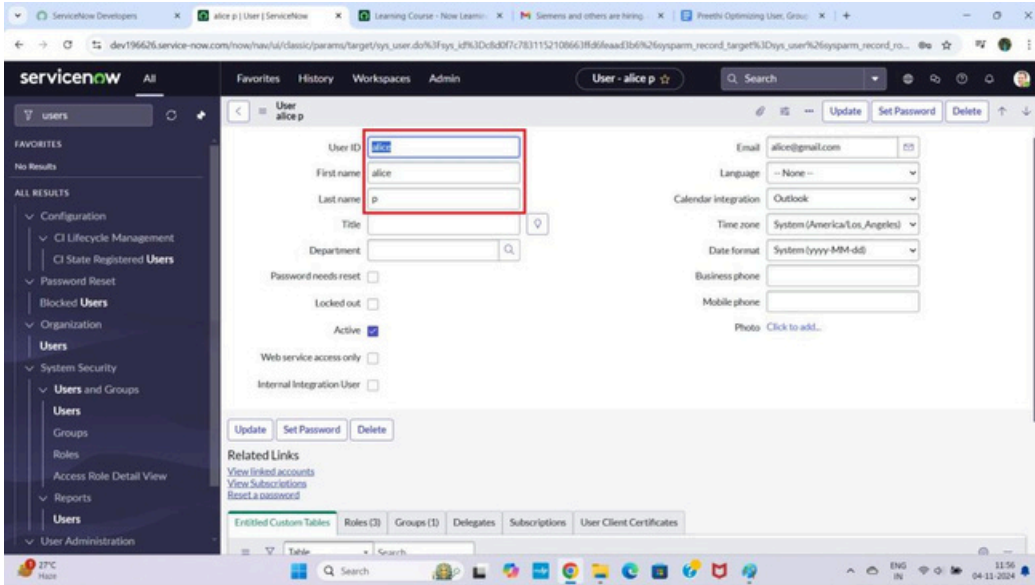
Users, Groups, Roles, Tables, Access Control List, Flow Designer

TASK INITIATION

Milestone \ : Users

Activity \ : 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 User Administration page for user 'alice p'. The form includes fields for User ID, First name, Last name, Email, Language, Calendar integration, Time zone, Date format, Business phone, and Mobile phone. The 'User ID' field is highlighted with a red box.

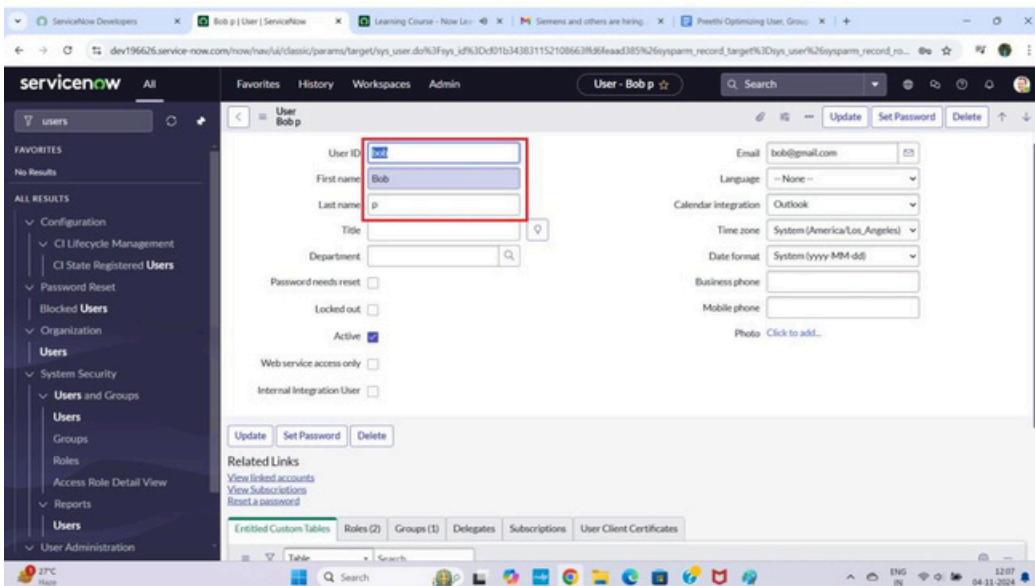
Create one more user :

✓ Create another user with the following details

• Click on submit

^

•

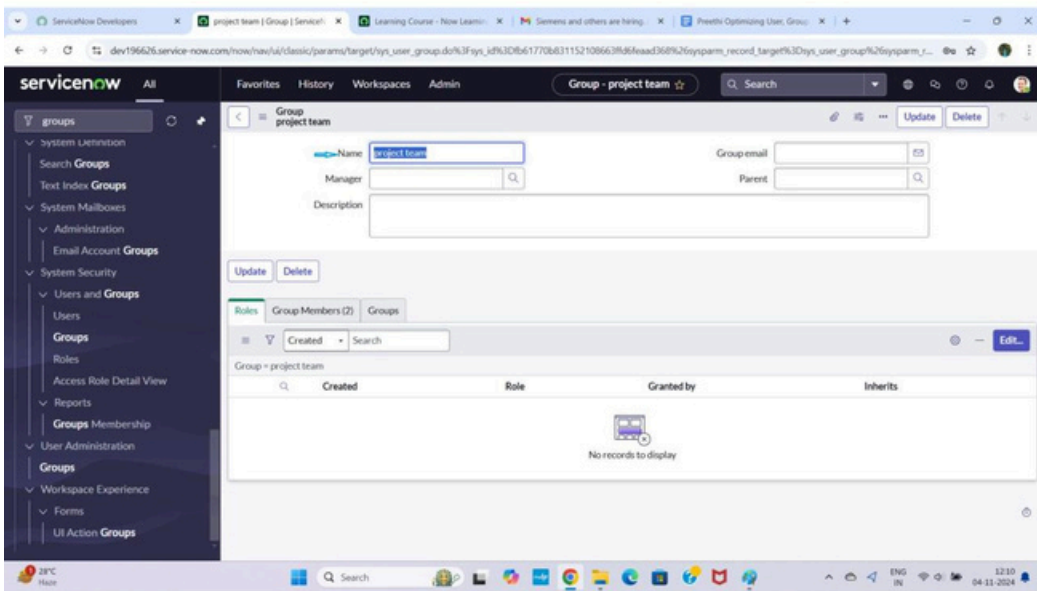


ServiceNow User Administration page for user 'Bob p'. The form includes fields for User ID, First name, Last name, Email, Language, Calendar integration, Time zone, Date format, Business phone, and Mobile phone. The 'User ID' field is highlighted with a red box.

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

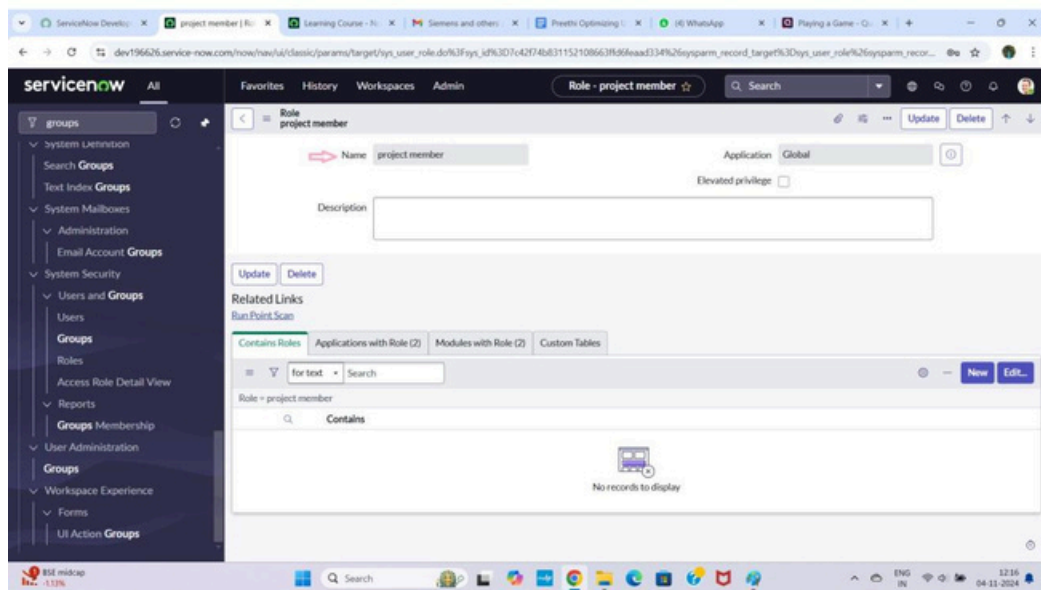


The screenshot shows the ServiceNow 'Groups' form for a group named 'project team'. The form includes fields for Name, Group email, Manager, Parent, and Description. Below these fields are 'Update' and 'Delete' buttons. The 'Roles' tab is selected, showing a table with columns: Created, Role, Granted by, and Inherits. The table is currently empty, displaying 'No records to display'.

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

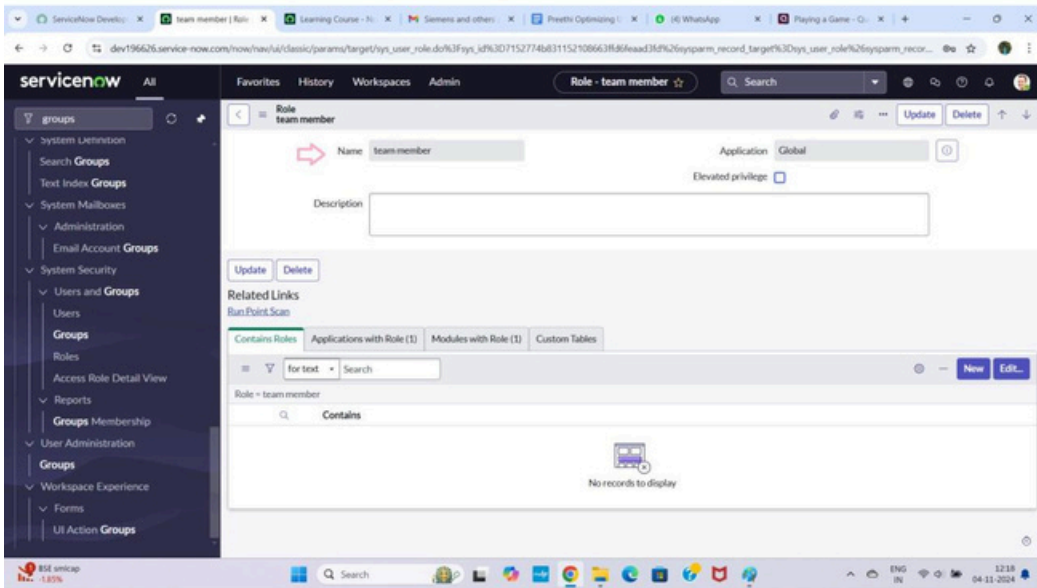


Create one more role :

- √. Create another role with the following details
- ∧. Click on submit

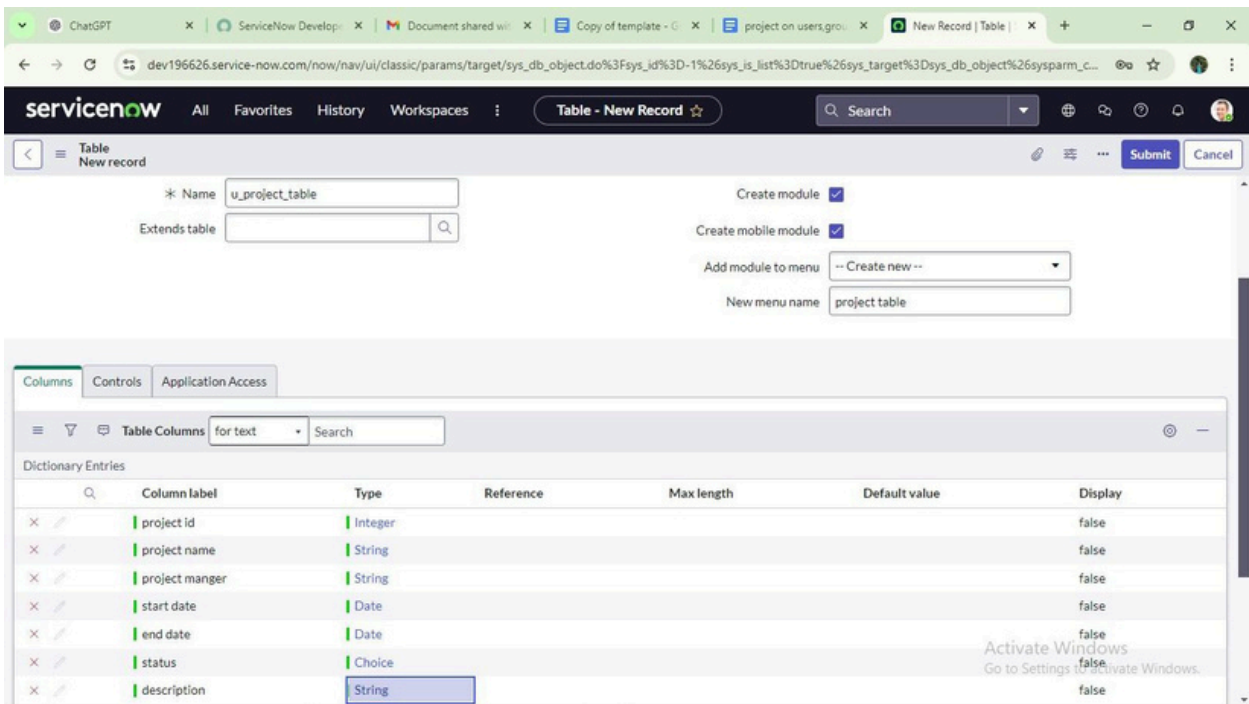
Milestone ε : Table Activity ∨ : Create Table

- ∨. Open service now.
- √. Click on All << search for tables
- √. Select tables under system definition
- ε. Click on new
- ο. Fill the following details to create a new table
 - Label : project table
 - Check the boxes Create module & Create mobile module
- √. Under new menu name : project table
- √. Under table columns give the columns



The screenshot shows the ServiceNow interface for configuring a role named 'team member'. The left sidebar contains a navigation menu with categories like System Limitation, System Mailboxes, Administration, Email Account Groups, System Security, Users and Groups, Reports, Groups Membership, User Administration, Workspace Experience, Forms, and UI Action Groups. The main content area shows the role configuration form with fields for Name (team member), Application (Global), and Description. There are 'Update' and 'Delete' buttons. Below the form, there are 'Related Links' and a 'Run Point Scan' button. A table titled 'Contains Roles' is shown with a search bar and a 'New' button. The table currently displays 'No records to display'.

Λ. Click on submit



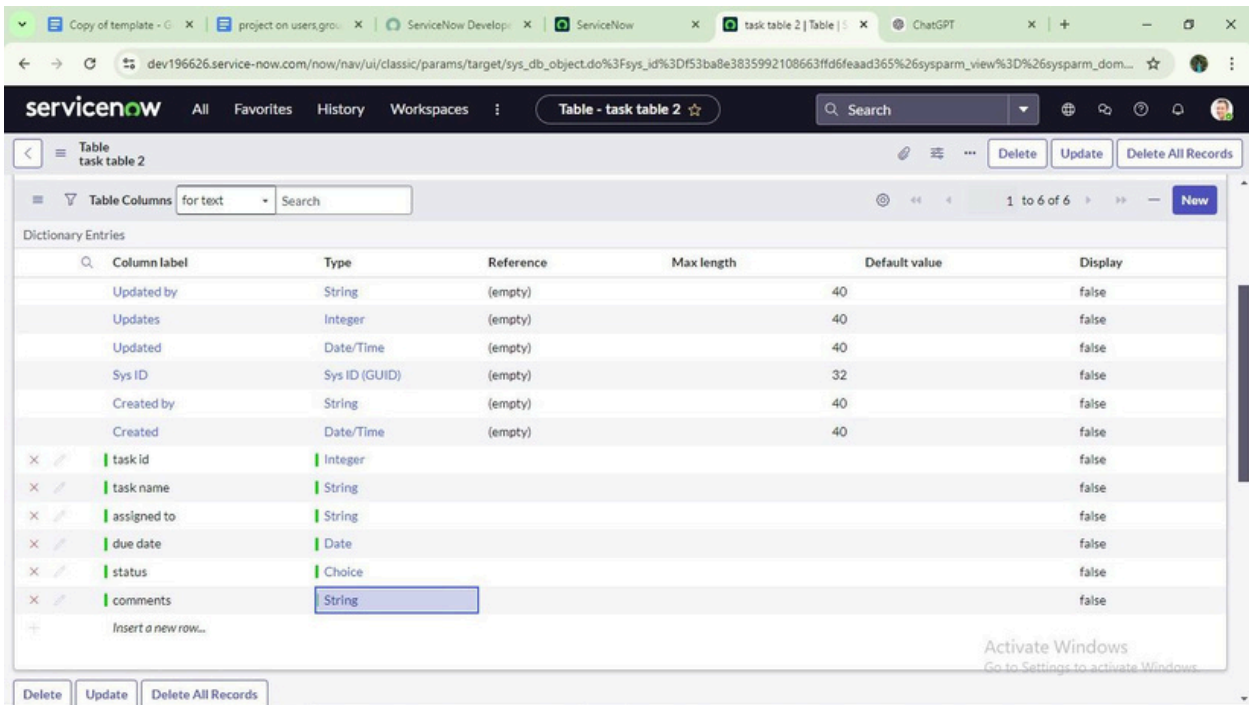
The screenshot shows the ServiceNow interface for configuring a new table named 'u_project_table'. The left sidebar is the same as in the previous screenshot. The main content area shows the 'Table - New Record' form. Fields include Name (u_project_table), Extends table (empty), Create module (checked), Create mobile module (checked), Add module to menu (dropdown menu), and New menu name (project table). There are 'Submit' and 'Cancel' buttons. Below the form, there are tabs for 'Columns', 'Controls', and 'Application Access'. The 'Columns' tab is active, showing a table of dictionary entries.

Dictionary Entries	Column label	Type	Reference	Max length	Default value	Display
<input type="checkbox"/>	project id	Integer				false
<input type="checkbox"/>	project name	String				false
<input type="checkbox"/>	project manger	String				false
<input type="checkbox"/>	start date	Date				false
<input type="checkbox"/>	end date	Date				false
<input type="checkbox"/>	status	Choice				false
<input type="checkbox"/>	description	String				false

Create one more table:

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

Β. Click on submit.



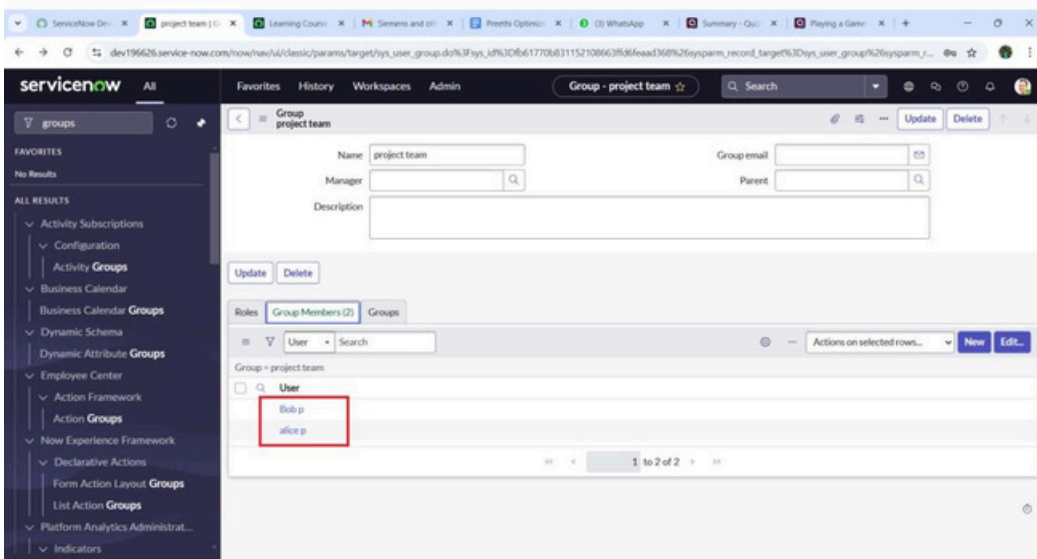
The screenshot shows the ServiceNow interface for 'Table - task table 2'. The 'Table Columns' section is active, displaying a list of dictionary entries. The table has columns for Column label, Type, Reference, Max length, Default value, and Display. The entries include system fields like 'Updated by', 'Updates', 'Created by', and 'Created', as well as custom fields like 'task id', 'task name', 'assigned to', 'due date', 'status', and 'comments'. The 'comments' field is currently selected.

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

Milestone 5 : Assign users to groups

Activity 1 : Assign users to project team group

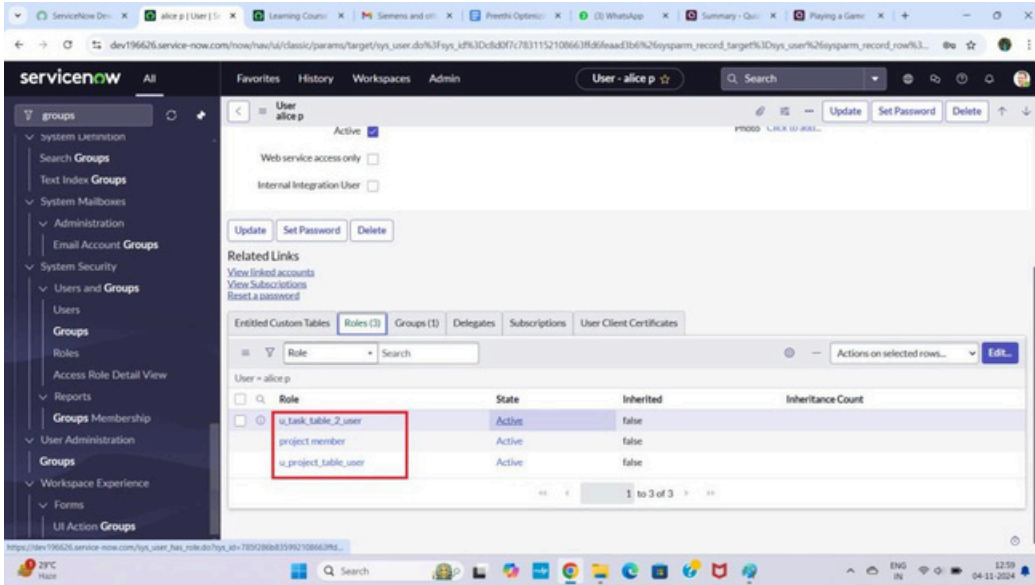
1. Open service now.
2. Click on All << search for groups
3. Select tables under system definition
4. Select the project team group
5. Under group members
6. Click on edit
7. Select alice p and bob p and save



Milestone 1 : 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 .

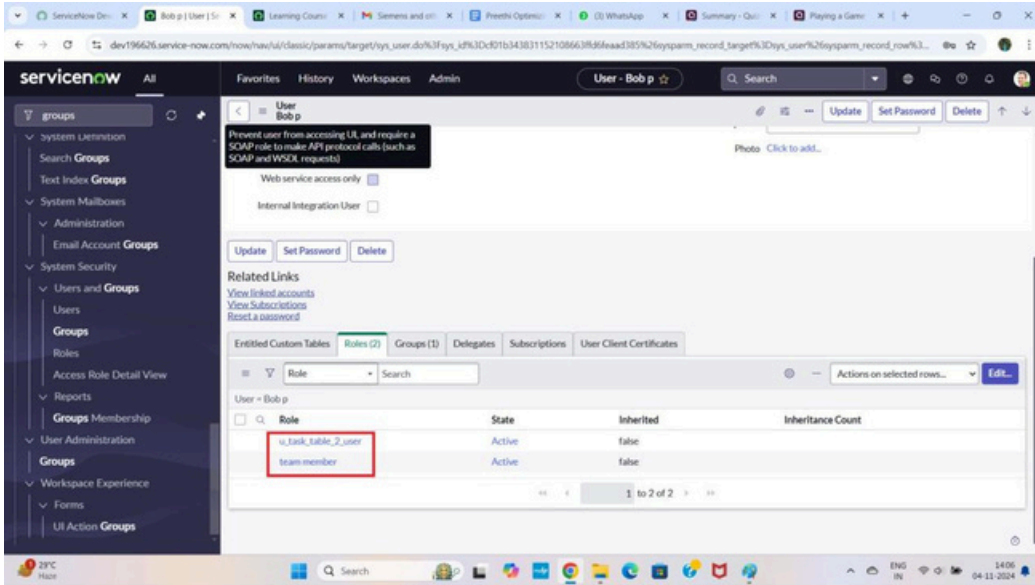


ServiceNow User Profile for 'User - alice p'. The page shows user details, related links, and a table of roles assigned to the user. The roles table has columns: Role, State, Inherited, and Inheritance Count. The roles listed are 'u_task_table_2_user', 'project member', and 'u_project_table_user'. The 'u_task_table_2_user' role is highlighted with a red box.

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

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 table.



Milestone v : Application access

Activity \ : Assign table access to application

1. while creating a table it automatically create an 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 table v and click on edit application .
6. Give the project member and team member role for task table v application

dev196626.service-now.com/now/nav/ui/classic/params/target/sys_app_application.do%3Fsys_id%3D9705334f831152108663ffd6fead362

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 project table Application Global 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 Custom Applications

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.

dev196626.service-now.com/now/nav/ui/classic/params/target/sys_app_application.do%3Fsys_id%3D114bece3835992108663ffd6fead3dc

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

Application Menu task table 2 Update Delete

Title task table 2 Application Global 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 Custom Applications

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

Hint

Description

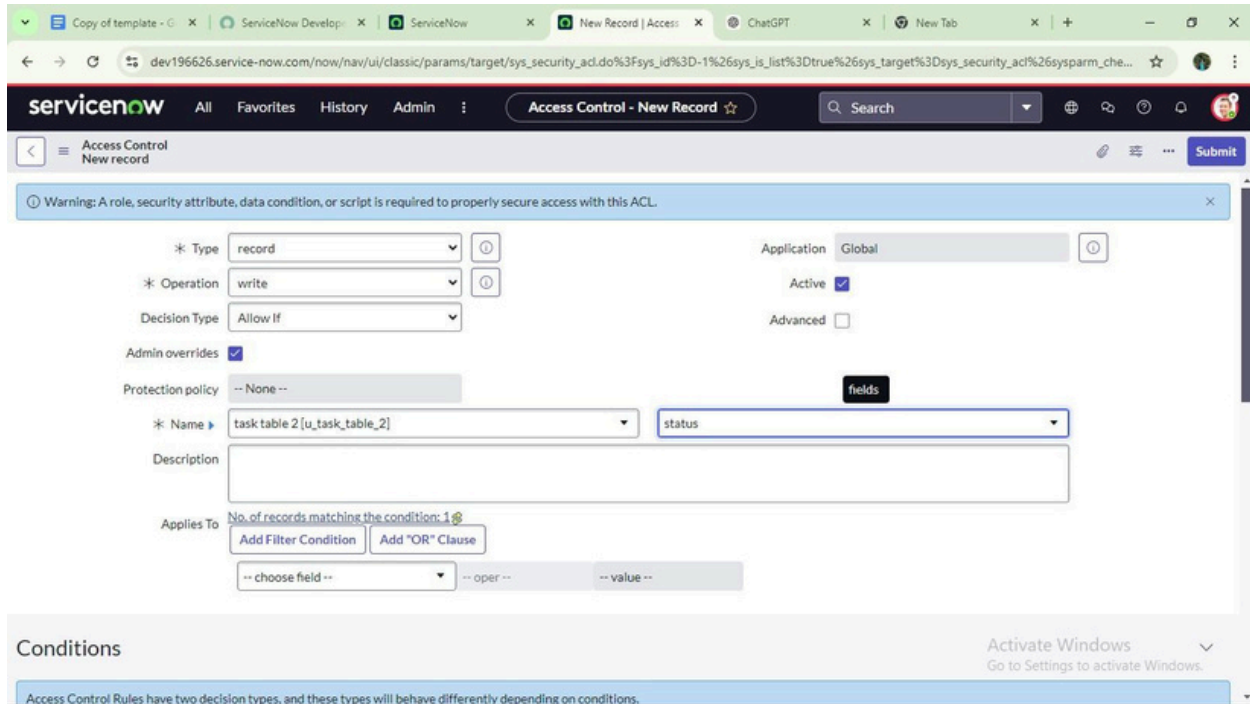
Update Delete

Activate Windows
Go to Settings to activate Windows.

Modules Order Search Actions on selected rows... New

Milestone 1 : 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

Application: Global

Active: ☒

Advanced: ☐

Admin overrides: ☒

Protection policy: -- None --

* Name: task table 2 [u_task_table_2]

Description:

status

Applies To: No. of records matching the condition: 1

Add Filter Condition Add "OR" Clause

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

Conditions

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 3 acl for the following fields

Copy of template - Google | ServiceNow Developers | ServiceNow | Access Controls | ServiceNow | ChatGPT

dev196626.service-now.com/now/nav/ui/classic/params/target/sys_security_ad_list.do%3Fsysparm_query%3Dsys_created_onONToday%40javascript%3Ags.beginningOfToday...

servicenow All Favorites History Workspaces Access Controls Search

Access Controls Name Search Actions on selected rows... New

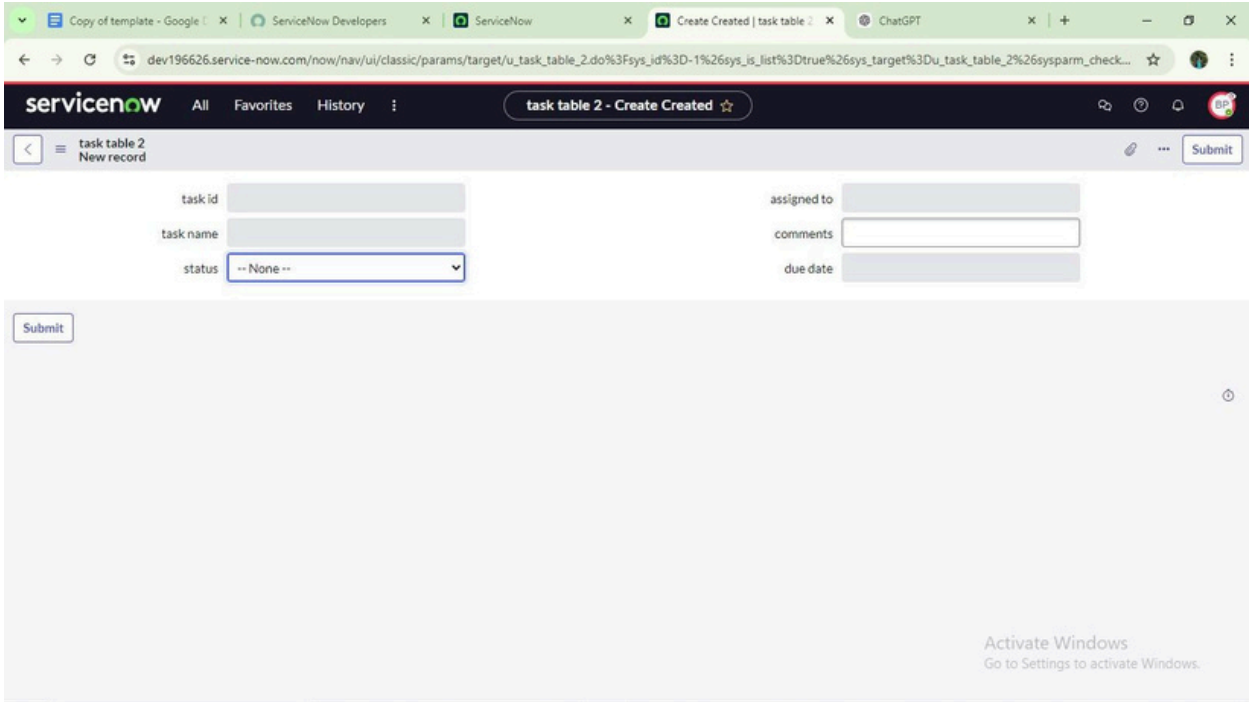
All > Created on Today

<input type="checkbox"/>	Name	Decision Type	Operation	Type	Active	Updated by	Updated
<input type="checkbox"/>	u_leave_request	Allow If	delete	record	true	admin	2024-10-22 02:27:59
<input type="checkbox"/>	u_leave_request	Allow If	create	record	true	admin	2024-10-22 02:27:59
<input type="checkbox"/>	u_task_table	Allow If	read	record	true	admin	2024-10-22 04:21:28
<input type="checkbox"/>	u_task_table	Allow If	write	record	true	admin	2024-10-22 04:20:15
<input type="checkbox"/>	u_task_table.u_assigned_to	Allow If	write	record	true	admin	2024-10-22 04:33:53
<input type="checkbox"/>	u_task_table.u_due_date	Allow If	write	record	true	admin	2024-10-22 04:33:14
<input type="checkbox"/>	u_task_table.u_task_id	Allow If	write	record	true	admin	2024-10-22 04:27:47
<input type="checkbox"/>	u_task_table.u_task_name	Allow If	write	record	true	admin	2024-10-22 04:31:14
<input type="checkbox"/>	u_task_table_2	Allow If	write	record	true	admin	2024-10-22 21:05:07
<input type="checkbox"/>	u_task_table_2	Allow If	read	record	true	admin	2024-10-22 21:26:57
<input type="checkbox"/>	u_task_table_2	Allow If	read	record	true	admin	2024-10-22 21:05:07
<input type="checkbox"/>	u_task_table_2	Allow If	write	record	true	admin	2024-10-22 21:28:27
<input type="checkbox"/>	u_task_table_2	Allow If	create	record	true	admin	2024-10-22 21:05:06
<input type="checkbox"/>	u_task_table_2	Allow If	delete	record	true	admin	2024-10-22 21:05:07
<input type="checkbox"/>	u_task_table_2.u_assigned_to	Allow If	write	record	true	admin	2024-10-22 21:31:20

Activate Windows Go to Settings to activate Windows.

1 to 20 of 23

۱۲. Click on profile on top right side
۱۳. Click on impersonate user
۱۴. Select bob user
۱۵. Go to all and select task table in the application menu bar
۱۶. Comment and status fields are have the edit access



The screenshot shows a web browser window with multiple tabs. The active tab is 'Create Created | task table 2'. The URL is 'dev196626.service-now.com/now/nav/ui/classic/params/target/u_task_table_2.do%3Fsys_id%3D-1%26sys_is_list%3Dtrue%26sys_target%3Du_task_table_2%26sysparm_check...'. The ServiceNow header is visible with 'task table 2 - Create Created' and a star icon. The form is titled 'task table 2 New record' and includes a 'Submit' button. The form fields are:

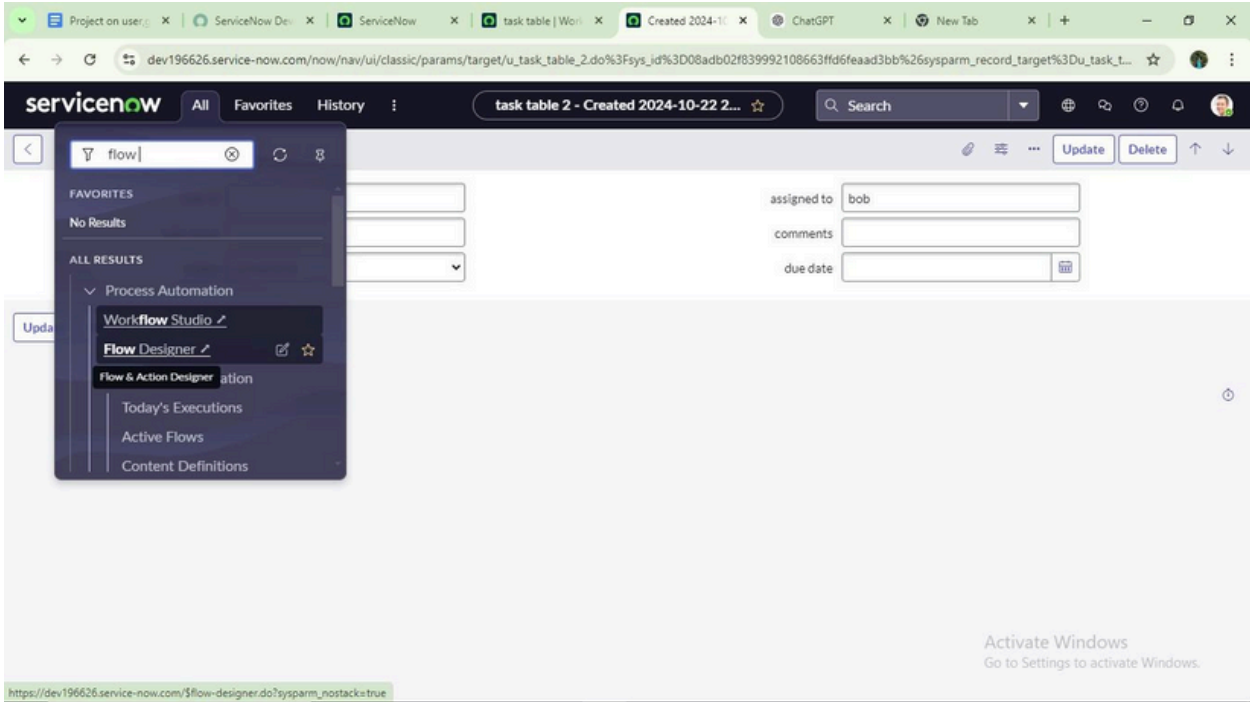
- task id:
- task name:
- status:
- assigned to:
- comments:
- due date:

At the bottom right, there is a watermark: 'Activate Windows Go to Settings to activate Windows.'

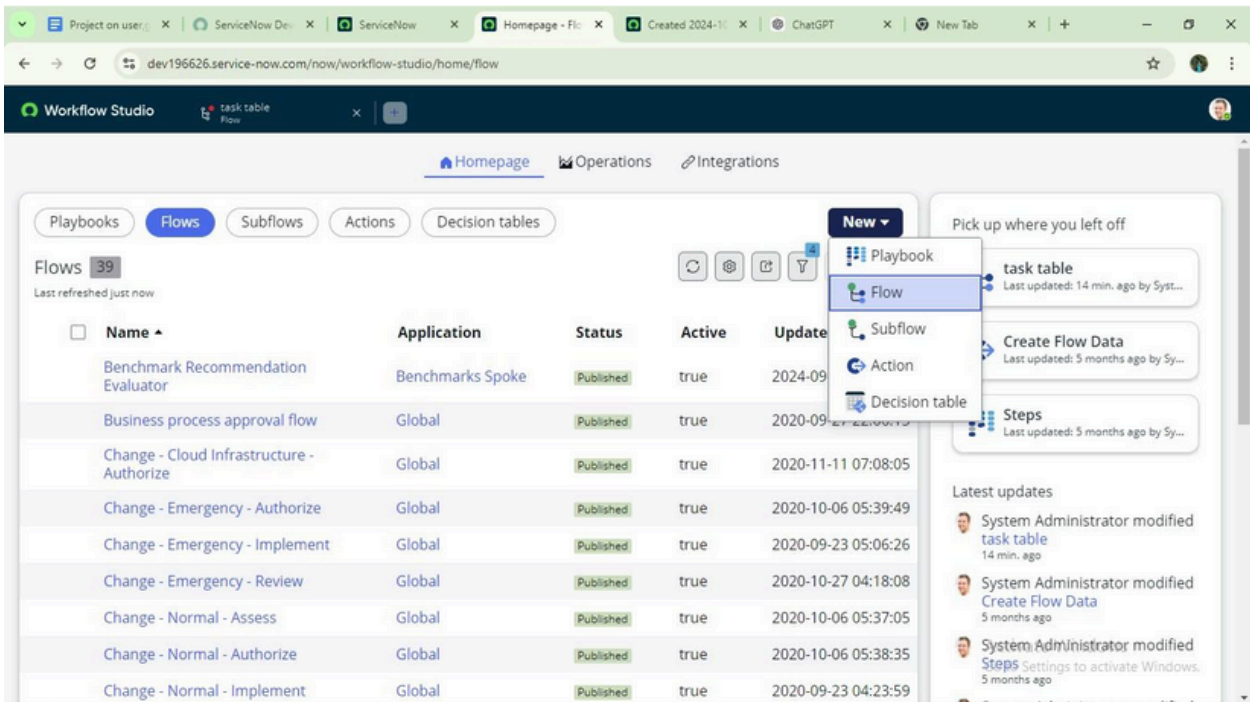
Milestone 9: Flow

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.

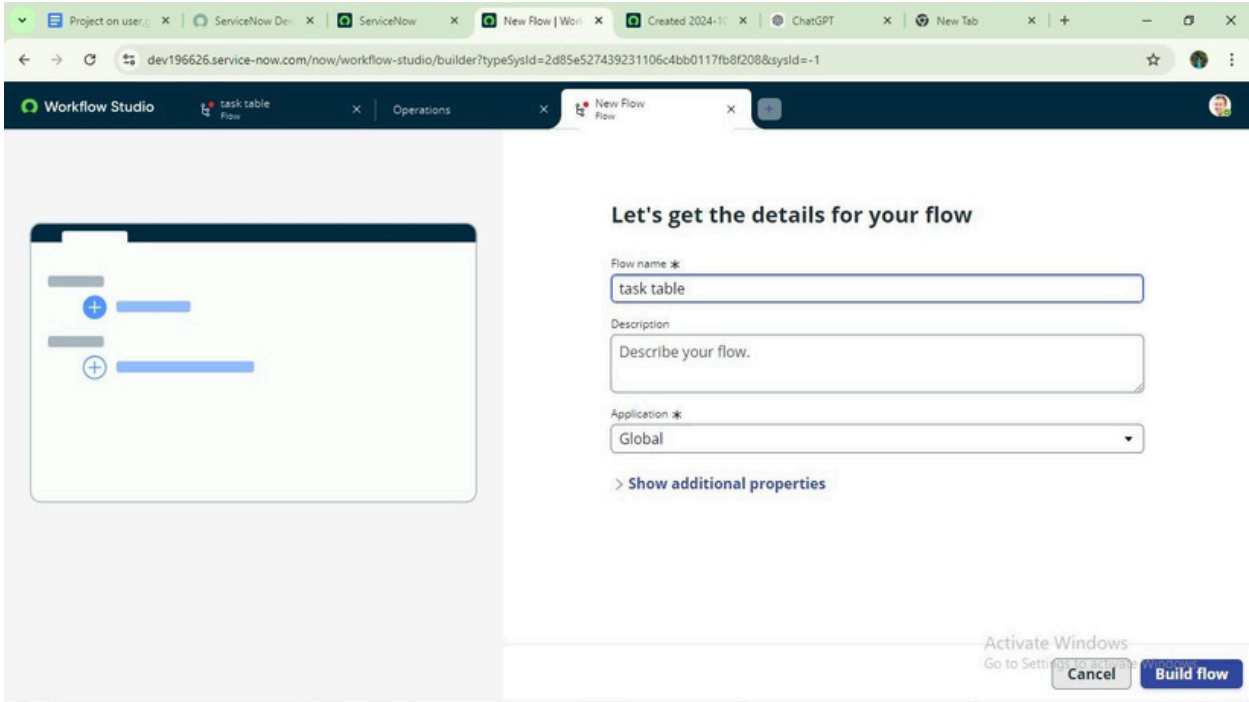


The screenshot shows the ServiceNow Flow Designer interface. The top navigation bar includes 'All', 'Favorites', and 'History'. The main header displays 'task table 2 - Created 2024-10-22 2...'. A search bar is present on the right. On the left, a sidebar menu is open, showing 'flow' in the search bar and a list of results under 'ALL RESULTS'. The results include 'Workflow Studio', 'Flow Designer', 'Flow & Action Designer', 'Today's Executions', 'Active Flows', and 'Content Definitions'. The main workspace shows a form with fields for 'assigned to' (set to 'bob'), 'comments', and 'due date'. The URL at the bottom is 'https://dev196626.service-now.com/\$flow-designer.do?sysparm_nostack=true'.



The screenshot shows the ServiceNow Workflow Studio interface. The top navigation bar includes 'Homepage', 'Operations', and 'Integrations'. The main header displays 'Workflow Studio' and 'task table Flow'. A sidebar menu is open, showing 'New' with options: 'Playbook', 'Flow', 'Subflow', 'Action', and 'Decision table'. The main workspace shows a table of flows with columns: 'Name', 'Application', 'Status', 'Active', and 'Update'. The table lists several flows, including 'Benchmark Recommendation Evaluator', 'Business process approval flow', and various 'Change' flows. The 'Status' column shows 'Published' for all flows. The 'Active' column shows 'true' for all flows. The 'Update' column shows the last update date and time for each flow. On the right, there are sections for 'Pick up where you left off' and 'Latest updates'.

Name	Application	Status	Active	Update
Benchmark Recommendation Evaluator	Benchmarks Spoke	Published	true	2024-09-23 04:23:59
Business process approval flow	Global	Published	true	2020-09-23 04:23:59
Change - Cloud Infrastructure - Authorize	Global	Published	true	2020-11-11 07:08:05
Change - Emergency - Authorize	Global	Published	true	2020-10-06 05:39:49
Change - Emergency - Implement	Global	Published	true	2020-09-23 05:06:26
Change - Emergency - Review	Global	Published	true	2020-10-27 04:18:08
Change - Normal - Assess	Global	Published	true	2020-10-06 05:37:05
Change - Normal - Authorize	Global	Published	true	2020-10-06 05:38:35
Change - Normal - Implement	Global	Published	true	2020-09-23 04:23:59



Workflow Studio

task table Flow

Operations

New Flow Flow

Let's get the details for your flow

Flow name *
task table

Description
Describe your flow.

Application *
Global

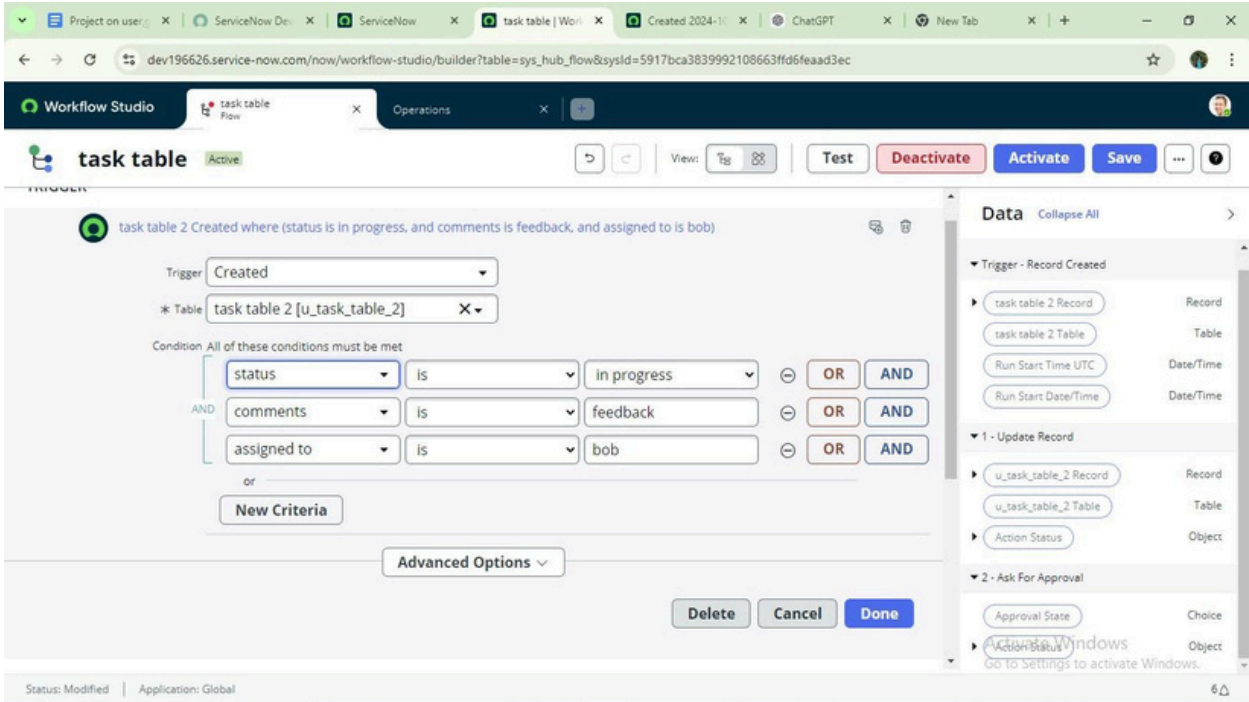
> Show additional properties

Activate Windows
Go to Settings to activate Windows

Cancel Build flow

next step

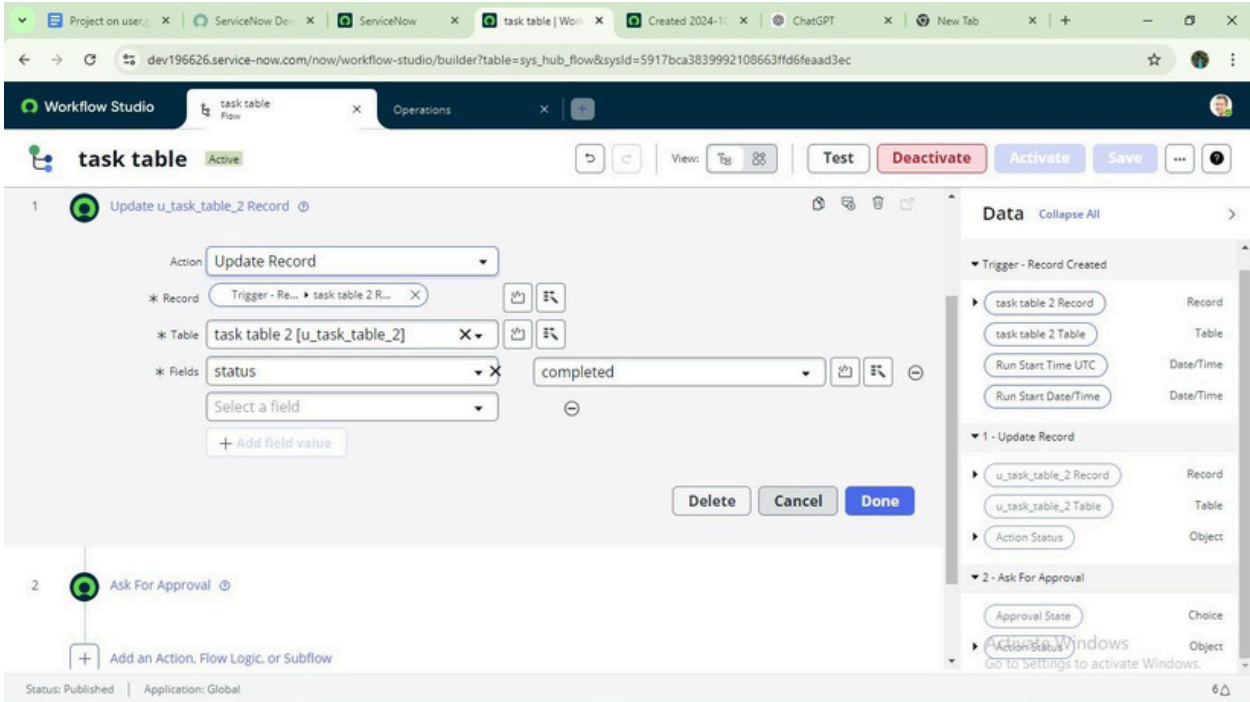
1. Click on Add trigger
2. Select the trigger in that Search for "create record" and select that.
3. Give the table name as "task table".
4. Give the Condition as Field : status Operator : is Value : in progress
Field : comments Operator : is Value : feedback
Field : assigned to Operator : is Value :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



The screenshot shows the ServiceNow Workflow Studio interface. The main workspace displays a workflow configuration for 'task table 2'. The trigger is set to 'Created'. The table is 'task table 2 [u_task_table_2]'. The condition is 'All of these conditions must be met' with three criteria: 'status is in progress', 'comments is feedback', and 'assigned to is bob'. The right sidebar shows the 'Data' section with a list of fields: 'task table 2 Record', 'task table 2 Table', 'Run Start Time UTC', 'Run Start Date/Time', '1 - Update Record', 'u_task_table_2 Record', 'u_task_table_2 Table', 'Action Status', '2 - Ask For Approval', 'Approval State', and 'Action Status'. The bottom status bar indicates 'Status: Modified' and 'Application: Global'.

Next step:

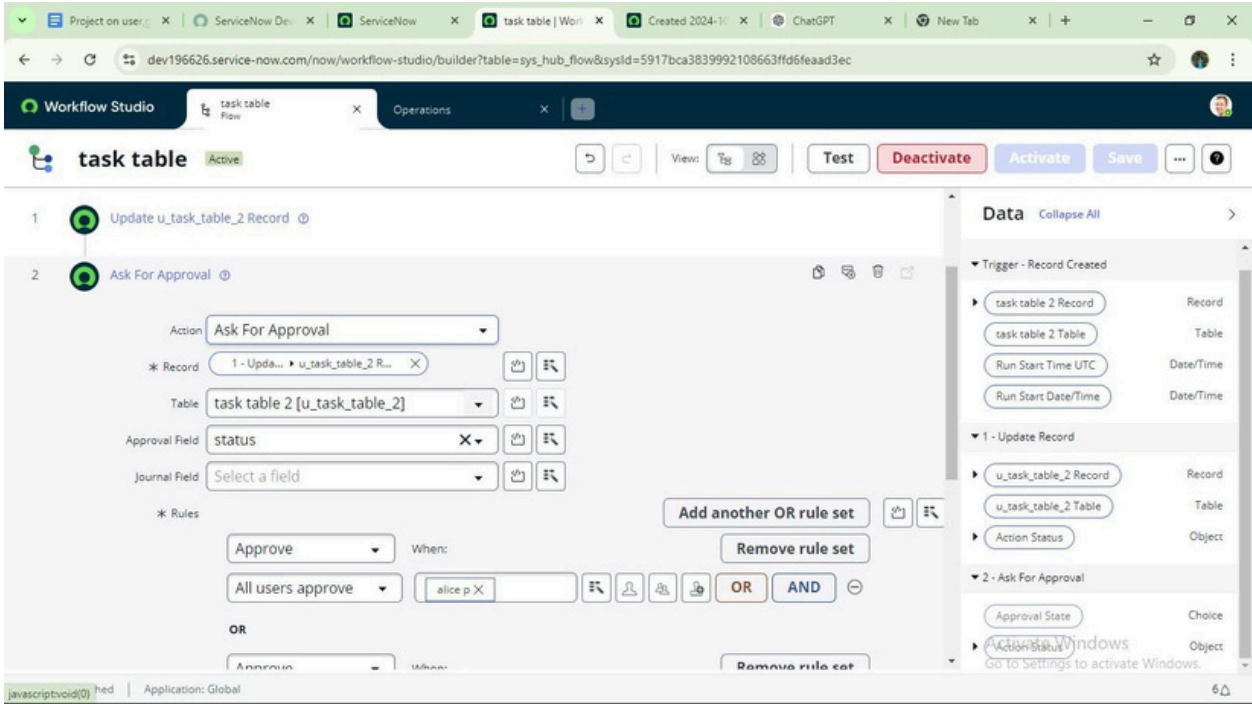
١. Click on Add an action.
٢. Select action in that search for "update records".
٣. In Record field drag the fields from the data navigation from Right Side (Data pill)
٤. Table will be auto assigned after that
٥. Add fields as "status" and value as "completed"
٦. Click on Done.



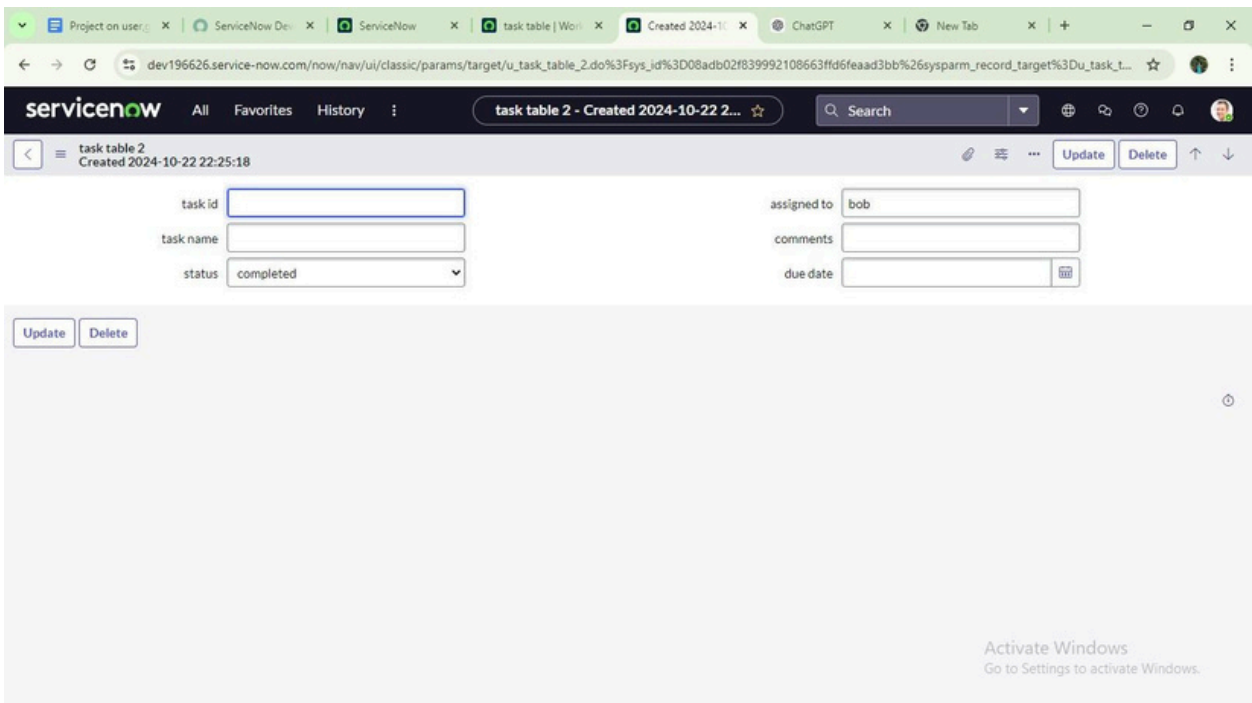
The screenshot shows the ServiceNow Workflow Studio interface. The main workspace displays the configuration for an 'Update Record' action. The 'Record' field is set to 'Trigger - Record Created', the 'Table' is 'task table 2 [u_task_table_2]', and the 'Fields' section has 'status' selected with a value of 'completed'. The 'Data' panel on the right shows the data structure for the 'Trigger - Record Created' event, including fields like 'task table 2 Record', 'task table 2 Table', 'Run Start Time UTC', and 'Run Start Date/Time'. Below the main workspace, there is a section for 'Ask For Approval' and a button to 'Add an Action, Flow Logic, or Subflow'.

Next step:

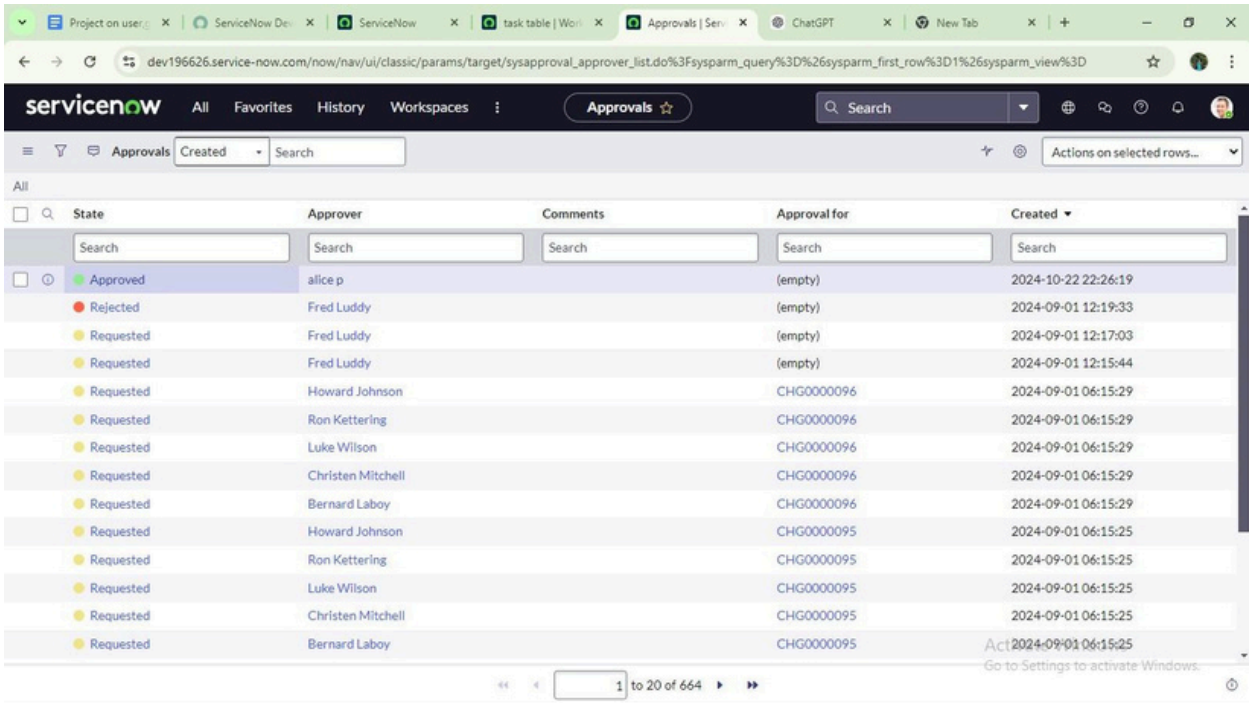
1. Now under Actions.
2. Click on Add an action.
3. Select action in that, search for "ask for approval".
4. In Record field drag the fields from the data navigation from Right side.
5. Table will be auto assigned after that.
6. Give the approve field as "status".
7. Give approver as alice p.
8. Click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



4. Go to application navigator search for task table.
5. Its status field is updated to completed



١١. Go to application navigator and search for my approval
١٢. Click on my approval under the service desk.
١٣. 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 :

Effective user, group, and role management combined with robust access control and workflow systems are essential components for maintaining the security, efficiency, and scalability of any organization's IT infrastructure.