

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

**Team Id: NM2025TMID13518**

**Team Members:**

**Team Leader :JAYAMANI.S**

**Team Member 1 :HARISH.M**

**Team Member 2 :SANJAY.C**

**Team Member 3:MOKESH.A**

**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:** To optimize identity and access management by centralizing user, group, and role controls with automated workflows, ensuring secure, compliant, and seamless access across the organization.

**Skills:** Tensorflow, Oracle DB

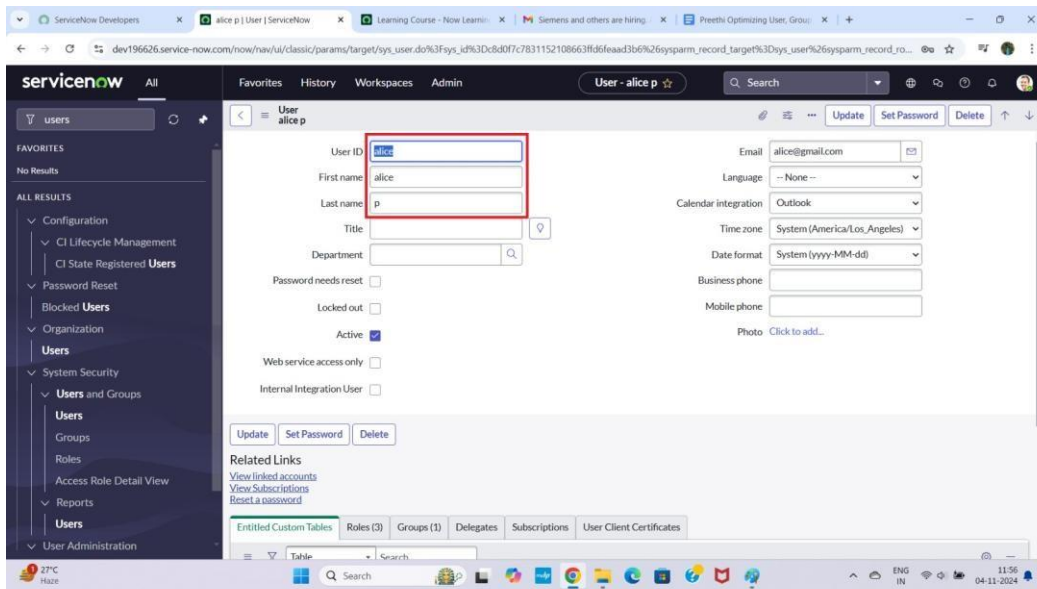
### **TASK INITIATION**

#### **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



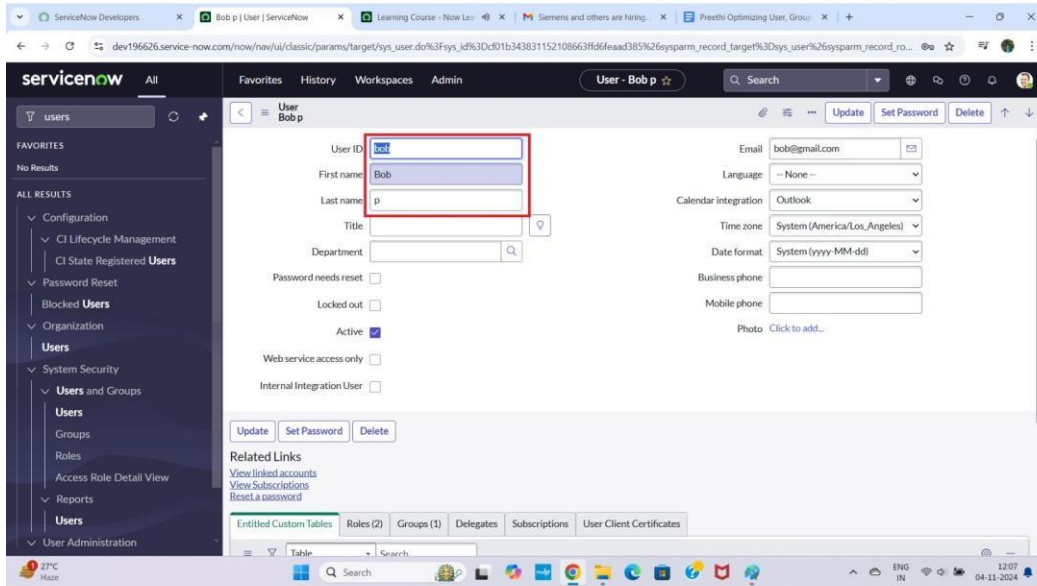
The screenshot shows the ServiceNow User Administration interface. The main form is titled 'User - alice p'. It contains the following fields and options:

- User ID:** alice
- First name:** alice
- Last name:** p
- Title:**
- Department:**
- Password needs reset:** ☐
- Locked out:** ☐
- Active:** ☒
- Web service access only:** ☐
- Internal Integration User:** ☐
- Email:** alice@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...

At the bottom of the form are buttons for **Update**, **Set Password**, and **Delete**. Below the form are links for [View linked accounts](#), [View Subscriptions](#), and [Reset a password](#). At the very bottom, there are tabs for **Entitled Custom Tables**, **Roles (3)**, **Groups (1)**, **Delegates**, **Subscriptions**, and **User Client Certificates**.

### Create one more user:

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



The screenshot shows the ServiceNow user management interface. The left sidebar contains a navigation menu with categories like Configuration, Password Reset, Organization, System Security, and User Administration. The main area displays the 'User - Bob p' form. The form fields are as follows:

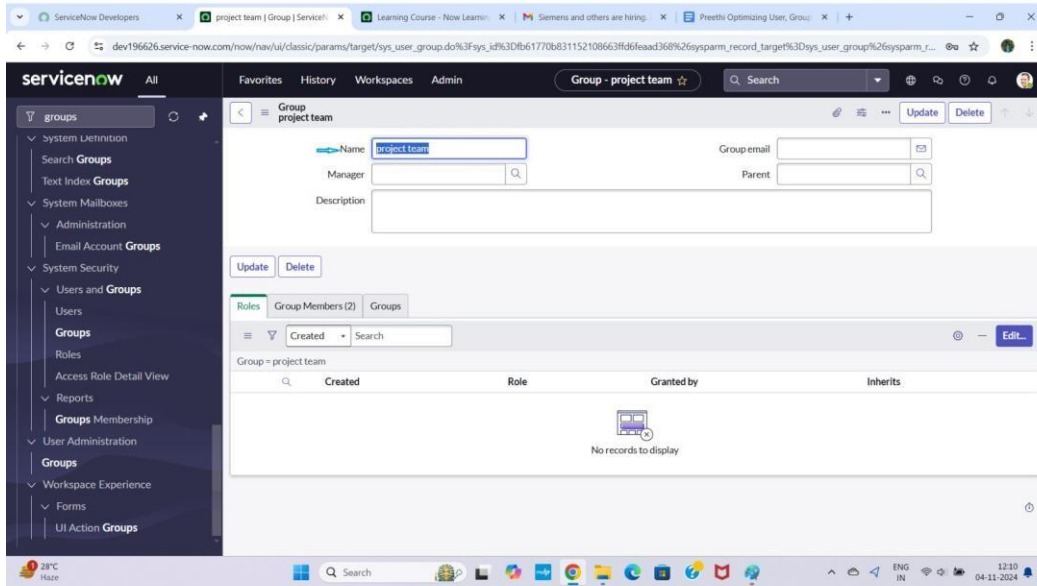
Field	Value
User ID	bob
First name	Bob
Last name	p
Title	
Department	
Email	bob@gmail.com
Language	-- None --
Calendar integration	Outlook
Time zone	System (America/Los_Angeles)
Date format	System (yyyy-MM-dd)
Business phone	
Mobile phone	
Photo	Click to add...

Below the form fields, there are checkboxes for 'Password needs reset', 'Locked out', 'Active' (checked), 'Web service access only', and 'Internal Integration User'. At the bottom of the form, there are buttons for 'Update', 'Set Password', and 'Delete'. A 'Related Links' section is also visible, containing links for 'View linked accounts', 'View Subscriptions', and 'Reset a password'.

## Milestone 2 : Groups

### Activity 1: Create Groups

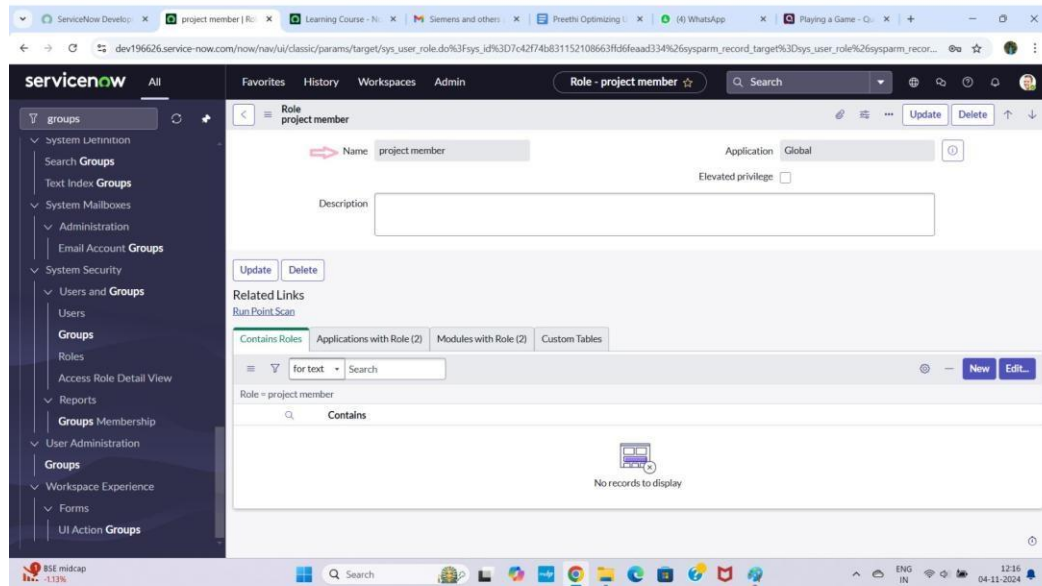
1. Open service now.
2. Click on All >> search for groups
3. Select groups under system security
4. Click on new
5. Fill the following details to create a new group
6. Click on submit



## 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

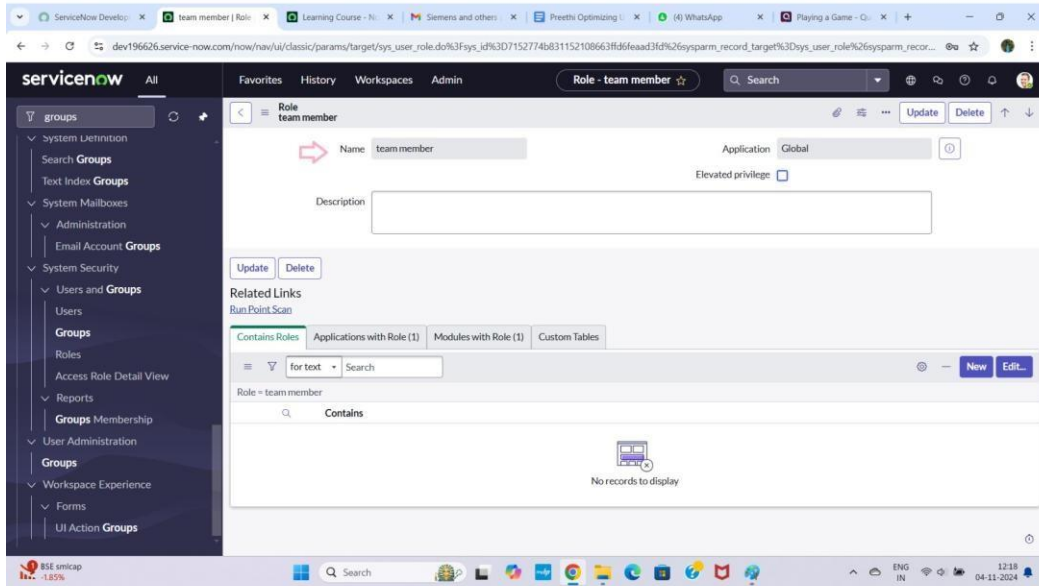


### Create one more role:

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

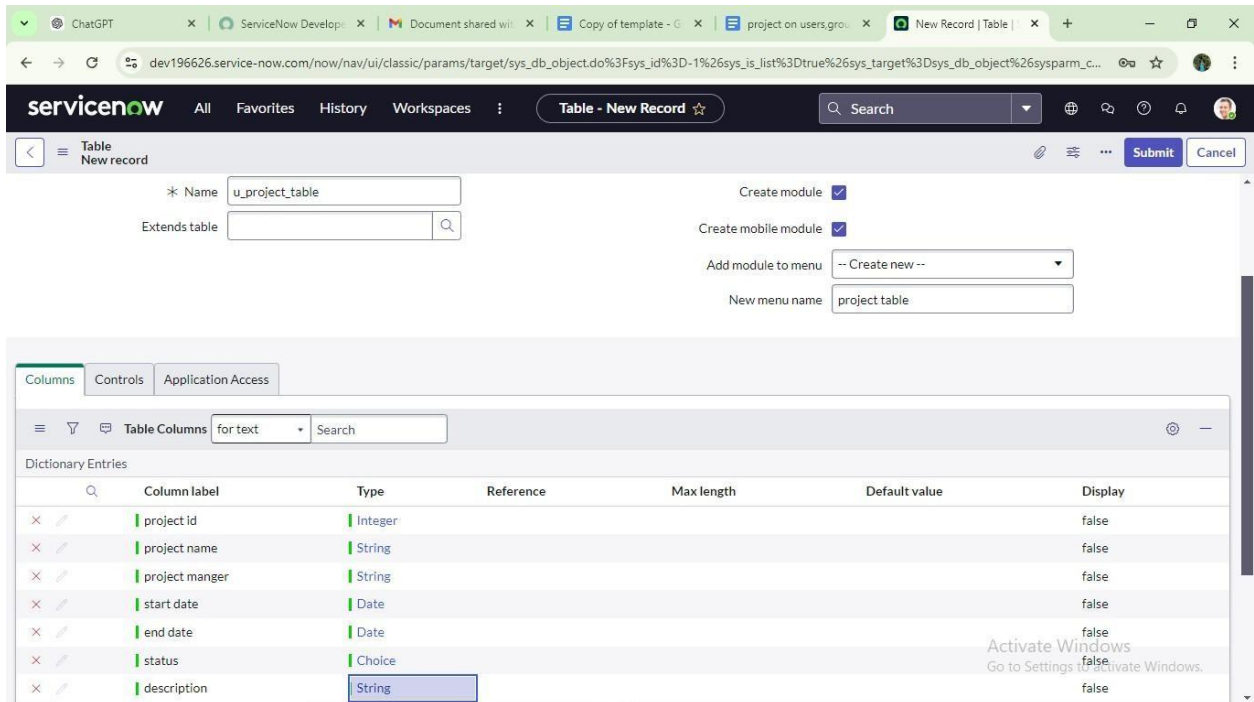
### Milestone 4 : Table Activity 1: Create Table

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



The screenshot shows the ServiceNow 'Role - team member' configuration page. The left sidebar contains a navigation menu with categories like System Definition, 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 with fields for Name (team member), Application (Global), and Description. There are buttons for Update, Delete, and Run Point Scan. Below these are tabs for Contains Roles, Applications with Role (1), Modules with Role (1), and Custom Tables. The Contains Roles tab is active, showing a table with no records to display.

8. Click on submit



The screenshot shows the ServiceNow 'Table - New Record' configuration page. The top section has fields for Name (u\_project\_table), Extends table, Create module (checked), Create mobile module (checked), Add module to menu (Create new), and New menu name (project table). Below this are tabs for Columns, Controls, and Application Access. The Columns tab is active, showing a table of Dictionary Entries.

Column label	Type	Reference	Max length	Default value	Display
project id	Integer				false
project name	String				false
project manger	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.

dev196626.service-now.com/now/nav/ui/classic/params/target/sys\_db\_object.do%3Fsys\_id%3Df53ba8e3835992108663ffd6fead365%26sysparm\_view%3D%26sysparm\_dom...

servicenow All Favorites History Workspaces Table - task table 2 Search

Table task table 2 Delete Update Delete All Records

Table Columns for text Search 1 to 6 of 6 New

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...					

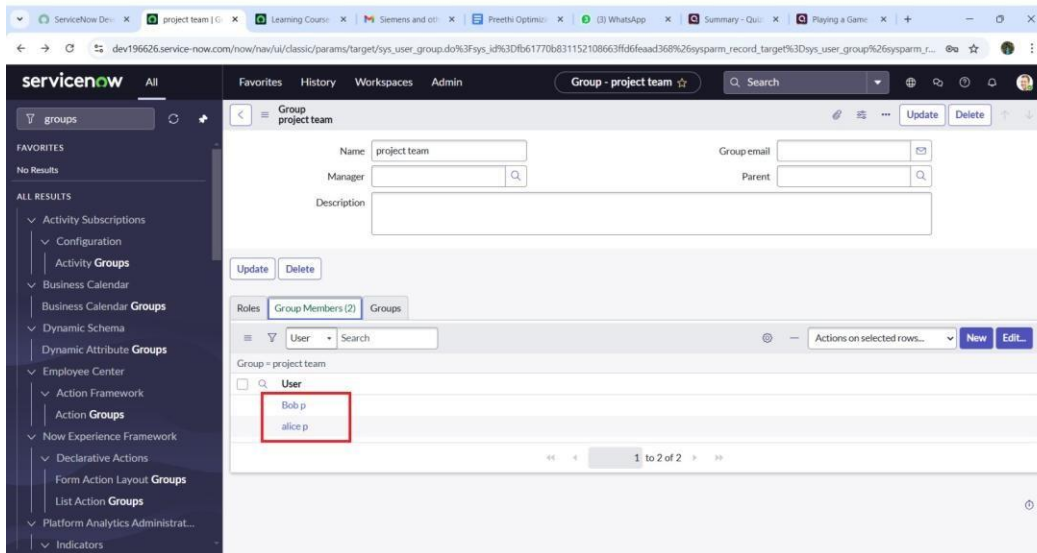
Activate Windows  
Go to Settings to activate Windows.

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

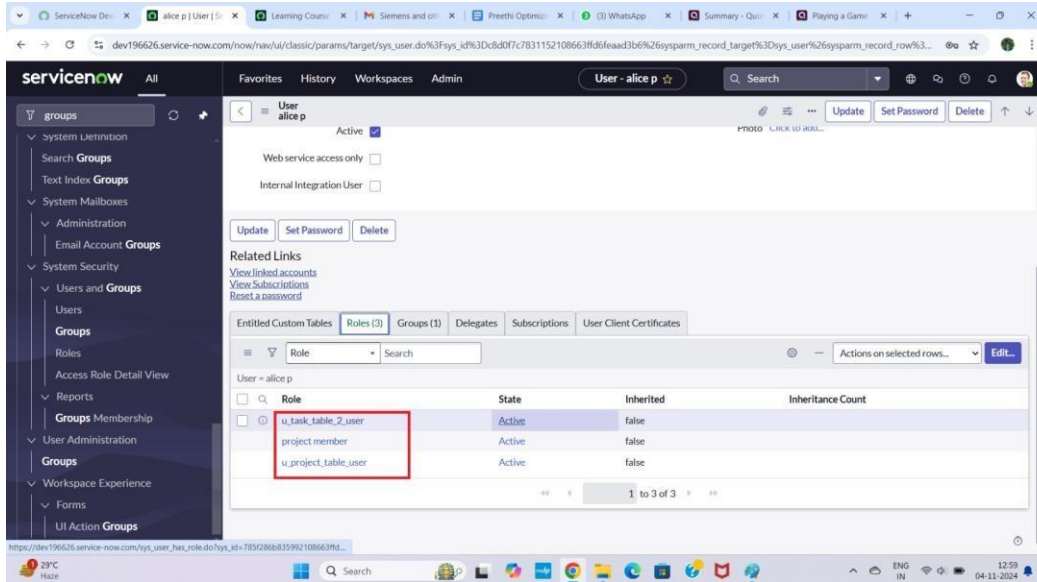


## Milestone 6 : Assign roles to users

### 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.



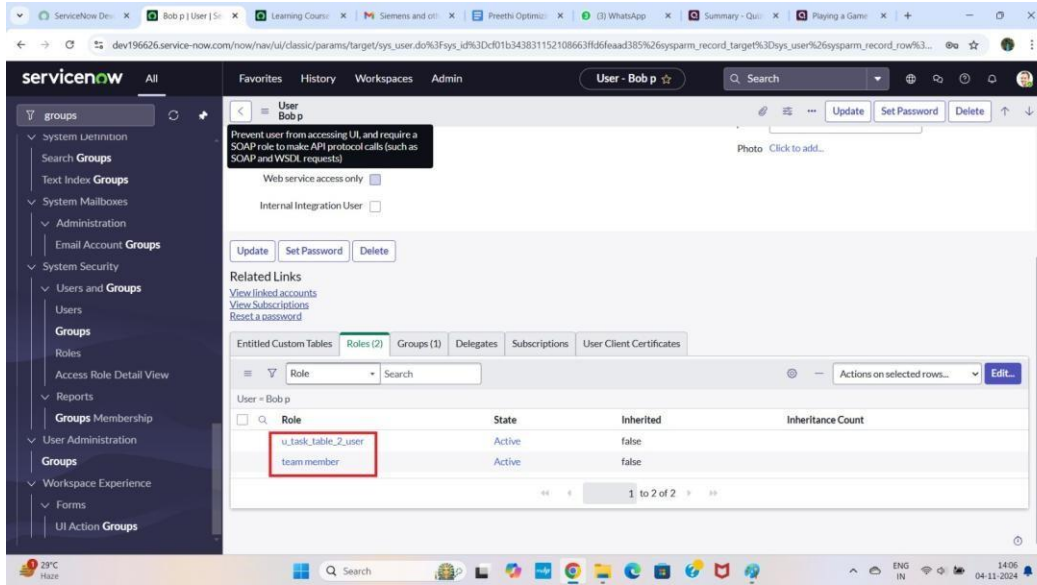


The screenshot shows the ServiceNow user profile for 'User - alice p'. The 'Roles' tab is selected, displaying a table of roles assigned to the user. The table has the following data:

Role	State	Inherited	Inheritance Count
u_task_table_2_user	Active	false	1
project member	Active	false	1
u_project_table_user	Active	false	1

## 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.



ServiceNow User Profile for Bob p

Prevent user from accessing UI, and require a SOAP role to make API protocol calls (such as SOAP and WSDL requests)

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 (2) Groups (1) Delegates Subscriptions User Client Certificates

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

1 to 2 of 2

## 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

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

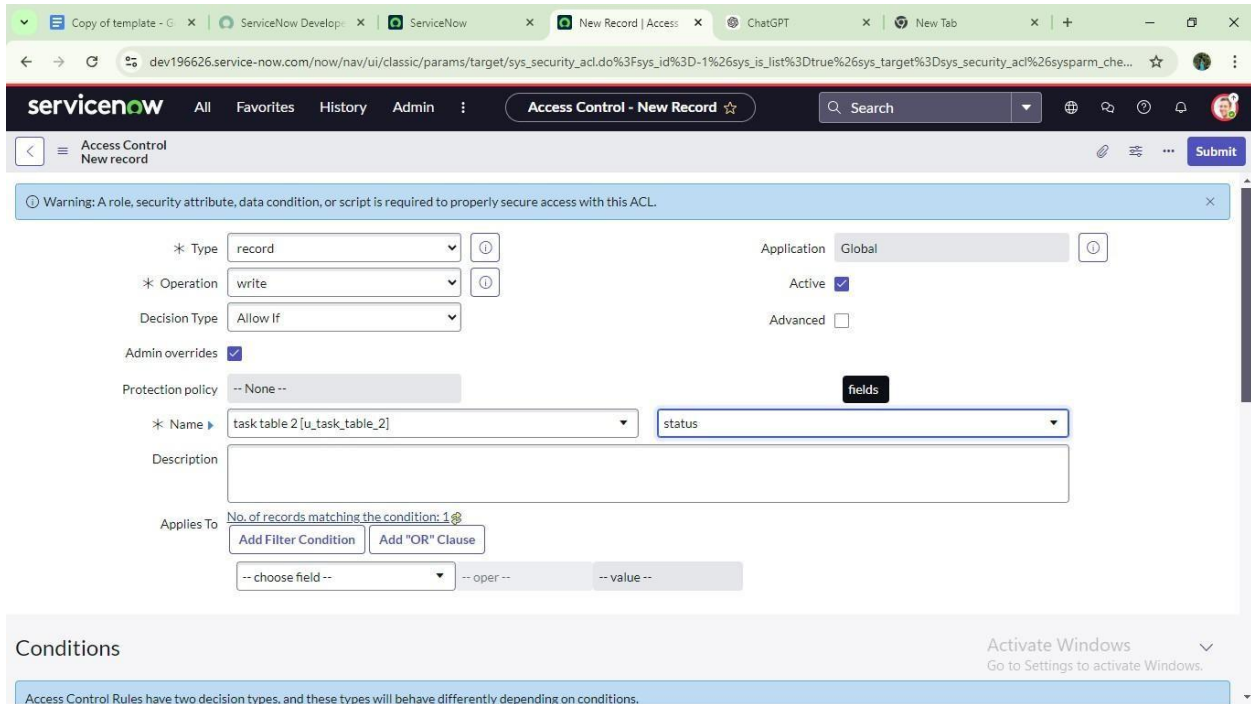
Update Delete

Activate Windows  
Go to Settings to activate Windows.

Modules Order Search Actions on selected rows New

## Milestone 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

Application: Global

Active: ☒

Advanced: ☐

Admin overrides: ☒

Protection policy: -- None --

\* Name: task table 2 [u\_task\_table\_2]

status

Description:

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

Add Filter Condition Add "OR" Clause

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

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

dev196626.service-now.com/now/nav/ui/classic/params/target/sys\_security\_acl\_list.do%3Fsysparm\_query%3Dsys\_created\_onONToday%40javascript%3Aags.beginningOfToday...

servicenow All Favorites History Workspaces Access Controls Search

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

All > Created on Today

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_due_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

1 to 20 of 23

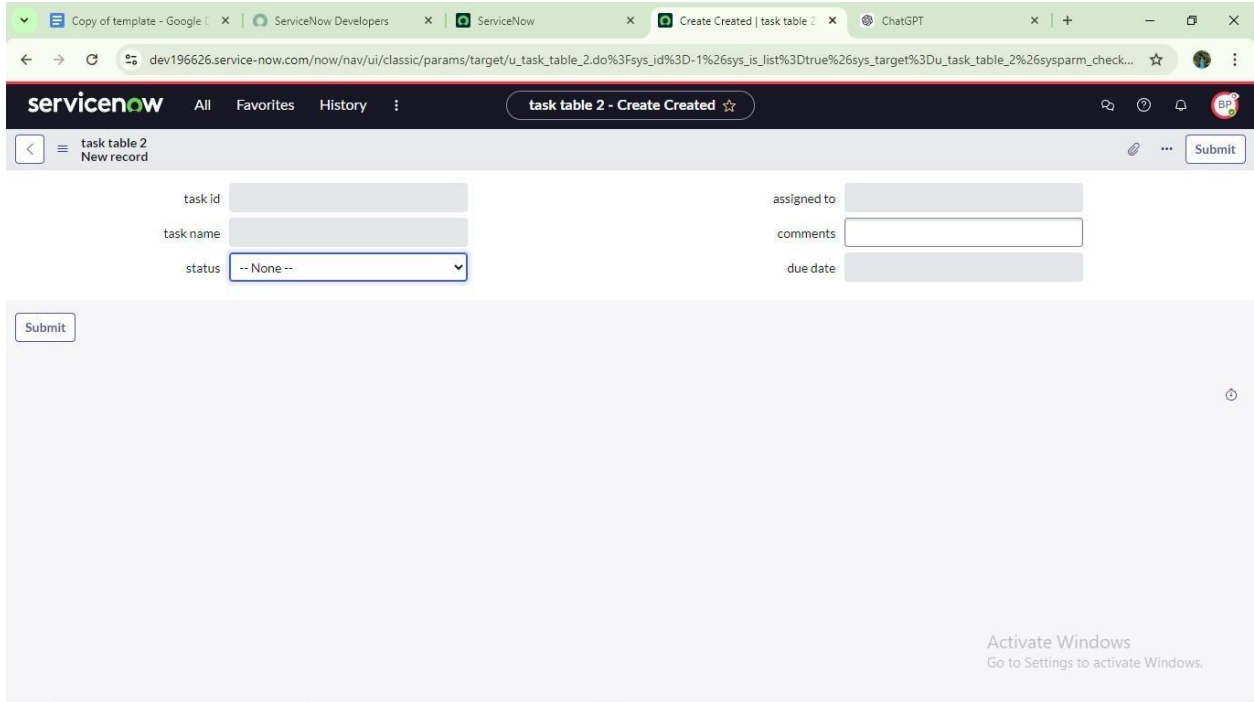
12. Click on profile on top right side

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 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 shows 'task table 2 - Create Created'. The form has the following fields:

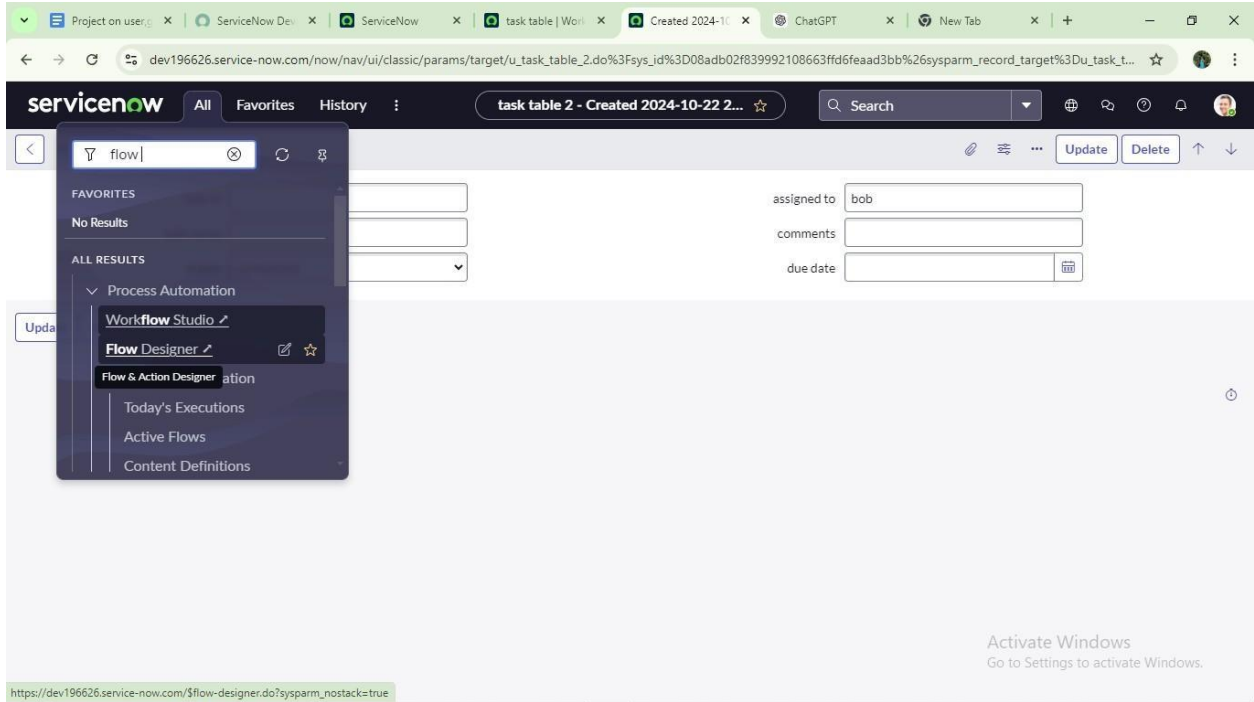
- task id:
- task name:
- status:
- assigned to:
- comments:
- due date:

There is a 'Submit' button at the bottom left of the form area. An 'Activate Windows' watermark is visible in the bottom right corner of the browser window.

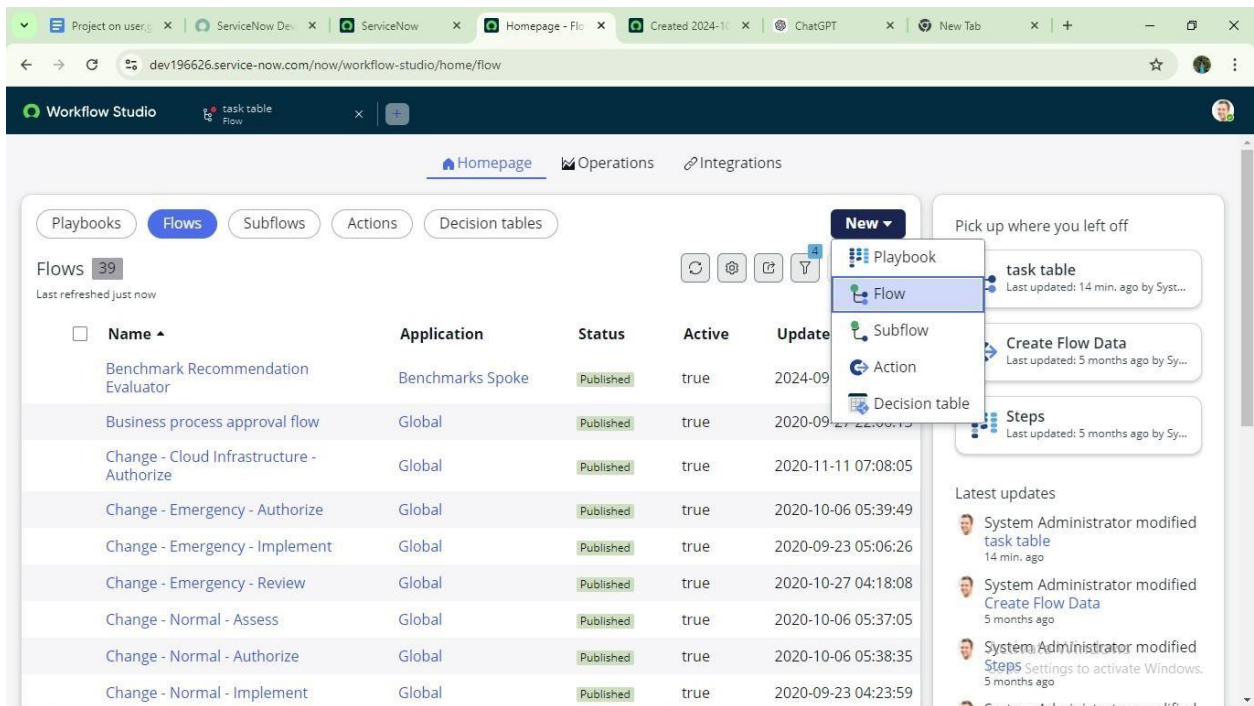
## Milestone 9: Flow

### 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 'task table 2' interface. A search bar at the top left contains the text 'flow'. A dropdown menu is open, showing 'No Results' under 'FAVORITES' and 'ALL RESULTS'. Under 'ALL RESULTS', there is a section for 'Process Automation' with links to 'Workflow Studio', 'Flow Designer', and 'Flow & Action Designer'. Below these are links for 'Today's Executions', 'Active Flows', and 'Content Definitions'. The main table area shows columns for 'assigned to' (value: bob), 'comments', and 'due date'. The URL at the bottom is [https://dev196626.service-now.com/\\$flow-designer.do?sysparm\\_nostack=true](https://dev196626.service-now.com/$flow-designer.do?sysparm_nostack=true).

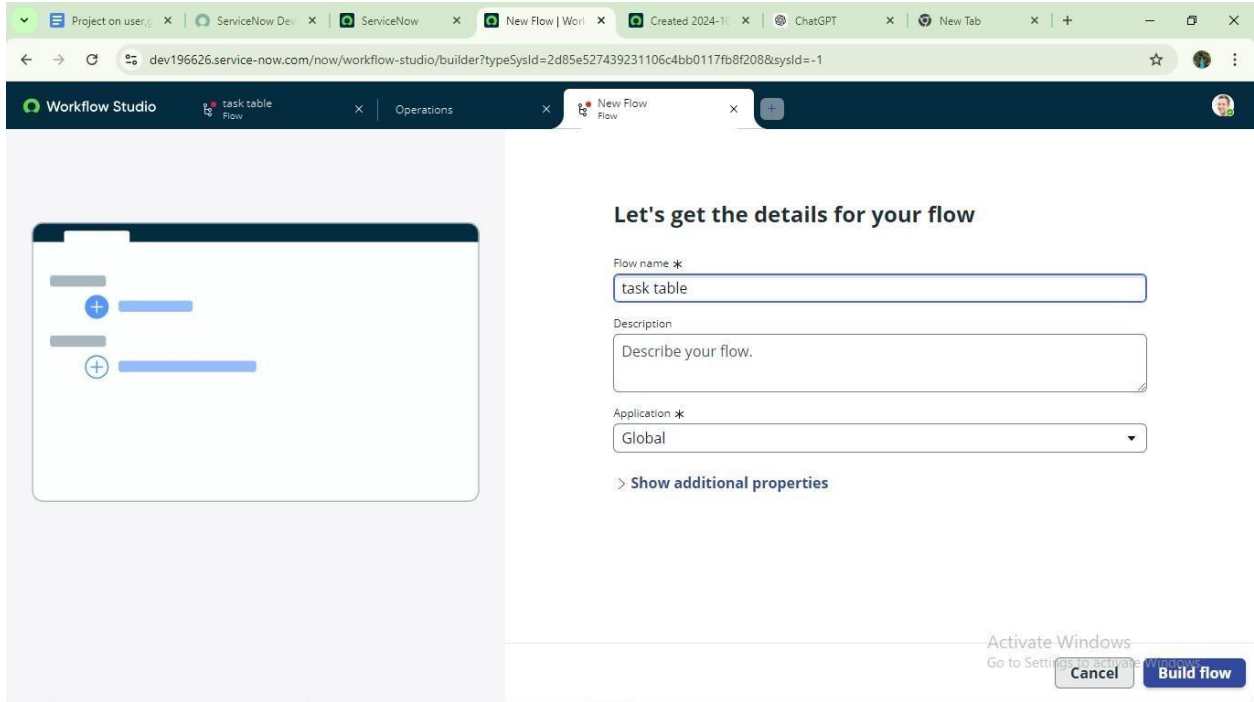


The screenshot shows the ServiceNow 'Workflow Studio' interface. The 'Flows' tab is selected, showing a list of 39 flows. A 'New' dropdown menu is open, showing options for 'Playbook', 'Flow', 'Subflow', 'Action', and 'Decision table'. The 'Flow' option is highlighted. The list of flows includes:

Name	Application	Status	Active	Update
Benchmark Recommendation Evaluator	Benchmarks Spoke	Published	true	2024-09
Business process approval flow	Global	Published	true	2020-09
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

On the right side, there is a 'Pick up where you left off' section with cards for 'task table', 'Create Flow Data', and 'Steps'. Below this is a 'Latest updates' section showing system administrator modifications.





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

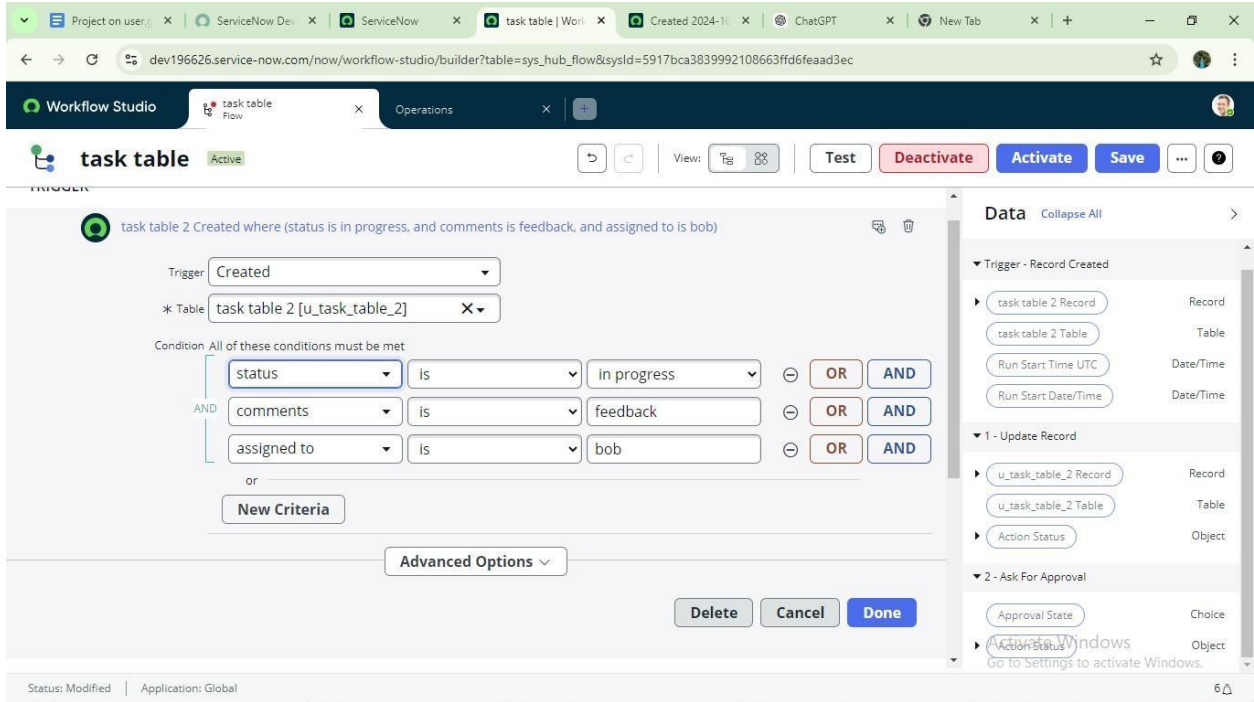
Activate Windows  
Go to Settings to activate Windows

Cancel Build flow

#### next step:

1. Click on Add 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.

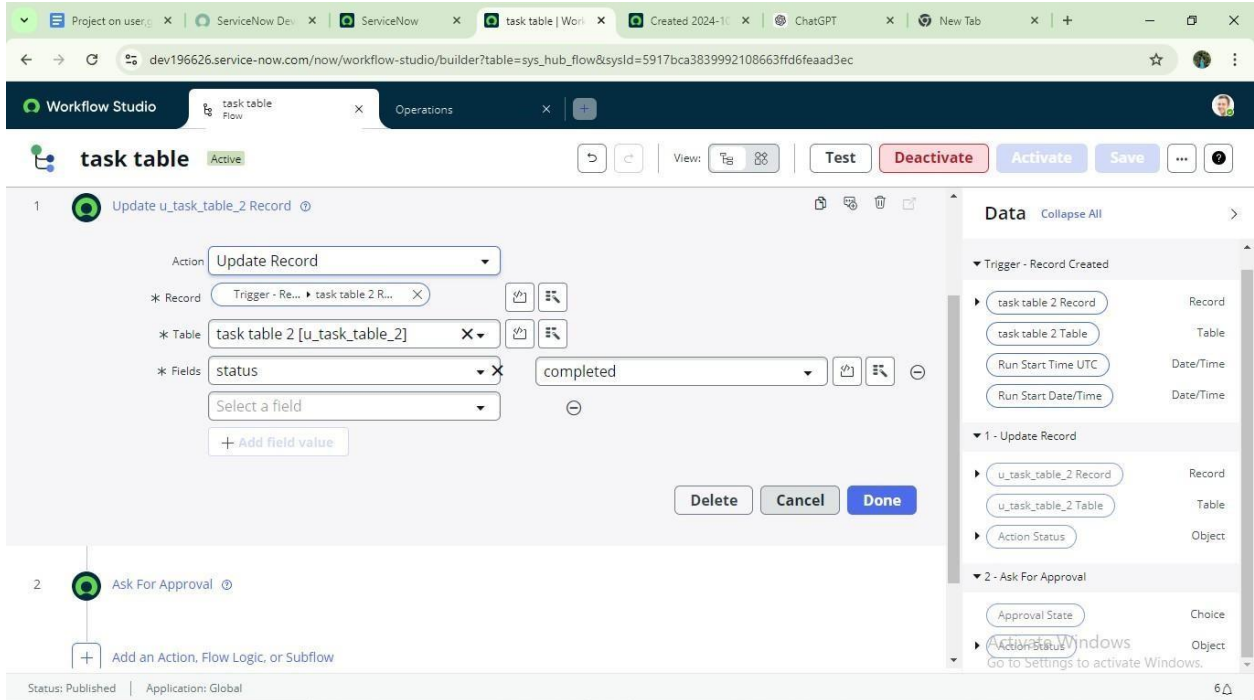




The screenshot shows the ServiceNow Workflow Studio interface. The main workspace displays a workflow configuration for 'task table 2'. The trigger is set to 'Created'. The table is 'task table 2 [u\_task\_table\_2]'. The condition is 'All of these conditions must be met' with three criteria: 'status 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:

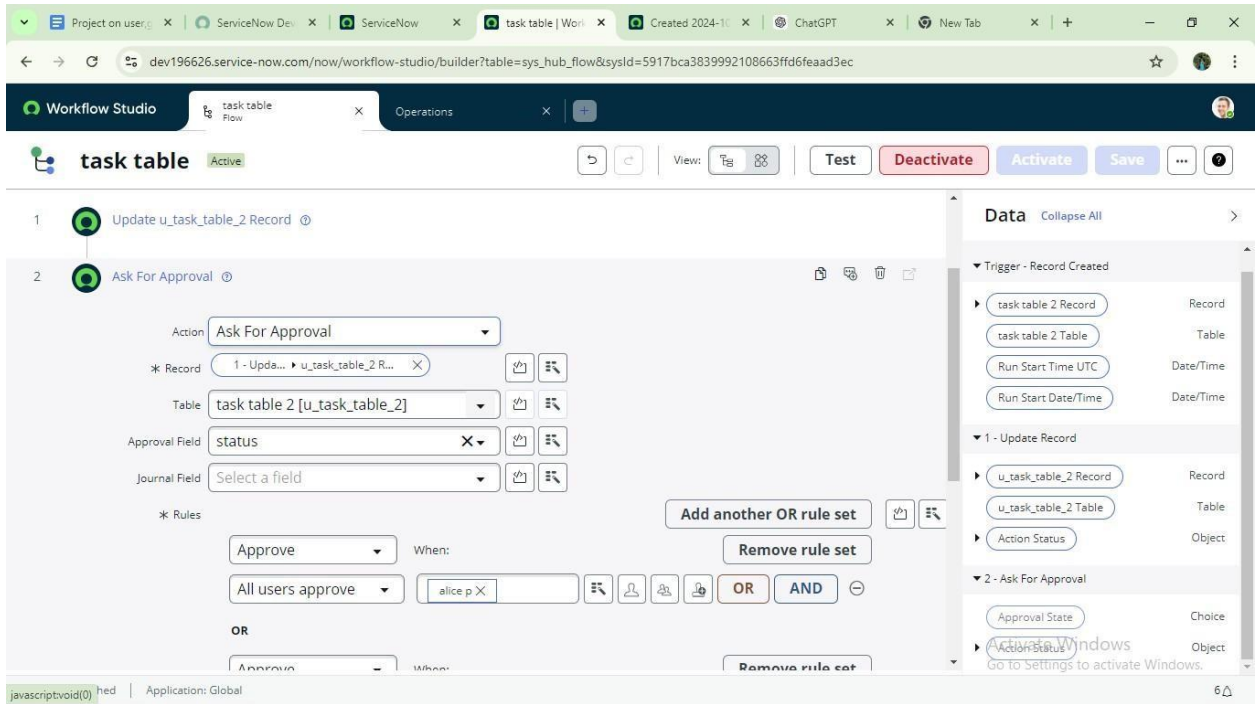
1. Click on Add an action.
2. Select action in that ,search for “ update records”.
3. In Record field drag the fields from the data navigation from Right Side(Data pill)
4. Table will be auto assigned after that
5. Add fields as “status” and value as “completed”
6. Click on Done.



The screenshot shows the ServiceNow Workflow Studio interface. The main workspace displays the configuration for the 'Update u\_task\_table\_2 Record' action. The 'Action' dropdown is set to 'Update Record'. The 'Record' field is set to 'Trigger - Re... task table 2 R...'. The 'Table' field is set to 'task table 2 [u\_task\_table\_2]'. The 'Fields' field is set to 'status', and the 'completed' field is selected. The 'Data' panel on the right shows the data flow, including 'Trigger - Record Created', '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 'Status' is 'Published' and the 'Application' is 'Global'.

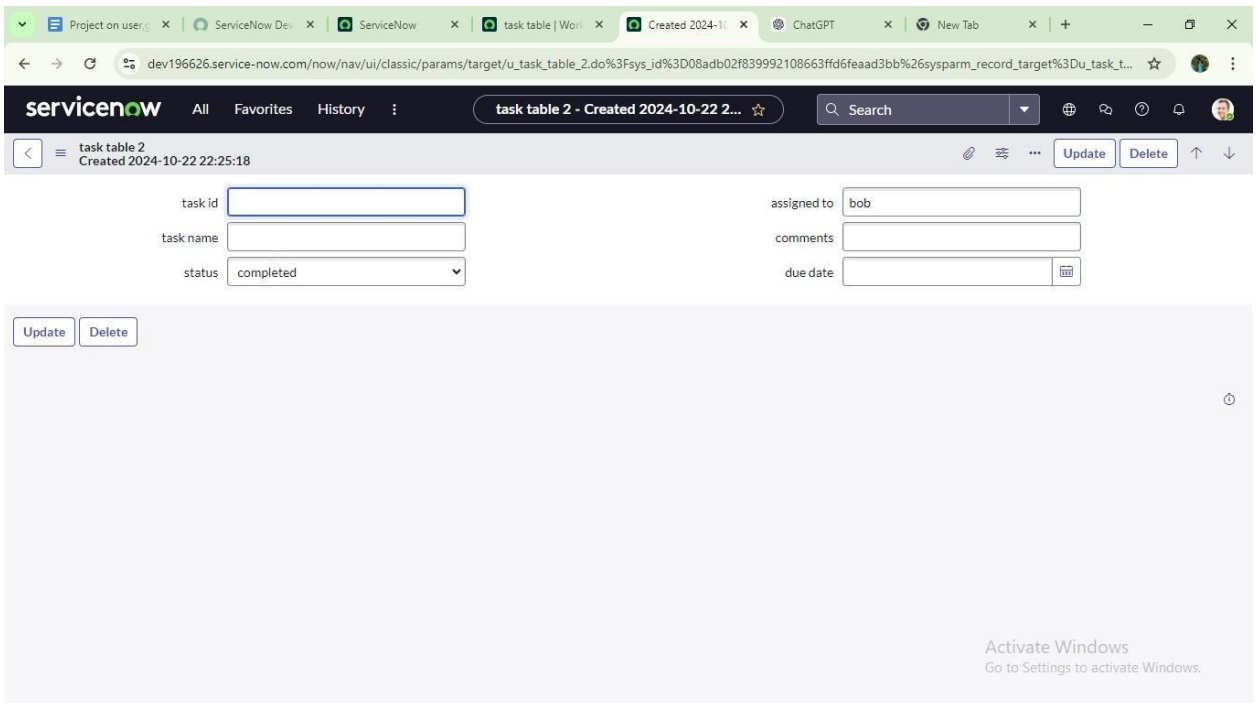
## Next step:

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.

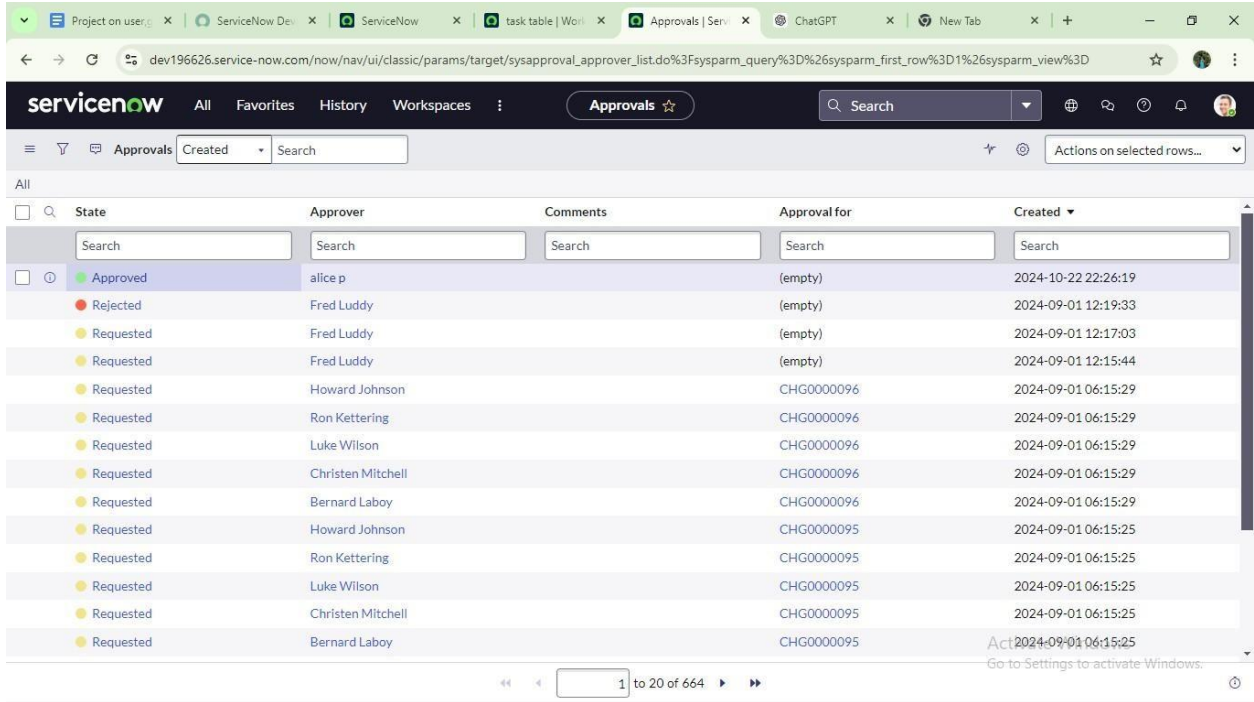


9.Go to application navigator search for task table.

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



The screenshot shows the ServiceNow 'Approvals' page. The table lists various approval requests with columns for State, Approver, Comments, Approval for, and Created. The first row is highlighted as 'Approved' for 'alice p' on '2024-10-22 22:26:19'. Other rows show 'Rejected' and 'Requested' states for various approvers like Fred Luddy, Howard Johnson, Ron Kettering, Luke Wilson, Christen Mitchell, and Bernard Laboy.

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

**Conclusion :**