

OPTIMIZING USER, GROUP, AND ROLE MANAGEMENT WITH ACCESS CONTROL AND WORKFLOWS

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Team size:5

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Problem Context:

In a small project environment, a Project Manager (Alice) and a Team Member (Bob) are responsible for delivering tasks. However, the absence of well-defined roles, access restrictions, and structured workflows often creates confusion in responsibilities, accountability, and progress monitoring.

Objectives:

- 1. Role Definition:** Clearly outline the duties of Alice as Project Manager and Bob as Team Member, ensuring both responsibility and access boundaries are transparent.
- 2. Access Control:** Introduce mechanisms that limit Bob's ability to create or edit projects beyond his assigned tasks, while still allowing him to view and update his responsibilities.
- 3. Workflow Organization:** Establish a structured process that enables Alice to assign work, track task progress, and oversee completion in a timely and efficient manner.

Key Skills/Tools: Users, Groups, Roles, Tables, Access Control Lists (ACL), Workflow/Flow Designer.

TASK INITIATION

Milestone 1: Users

Activity 1: Create Users

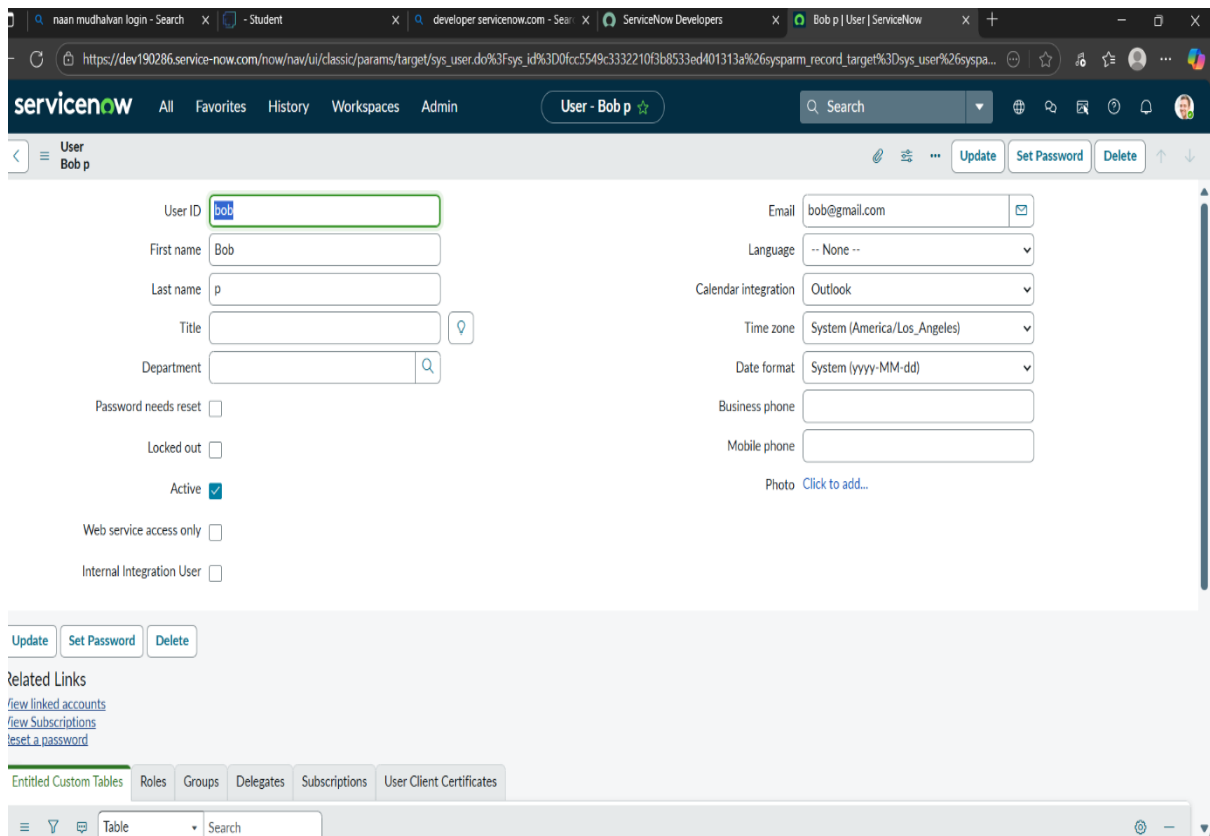
1. Open service now
2. Click on All >> search for users
3. Select Users under system security
4. Click on new
5. Fill the following details to create a new user
6. Click on submit

The screenshot displays the ServiceNow user profile interface. The top navigation bar includes the ServiceNow logo and a search bar. The user profile for 'Alice p' is shown, with fields for personal and contact information. The 'Active' checkbox is checked. Below the profile fields, there are buttons for 'Update', 'Set Password', and 'Delete'. A 'Related Links' section provides links to 'View linked accounts', 'View Subscriptions', and 'Reset a password'. At the bottom, a horizontal menu shows 'Entitled Custom Tables' as the selected option, with other options like 'Roles', 'Groups', '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 for a user named 'Bob p'. The form is divided into two main sections. The left section contains fields for 'User ID' (filled with 'bob'), 'First name' (filled with 'Bob'), 'Last name' (filled with 'p'), 'Title' (empty), and 'Department' (empty with a search icon). Below these are checkboxes for 'Password needs reset', 'Locked out', 'Active' (checked), 'Web service access only', and 'Internal Integration User'. The right section contains fields for 'Email' (filled with 'bob@gmail.com'), 'Language' (set to '-- None --'), 'Calendar integration' (set to 'Outlook'), 'Time zone' (set to 'System (America/Los_Angeles)'), 'Date format' (set to 'System (yyyy-MM-dd)'), 'Business phone', and 'Mobile phone'. There is also a 'Photo' field with a 'Click to add...' link. At the top right, there are buttons for 'Update', 'Set Password', and 'Delete'. Below the form, there are 'Update', 'Set Password', and 'Delete' buttons again. Underneath these are 'Related Links' for 'view linked accounts', 'view Subscriptions', and 'reset a password'. At the bottom, there is a navigation bar with tabs for 'Entitled Custom Tables', 'Roles', 'Groups', 'Delegates', 'Subscriptions', and 'User Client Certificates'. The 'Groups' tab is currently selected.

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 'Group - New Record' form in ServiceNow. The 'Name' field is filled with 'project team'. There are also fields for 'Manager', 'Group email', 'Parent', and 'Description'. A 'Submit' button is located at the bottom left of the form.

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.

The screenshot shows the 'Role - project member' form in ServiceNow. The 'Name' field is filled with 'project member'. The 'Application' field is filled with 'Global'. There is an 'Elevated privilege' checkbox. Below the form are tabs for 'Contains Roles', 'Applications with Role', 'Modules with Role', and 'Custom Tables'. The 'Contains Roles' tab is active, showing a search bar and a table with no records.

Create one more role:

7. Create another role with the following details

8. Click on submit

The screenshot shows the ServiceNow 'Role - New Record' form. The form is titled 'Role - New Record' and has a 'Submit' button in the top right corner. The 'Name' field is labeled with a red asterisk and contains the text 'team member'. The 'Application' dropdown menu is set to 'Global'. The 'Elevated privilege' checkbox is unchecked. The 'Description' field is empty. A 'Submit' button is located at the bottom left of the form area.

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

servicenow All Favorites History Workspaces Admin Table - New Record

Table New record

* Name

Extends table

Create module ☒

Create mobile module ☒

Add module to menu -- Create new --

New menu name

Remote Table ☐

Columns Controls Application Access

Table Columns for text Search

Dictionary Entries

	Column label	Type	Reference	Max length	Default value	Display
X	project id					false
X	project name					false
X	project manager					false
+	<input type="text" value="st"/>					

8. Click on submit

ServiceNow Developers x New Record | Table | ServiceNow x +

servicenow All Favorites History Workspaces Admin Table - New Record

Table New record

Name

Extends table

Create module ☒

Create mobile module ☒

Add module to menu -- Create new --

New menu name

Remote Table ☐

Columns Controls Application Access

Table Columns Column label Search

Dictionary Entries

	Column label	Type	Reference	Max length	Default value	Display
X	Updated by	String	(empty)	40	40	false
X	Updates	Integer	(empty)	40	40	false
X	Updated	Date/Time	(empty)	40	40	false
X	Sys ID		(empty)	32	40	false
X			(empty)	40	40	false
X			(empty)	40	40	false
+	Insert a new row...					

Create one more table:

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

10. Click on submit.

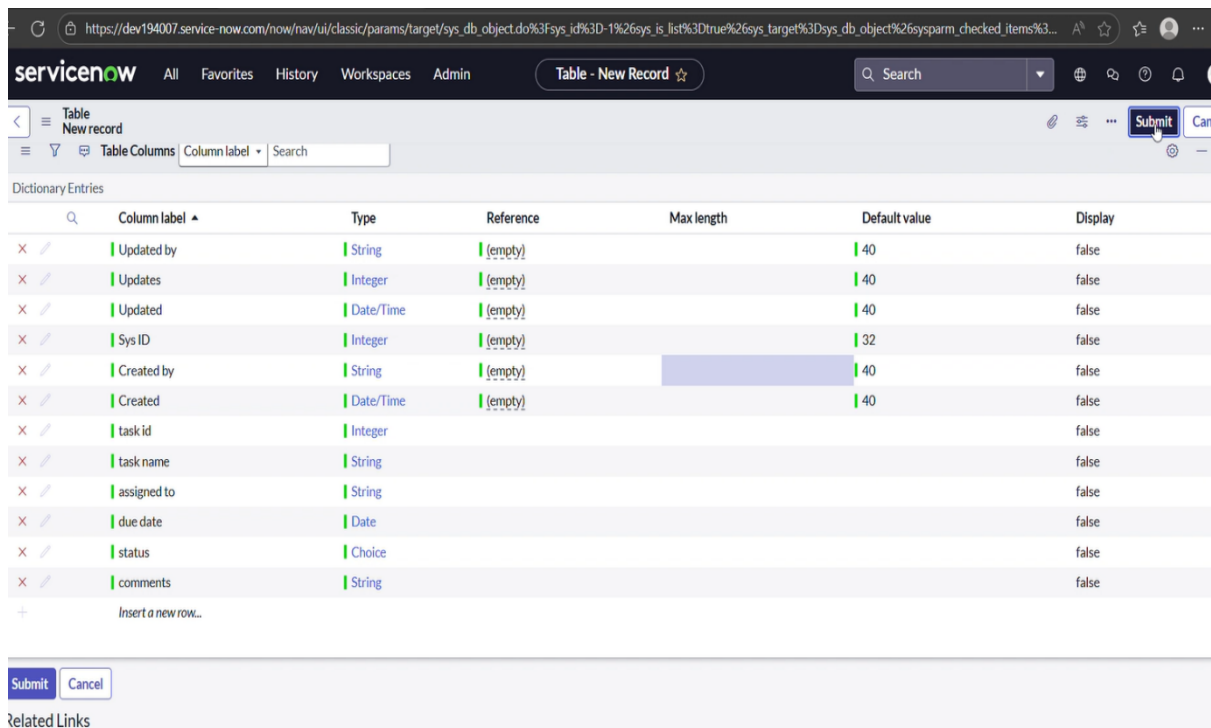


Table - New Record

Table Columns: Column label 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	Integer	(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...

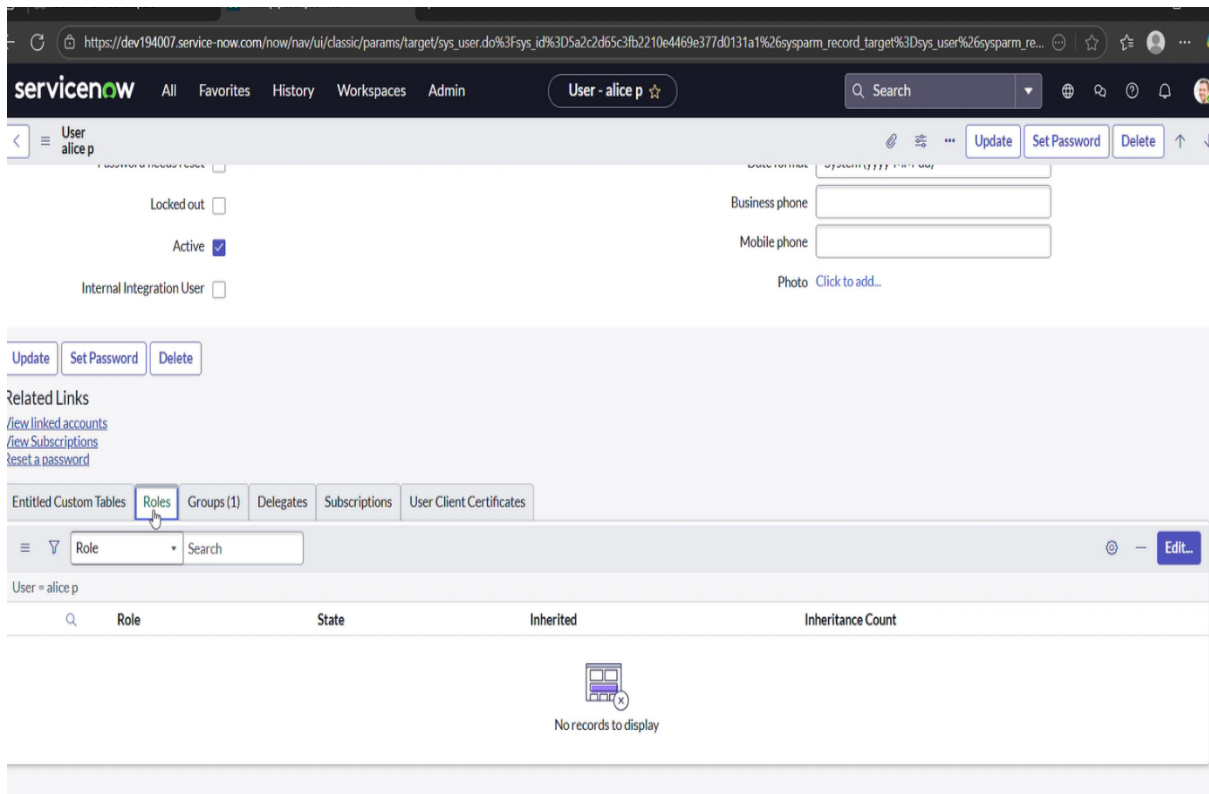
Submit Cancel

Related Links

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.

servicenow All Favorites History Workspaces Admin User - alice p

Search

User - alice p

Update Set Password Delete

Password needs reset ☐

Locked out ☐

Active ☒

Internal Integration User ☐

Date format System (yyyy-MM-dd)

Business phone

Mobile phone

Photo Click to add...

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 Search

Actions on selected rows... Edit...

User = alice p

Role	State	Inherited	Inheritance Count
u_project_table_user	Active	false	
u_task_table_2_user	Active	false	

1 to 2 of 2

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.

The screenshot shows the ServiceNow 'User' form for a user named 'bob p'. The form is divided into two main sections. The left section contains fields for 'User ID' (000), 'First name' (bob), 'Last name' (p), 'Title' (empty), and 'Department' (empty). Below these are checkboxes for 'Password needs reset', 'Locked out', 'Active' (checked), and 'Internal Integration User'. The right section contains fields for 'Email' (bob@gmail.com), 'Identity type' (Human), 'Language' (None), 'Calendar integration' (Outlook), 'Time zone' (System (America/Los Angeles)), 'Date format' (System (yyyy-MM-dd)), 'Business phone', 'Mobile phone', and a 'Photo' link. At the bottom of the form are buttons for 'Update', 'Set Password', and 'Delete'. Below the form is a 'related Links' section with links for 'few linked accounts', 'few Subscriptions', and 'reset a password'. At the very bottom is a navigation bar with tabs for 'Entitled Custom Tables', 'Roles', 'Groups (1)', 'Delegates', 'Subscriptions', and 'User Client Certificates'. The 'Groups (1)' tab is currently selected.

Milestone 7: Application access

Activity 1: Assign table access to application

1. while creating a table it automatically create 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 ServiceNow 'Application Menu' form for an application named 'project table'. The form is divided into several sections. The first section is a blue bar with the text 'Restricts access to the specified roles. Otherwise, all users can view the application menu when it is active.' Below this is a 'Roles' field with a dropdown menu showing 'u_project_table_user'. The second section is another blue bar with the text 'Specifies the menu category, which defines the navigation menu style. The default value is Custom Applications.' Below this is a 'Category' field with a dropdown menu showing 'Custom Applications'. The third section is a blue bar with the text 'The text that appears in a tooltip when a user points to this application menu'. Below this are 'Hint' and 'Description' text input fields. At the bottom of the form are buttons for 'Update' and 'Delete'. Below the form is a navigation bar with tabs for 'Modules', 'Order', and 'Search'. The 'Modules' tab is currently selected. Below the navigation bar is a table with the following columns: 'Title', 'Table', 'Active', 'Filter', 'Order', 'Link type', 'Device type', 'Roles', and 'Updated'. The table is currently empty.

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

The screenshot shows the ServiceNow 'Access Control' 'New record' form. At the top, there is a warning banner: 'Warning: A role, security attribute, data condition, script or ACL control via reference fields is required to properly secure access with this ACL.' The form fields include: 'Type' (record), 'Operation' (write), 'Decision Type' (Allow If), 'Application' (Global), 'Active' (checked), 'Advanced' (unchecked), 'Admin overrides' (checked), 'Protection policy' (None), 'Name' (a dropdown menu with a red asterisk), and 'Description' (a text area). Below the 'Applies To' section, there are buttons for 'Add Filter Condition' and 'Add OR Clause'. At the bottom, there is a 'Conditions' section with a dropdown arrow.

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
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 have the edit access

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

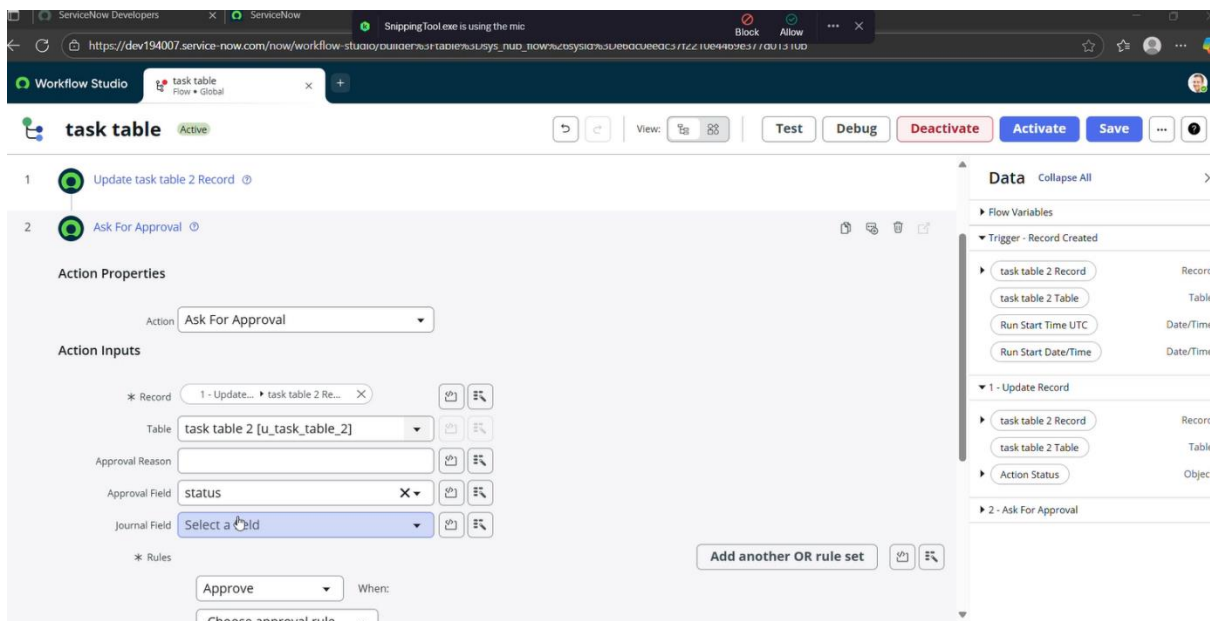
3. Click on Flow Designer under Process Automation.

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.

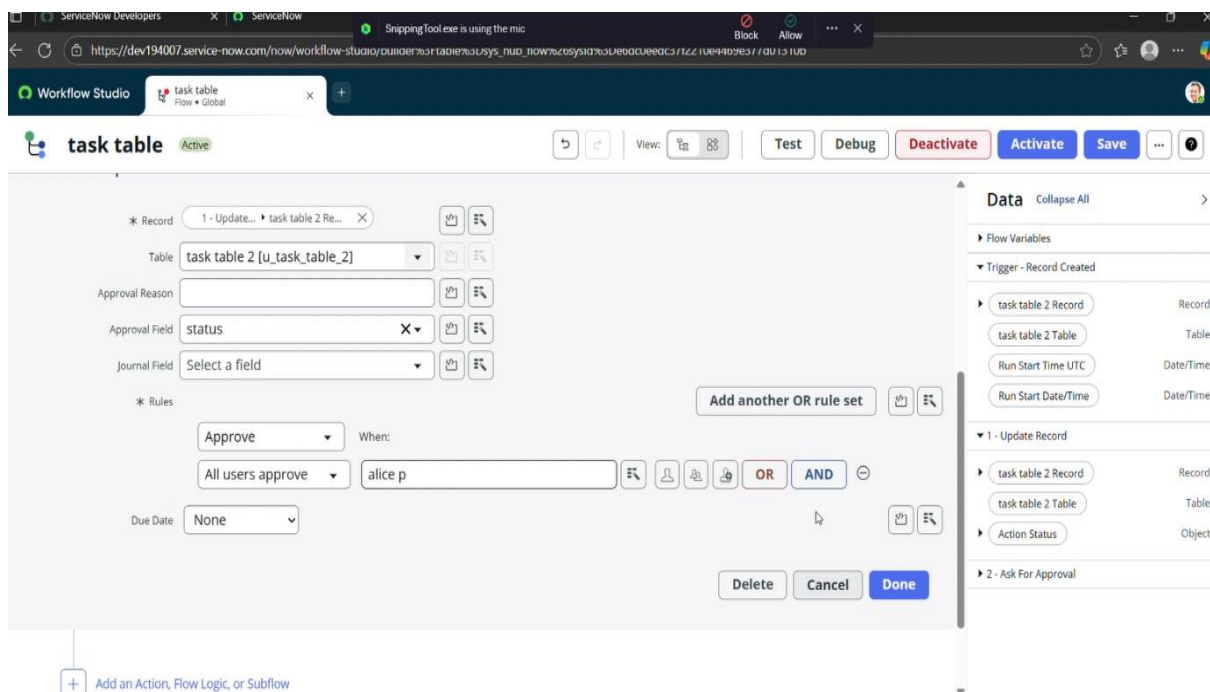
2. Select action in that, search for “update records”.

3. In Record field drag the fields from the data navigation from Right Side (Data pill)

4. Table will be auto assigned after that

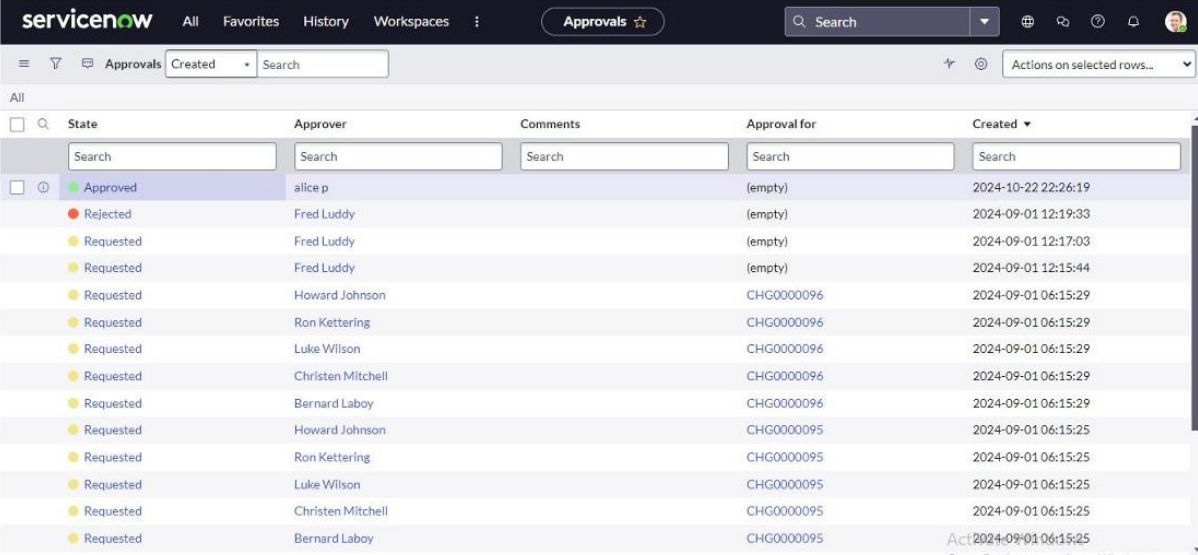
5. Add fields as “status” and value as “completed”

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. Its 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"/>	Search	Search	Search	Search	Search
<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:

This approach provides a streamlined system for managing projects by defining roles, applying access restrictions, and organizing workflows. It helps the team collaborate effectively, improves accountability, simplifies task tracking, and ensures successful project delivery.