

**ANJALAI AMMAL MAHALINGAM ENGINEERING
COLLEGE**

**DEPARTMENT OF COMPUTER SCIENCE AND
ENGINEERING**

NAAN-MUDHALVAN

**OPTIMIZING USER, GROUP, AND ROLE MANAGEMENT
THROUGH ACCESS CONTROL AND WORKFLOWS USING
SERVICENOW**

Team Id: NM2025TMIDO3879

Team size: 4

Team Leader : Karthikeyan S

Team Member 1: Barath M

Team Member 2: Barathkumar P K

Team Member 3: Kavindharan T

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.

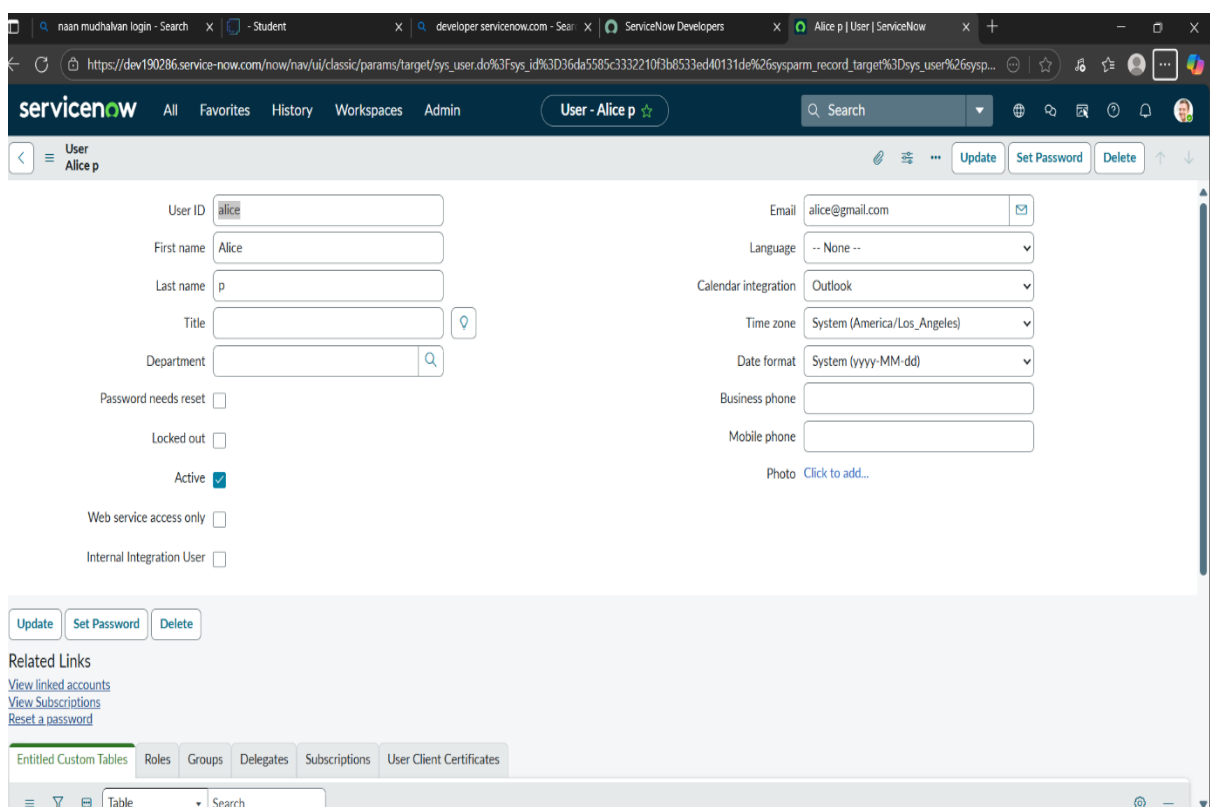
Key Skills/Tools: Users, Groups, Roles, Tables, Access Control Lists (ACL), Workflow/Flow Designer.

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 shows the ServiceNow user creation interface for a user named 'Alice p'. The form is divided into two main sections: personal information and system settings. The personal information section includes fields for User ID (alice), First name (Alice), Last name (p), Title, and Department. The system settings section includes fields for Email (alice@gmail.com), Language (-- None --), Calendar integration (Outlook), Time zone (System (America/Los Angeles)), Date format (System (yyyy-MM-dd)), Business phone, and Mobile phone. There are also checkboxes for 'Password needs reset', 'Locked out', 'Active' (checked), 'Web service access only', and 'Internal Integration User'. At the bottom, there are buttons for 'Update', 'Set Password', and 'Delete'. Below the form, there are 'Related Links' for 'View linked accounts', 'View Subscriptions', and 'Reset a password'. At the very bottom, there is a navigation bar with tabs for 'Entitled Custom Tables', 'Roles', 'Groups', 'Delegates', 'Subscriptions', and 'User Client Certificates'.

User ID:

First name:

Last name:

Title:

Department:

Email:

Language:

Calendar integration:

Time zone:

Date format:

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 Groups Delegates Subscriptions 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 top navigation bar includes 'servicenow', 'All', 'Favorites', 'History', 'Workspaces', 'Admin', and a user profile 'User - Bob p'. The main form is titled 'User Bob p' and contains the following fields:

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

Below the form fields are several checkboxes:

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

At the bottom of the form are buttons for 'Update', 'Set Password', and 'Delete'. Below these are 'Related Links' for 'view linked accounts', 'view Subscriptions', and 'reset a password'. A tabbed interface at the bottom shows 'Entitled Custom Tables' as the active tab, with other tabs for 'Roles', 'Groups', 'Delegates', 'Subscriptions', and 'User Client Certificates'.

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.

ServiceNow

Group - New Record

Name project team

Manager

Description

Group email

Parent

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.

ServiceNow Role - project member

Name: project member

Application: Global

Elevated privilege: ☐

Description:

Update Delete

Contains Roles Applications with Role Modules with Role Custom Tables

for text Search

Role = project member

Contains

No records to display

Create one more role:

7. Create another role with the following details

8. Click on submit

ServiceNow Role - New Record

Name: team member

Application: Global

Elevated privilege: ☐

Description:

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 'Table - New Record' form. The form is for creating a new table named 'u_project_table'. It includes fields for 'Name', 'Extends table', 'Create module', 'Create mobile module', 'Add module to menu', 'New menu name', and 'Remote Table'. Below these fields are tabs for 'Columns', 'Controls', and 'Application Access'. The 'Columns' tab is active, showing a table of 'Dictionary Entries' with columns: Column label, Type, Reference, Max length, Default value, and Display. The entries are 'project id', 'project name', and 'project manager'. A new entry 'stl' is being added at the bottom.

Column label	Type	Reference	Max length	Default value	Display
project id					false
project name					false
project manager					false
stl					

8. Click on submit

ServiceNow Developers x New Record | Table | ServiceNow x +

https://dev194007.service-now.com/now/nav/ui/classic/params/target/sys_db_object.do%3Fsys_id%3D-1%26sys_is_list%3Dtrue%26sys_target%3Dsys_db_object%26sysparm_checked_items%3...

servicenow All Favorites History Workspaces Admin Table - New Record Search

Table New record

Name: u_task_table_2

Extends table

Create module ☒

Create mobile module ☒

Add module to menu -- Create new --

New menu name task table 2

Remote Table ☐

Columns Controls Application Access

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		(empty)	32	false	
		(empty)	40	false	
		(empty)	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.

https://dev194007.service-now.com/now/nav/ui/classic/params/target/sys_db_object.do%3Fsys_id%3D-1%26sys_is_list%3Dtrue%26sys_target%3Dsys_db_object%26sysparm_checked_items%3...

servicenow All Favorites History Workspaces Admin Table - New Record

Table Columns Column label Search

Dictionary Entries

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

+ Insert a new row...

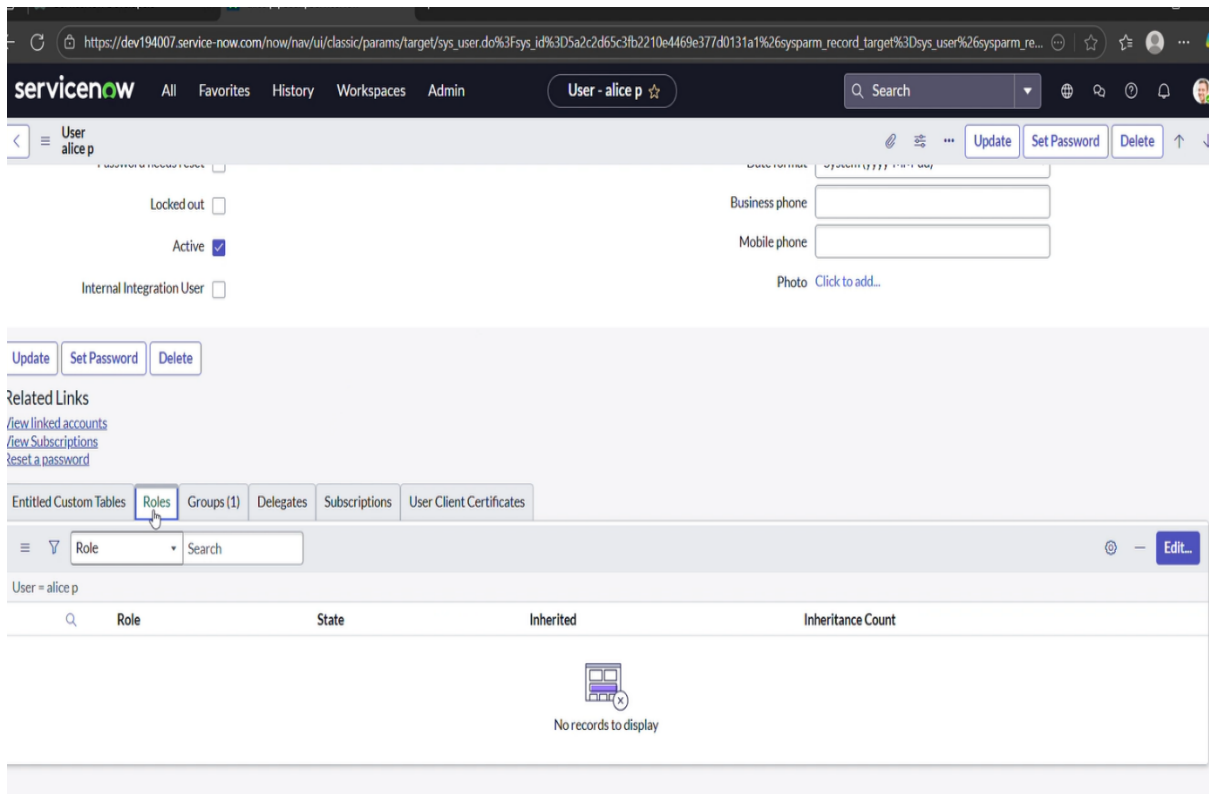
Submit Cancel

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.

ServiceNow Developers x bob p | User | ServiceNow x +

https://dev194007.service-now.com/now/nav/ui/classic/params/target/sys_user.do%3Fsys_id%3D3a7ce1a1c3fb2210e4469e377d0131b9%26sysparm_record_target%3Dsys_user%26sysparm_re...

servicenow All Favorites History Workspaces Admin User - bob p ☆ Search

User bob p Update Set Password Delete

User ID bob

First name bob

Last name p

Title

Department

Password needs reset ☐

Locked out ☐

Active ☒

Internal Integration User ☐

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

Photo Click to add...

Update Set Password Delete

Related Links

[View linked accounts](#)

[View Subscriptions](#)

[Reset a password](#)

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

Group Search

Actions on selected rows... New Edit...

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

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

Roles

u_project_table_user

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

Module	Order	Search	Actions on selected rows...	New				
Application menu = project table								
Title	Table	Active	Filter	Order	Link type	Device type	Roles	Updated

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, script or ACL control via reference fields 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: *

Description:

Applies To: [Add Filter Condition](#) [Add OR Clause](#)

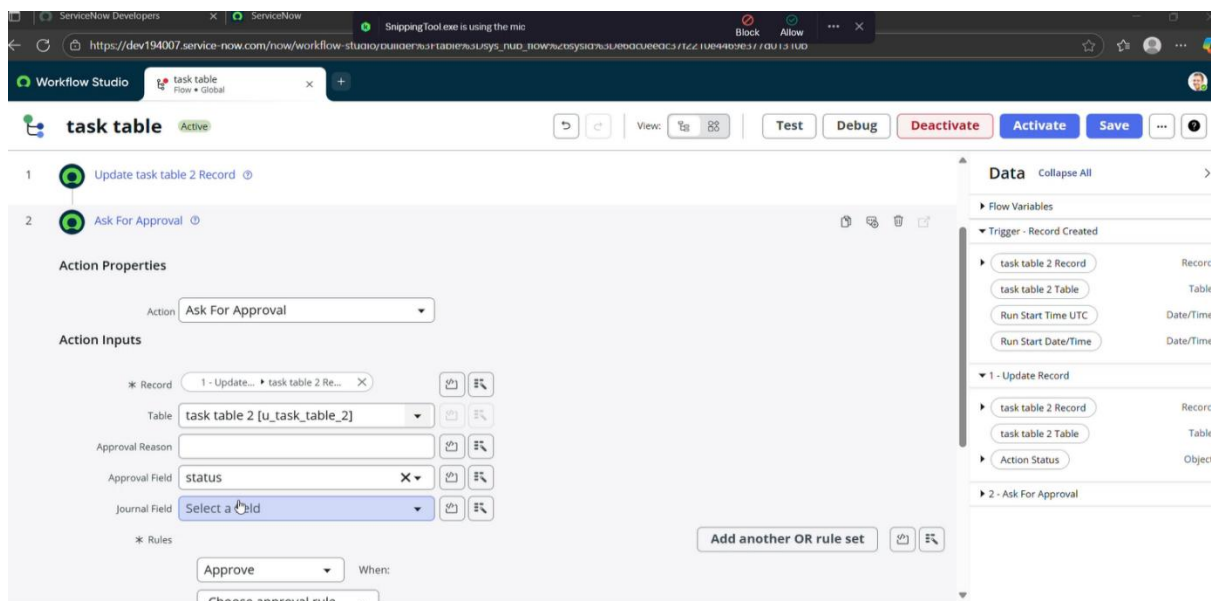
Conditions

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
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.

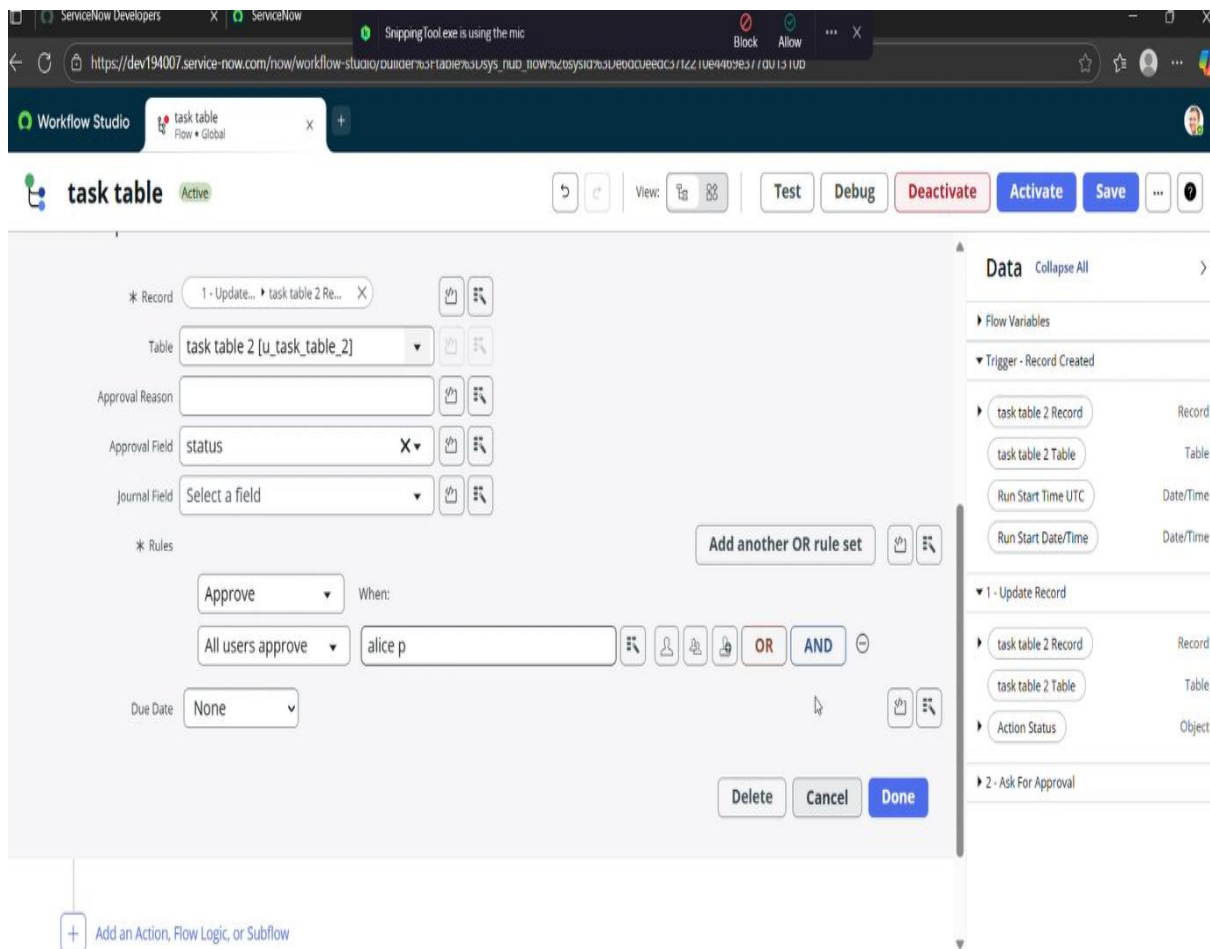
2. Select action in that, search for "update records".

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

servicenow				
All	Favorites	History	Workspaces	:
Approvals ☆				
Search				
Actions on selected rows...				
All				
State	Approver	Comments	Approval for	Created ▾
Search	Search	Search	Search	Search
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:

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.