

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

Problem Statement:

Within a small project management setup involving a Project Manager (Alice) and a Team Member (Bob), the absence of well-defined roles, structured workflows, and proper access restrictions creates confusion. This lack of clarity often leads to task mismanagement, accountability gaps, and difficulty in tracking project progress.

Objectives:

- 1. Clearly Define User Roles** – Assign specific roles to Alice (Project Manager) and Bob (Team Member) to make responsibilities and access privileges within the project management system more transparent.
- 2. Apply Access Control Measures** – Build a system that limits Bob's permissions, preventing him from creating or modifying projects, while still enabling him to view and update only the tasks assigned to him, thus avoiding unauthorized changes.
- 3. Organize Workflow Processes** – Create a well-structured workflow for task distribution and progress monitoring, allowing Alice to easily delegate tasks to Bob and track their completion effectively.

Skills:

User Management, Groups, Roles, Tables, Access Control Lists, and Flow Designer.

TASK INITIATION

Milestone 1: Users

Activity: Create Users

1. Open ServiceNow.
2. Navigate to 'All' > search for Users.
3. Select 'Users' under System Security.
4. Click 'New' and provide user details.
5. Save the new record.
6. Repeat the process to create a second user.

servicenow All

Favorites History Workspaces Admin

User - alice p

Search

User - User alice p

User ID: alice

First name: alice

Last name: p

Title:

Department:

Password needs reset:

Locked out:

Active:

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...

Update Set Password Delete

Related Links: View linked accounts, View Subscriptions, Reset a password

Entitled Custom Tables Roles (3) Groups (1) Delegates Subscriptions User Client Certificates

Table Search

27°C Haze ENG IN 11:56 04-11-2024

This screenshot shows the ServiceNow user profile for 'User - User alice p'. The 'User ID' field contains 'alice', the 'First name' field contains 'alice', and the 'Last name' field contains 'p'. These three fields are highlighted with a red rectangular box. The rest of the profile page displays various user details like email, language, calendar integration, and active status.

servicenow All

Favorites History Workspaces Admin

User - Bob p

Search

User - User Bob p

User ID: bob

First name: Bob

Last name: p

Title:

Department:

Password needs reset:

Locked out:

Active:

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...

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

Table Search

27°C Haze ENG IN 12:07 04-11-2024

This screenshot shows the ServiceNow user profile for 'User - User Bob p'. The 'User ID' field contains 'bob', the 'First name' field contains 'Bob', and the 'Last name' field contains 'p'. These three fields are highlighted with a red rectangular box. The rest of the profile page displays various user details like email, language, calendar integration, and active status.

Milestone 2: Groups

Activity 1: Create Groups

1. In ServiceNow, go to 'All' > search for Groups.
2. Select 'Groups' under System Security.
3. Click 'New', enter group details, and save.

The screenshot shows the ServiceNow interface for creating a new group. The left sidebar navigation bar is visible, showing various system categories like System Definition, System Mailboxes, System Security, and User Administration. The main content area is titled 'Group - project team'. It has fields for Name (set to 'project team'), Manager (empty), Group email (empty), and Parent (empty). A large text area for Description is empty. Below these fields are 'Update' and 'Delete' buttons. Underneath, there's a section for 'Group Members (2)'. It includes a search bar with 'Created' selected and a 'Search' button. A table header row shows columns for 'Created', 'Role', 'Granted by', and 'Inherits'. Below the header, there is a single record listed: a user icon with a circled 'X' next to it, followed by the text 'No records to display'. At the bottom right of the main content area, there is a small circular icon with a question mark.

Milestone 3: Roles

Activity 1: Create roles

1. In ServiceNow, search for Roles under System Security.
2. Select 'New', enter details for the role, and save.
3. Create an additional role using the same steps.

The screenshot shows the ServiceNow interface for creating a new role. The left sidebar navigation includes 'System Definition', 'Search Groups', 'Text Index Groups', 'System Mailboxes', 'Administration', 'Email Account Groups', 'System Security', 'Users and Groups', 'Groups', 'Roles', 'Access Role Detail View', 'Reports', 'Groups Membership', 'User Administration', 'Groups', 'Workspace Experience', 'Forms', and 'UI Action Groups'. The main content area displays a role configuration page for 'Role - project member'. The 'Name' field is set to 'project member', 'Application' is 'Global', and 'Elevated privilege' is unchecked. A 'Description' field is empty. Below the main form, there are tabs for 'Contains Roles', 'Applications with Role (2)', 'Modules with Role (2)', and 'Custom Tables'. Under 'Contains Roles', a search bar shows 'for text' and a search button. The results table is empty, displaying 'No records to display'. There are 'Update' and 'Delete' buttons at the top of the table.

Milestone 4: Table

Activity 1: Create Table

1. In ServiceNow, navigate to 'All' > search for Tables.
2. Create a new table labeled 'Project Table', enabling module and mobile module options.
3. Define necessary columns and save.
4. Repeat the process to create 'Task Table 2'.

This screenshot is identical to the one above, showing the ServiceNow interface for creating a new role named 'project member'. The left sidebar and main content area are the same, including the role configuration form, search results table, and navigation tabs.

servicenow All Favorites History Workspaces : Table - New Record ☆

* Name: u_project_table

Create module:

Extends table:

Create mobile module:

Add module to menu:

New menu name: project table

Columns **Controls** **Application Access**

Table Columns: for text

Dictionary Entries

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

Activate Windows
Go to Settings to activate Windows.

servicenow All Favorites History Workspaces : Table - task table 2 ☆

* Table: task table 2

Table Columns: for text

Dictionary Entries

Q	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
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...

Activate Windows
Go to Settings to activate Windows.

Milestone 5: Assign user to groups

Activity users to project team group

1. Open ServiceNow and search for Groups.
2. Select the 'Project Team' group.
3. Under Group Members, edit and add Alice P. and Bob P., then save.

The screenshot shows the ServiceNow Groups page. On the left, there's a sidebar with a search bar and a tree view of system categories like Activity Subscriptions, Configuration, and Employee Center. The main area is titled 'Group - project team'. It has fields for Name (project team), Manager (empty), Group email (empty), Parent (empty), and Description (empty). Below this is a 'Roles' section with tabs for 'Group Members (2)' and 'Groups'. The 'Group Members' tab is selected, showing a table with two rows: 'User' and 'Bob p' (with a red box around it) and 'alice p'. At the bottom right of the table, there are buttons for 'Actions on selected rows...', 'New', and 'Edit...'.

Milestone 6: Assign role of users

Activity 1: Assign roles to alice user

1. Open ServiceNow and go to All → Users.
2. From the options, select Tables under System Definition.
3. Choose the Project Manager user account.
4. In the Project Manager's profile, click Edit.
5. Add the Project Member role and save.
6. Again, click Edit and assign the u_project_table role and the u_task_table role.
7. Save the changes and update the form.

The screenshot shows the ServiceNow interface for managing users. The left sidebar navigation includes categories like System Definition, Administration, System Security, and User Administration. The main content area displays the details for a user named 'User - alice p'. The 'Roles' tab is active, showing three assigned roles:

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

The first row, 'u_task_table_2_user', is highlighted with a red box.

Activity 2: Assign role to bob user

1. Open ServiceNow and navigate to All → Users.
2. Select Tables under System Definition.
3. Choose the user account for Bob P.
4. In the Team Member section, click Edit.
5. Assign the Team Member role along with the required table role, then save.
6. Click on the Profile icon and impersonate Bob.
7. Once logged in as Bob, verify that the Task Table 2 is visible.

The screenshot shows the ServiceNow application interface. The left sidebar is titled "servicenow" and contains a navigation tree with categories like System Definition, Search Groups, Text Index Groups, System Mailboxes, Administration, Email Account Groups, System Security, Users and Groups, Roles, Access Role Detail View, Reports, Groups Membership, User Administration, Groups, Workspace Experience, Forms, and UI Action Groups. The "Groups" node under "User Administration" is currently selected. The main content area displays the "User - Bob p" profile. At the top right are "Search" and "Actions" buttons (Update, Set Password, Delete). Below the search bar is a photo placeholder with "Click to add...". The user's roles are listed in a table:

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

The "team member" role is highlighted with a red box.

Milestone 7: Application Access

Activity 1: Assign table access to application

1. Each table automatically generates an application and module.
2. Search for the 'Project Table' application and edit module roles.
3. Grant access to the 'Project Member' role.
4. Repeat for 'Task Table 2', assigning both Project Member and Team Member roles.

servicenow All Favorites History Admin : Application Menu - project table

Application Menu project table

Search 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 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

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

Hint

Description

Activate Windows
Go to Settings to activate Windows.

Update Delete

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

Application Menu task table 2

Search Update Delete

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

Activate Windows
Go to Settings to activate Windows.

Actions on selected rows... New

Update Delete

Modules Order Search

Milestone 8: Access Control Lists

Activity: Create ACL

1. Open ServiceNow.
2. Navigate to All → ACL.
3. Under System Security, select Access Control (ACL).
4. Click on Elevate Role.
5. Click New to create a new ACL.
6. Enter the required details for the ACL configuration.
7. Scroll down to the Requires Role section.
8. Double-click to insert a new row.
9. Assign the Task Table and the Team Member role.
10. Click Submit to save.
11. Repeat the process to create four additional ACLs for the specified fields.
12. Go to the profile icon in the top-right corner and click Impersonate User.
13. Select Bob as the impersonated user.
14. From the application menu, navigate to All → Task Table 2.
15. Verify that the Comment and Status fields are accessible for editing

The screenshot shows the ServiceNow interface for creating a new Access Control (ACL) record. The top navigation bar includes 'servicenow', 'All', 'Favorites', 'History', 'Admin', and a search bar. The main title is 'Access Control - New Record'. A warning message at the top states: 'Warning: A role, security attribute, data condition, or script 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: task table 2 [u_task_table_2]
- Fields: status
- Description: (empty)
- Applies To: No. of records matching the condition: 1
Add Filter Condition | Add "OR" Clause
-- choose field -- | -- oper -- | -- value --

A 'Conditions' section at the bottom left contains the note: 'Access Control Rules have two decision types, and these types will behave differently depending on conditions.'

servicenow All Favorites History Workspaces : Access Controls ☆

Search Actions on selected rows... New

All > Created on Today

<input type="checkbox"/>	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
<input type="checkbox"/>	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

Activate Windows
Go to Settings to activate Windows.

servicenow All Favorites History : task table 2 - Create Created ☆

task table 2 New record

Submit

task id	assigned to
task name	comments
status	due date

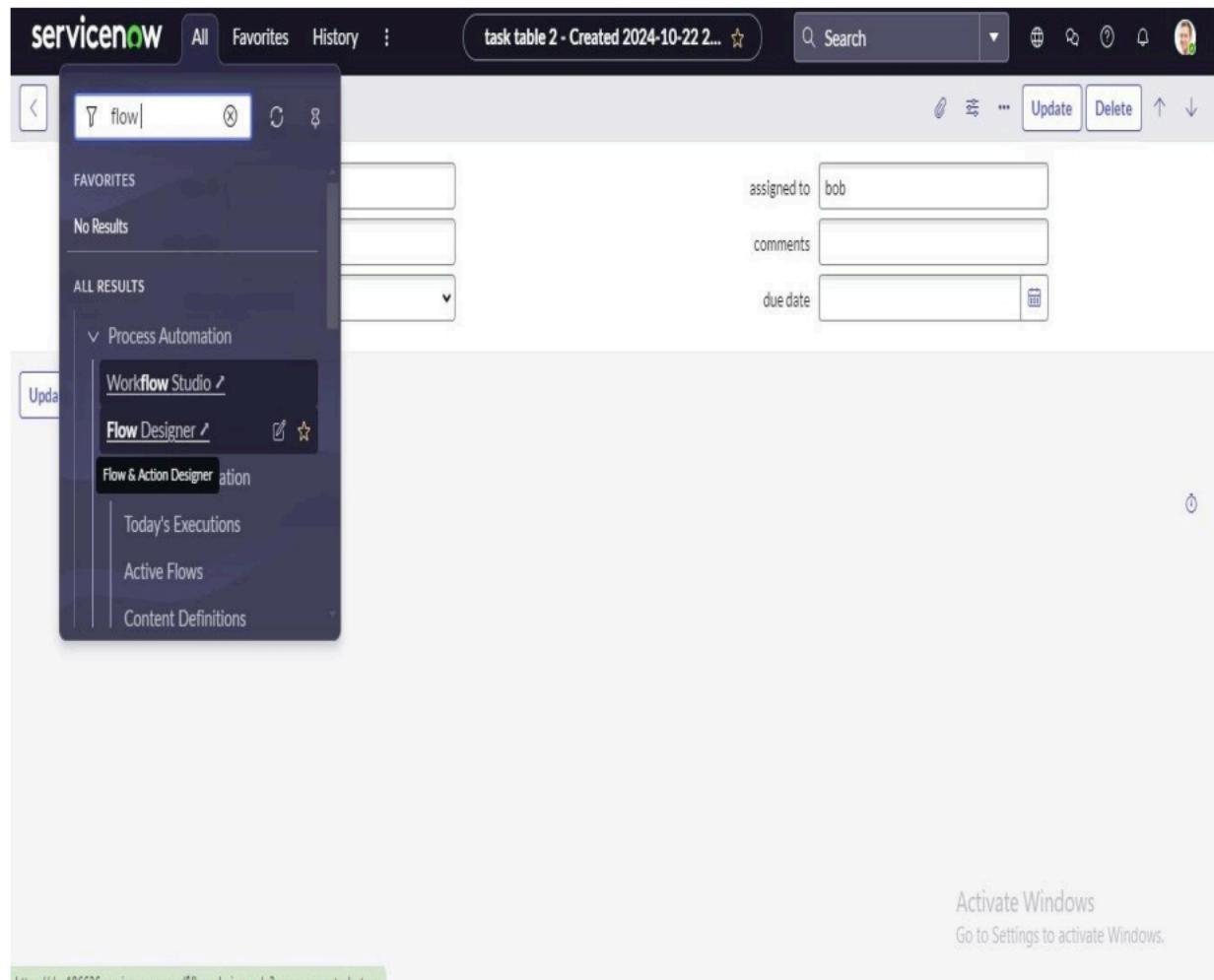
Submit

Activate Windows
Go to Settings to activate Windows.

Milestone 9: Flow

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

1. Open ServiceNow.
2. Go to All → Flow Designer under Process Automation.
3. Click New, then select Flow.
4. In Flow Properties, set the Flow Name as “Task Table”.
5. Choose Global as the application.
6. Click Build Flow to proceed.



Workflow Studio

task table Flow

Homepage Operations Integrations

Playbooks Flows Subflows Actions Decision tables

Flows 39 Last refreshed just now

Name	Application	Status	Active	Update
Benchmark Recommendation Evaluator	Benchmarks Spoke	Published	true	2024-09-27 22:00:15
Business process approval flow	Global	Published	true	2020-09-27 22:00:15
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

New ▾

- Playbook
- Flow**
- Subflow
- Action
- Decision table

Pick up where you left off

- task table Last updated: 14 min. ago by System Administrator
- Create Flow Data Last updated: 5 months ago by System Administrator
- Steps Last updated: 5 months ago by System Administrator

Latest updates

- System Administrator modified task table 14 min. ago
- System Administrator modified Create Flow Data 5 months ago
- System Administrator modified Steps Settings to activate Windows. 5 months ago

Workflow Studio

task table Flow

Operations

New Flow

Let's get the details for your flow

Flow name *

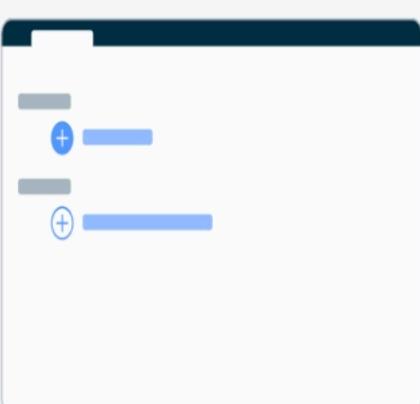
Description

Application *

> Show additional properties

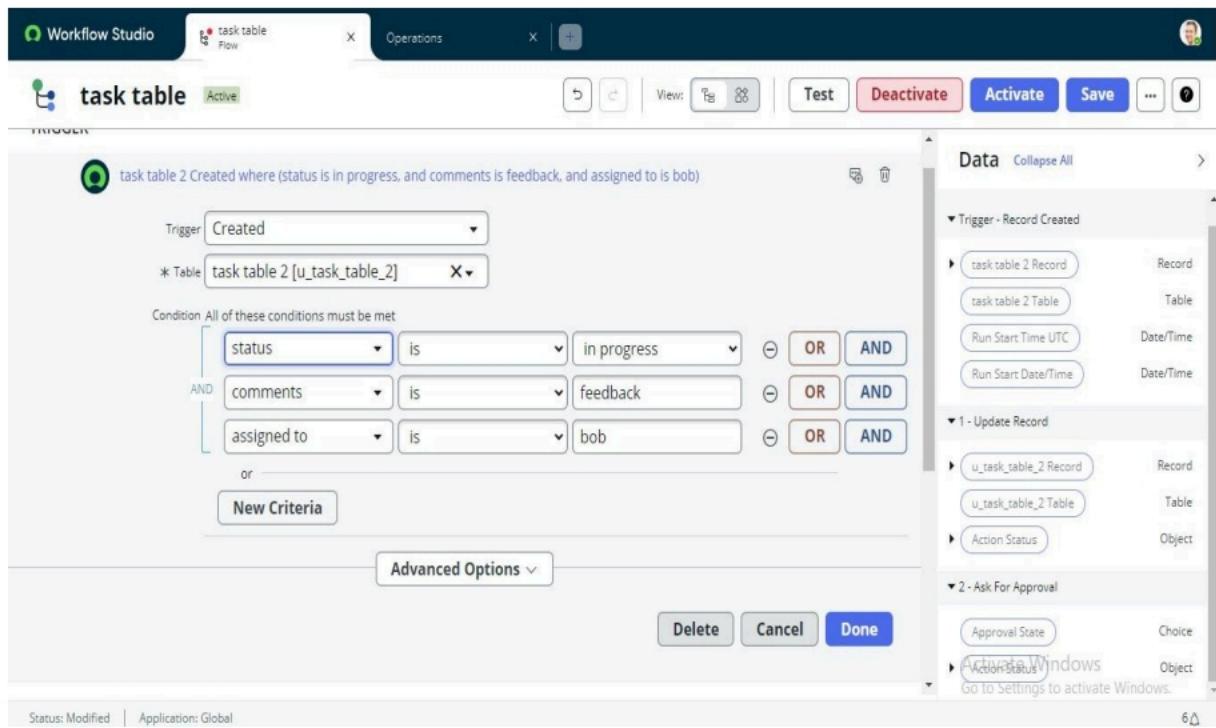
Activate Windows
Go to Settings To activate Windows

Cancel Build flow



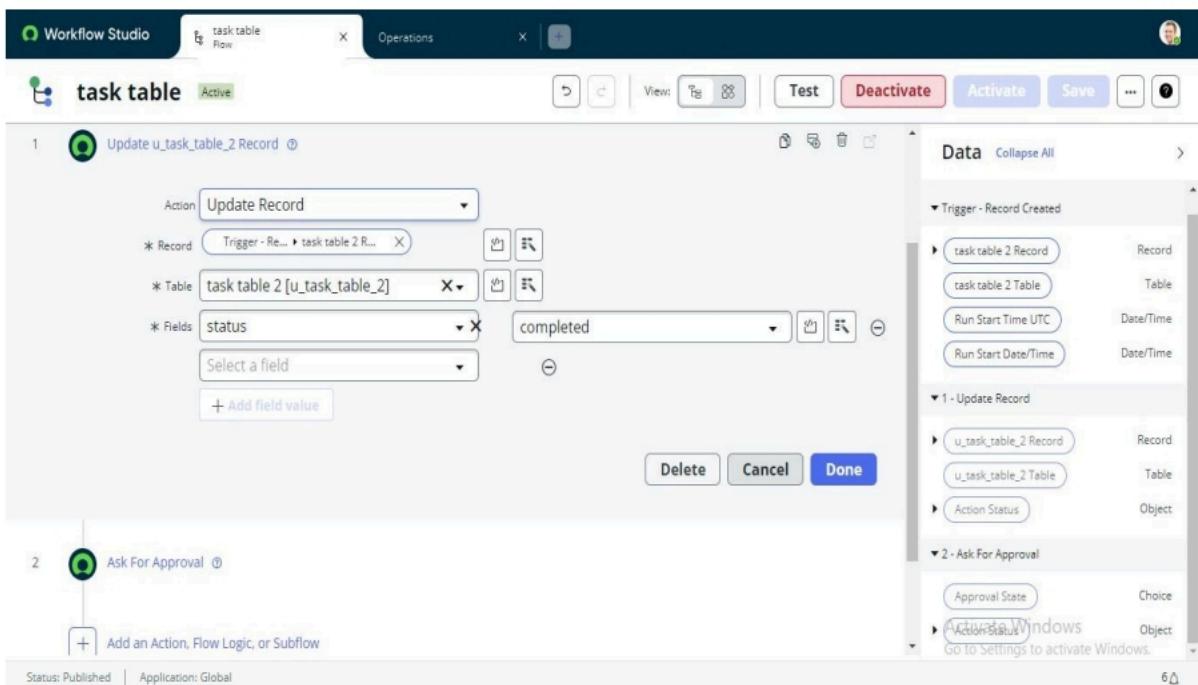
Next Step:

1. Click Add a Trigger.
2. Search and select Create Record.
3. Set the table name to Task Table.
4. Define conditions:
Status → In Progress
Comments → Feedback
Assigned To → Bob
5. Click Done to save.



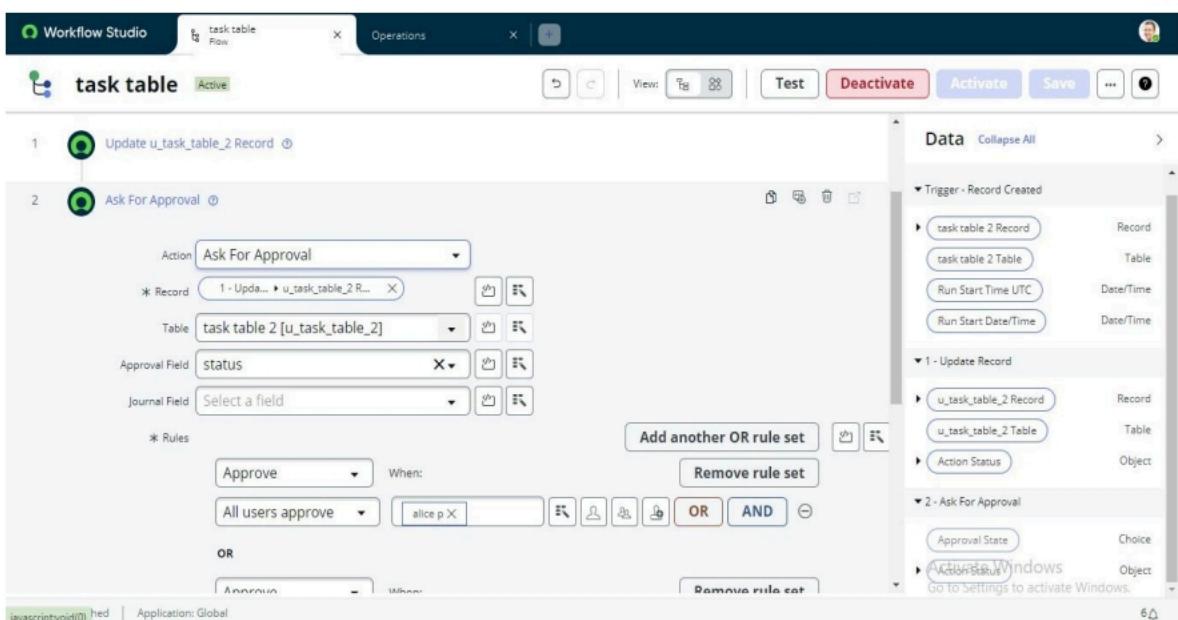
Next Step:

1. Click Add an Action.
2. Search and select Update Records.
3. In the Record field, drag the required fields from the right-side data panel.
4. The table will auto-assign.
5. Set the field Status to the value Completed.
6. Click Done to save.



Next Step:

1. Under Actions, click Add an Action.
2. Search and select Ask for Approval.
3. In the Record field, drag the required fields from the right-side data panel.
4. The table will auto-assign.
5. Set the approval field to Status.
6. Assign Alice P as the approver.
7. Click Done to save.



9. In the Application Navigator, search for Task Table.
10. Verify that the Status field is updated to Completed.

The screenshot shows the ServiceNow Task Table edit screen. At the top, there's a header bar with the ServiceNow logo, a search bar containing "task table 2 - Created 2024-10-22 22:25:18", and various navigation icons. Below the header, the page title is "task table 2" and the creation date is "Created 2024-10-22 22:25:18". The main content area contains several input fields:

- "task id" (input field)
- "task name" (input field)
- "status" (dropdown menu set to "completed")
- "assigned to" (input field with value "bob")
- "comments" (input field)
- "due date" (input field with calendar icon)

At the bottom left are "Update" and "Delete" buttons. A watermark at the bottom right reads "Activate Windows Go to Settings to activate Windows."

11. Open the Application Navigator and search for My Approvals.
12. Click on My Approvals under Service Desk.
13. Alice P will receive an approval request. Right-click on the request and select Approve.

The screenshot shows a ServiceNow interface for managing approvals. The top navigation bar includes links for All, Favorites, History, Workspaces, Approvals, and a search bar. The main content area displays a grid of approval records. The columns are labeled: State, Approver, Comments, Approval for, and Created. A search bar at the top of the grid allows filtering by State. The data in the grid is as follows:

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	Act 2024-09-01 06:15:25	

At the bottom right of the grid, there is a message: "Go to Settings to activate Windows." and a small circular icon.

Conclusion:

This scenario demonstrates a well-structured approach to project management by clearly defining the roles of Alice and Bob within an organized workflow. With Alice providing direction and Bob executing assigned tasks, the team collaborates effectively to achieve project goals. The use of tables helps in systematically organizing key information, making it easier to monitor projects, tasks, and progress updates. Overall, this system strengthens accountability, improves communication, and supports the successful completion of projects.