

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

## **Project Report**

Team Id: NM2025TMID13044

Team Size : 4

Team Leader: Meshak Jebasraja.B

Team Members: Ebinezer B, Mohamed Ravuthar S, Goutham J

## **Project Description:**

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 Access Controls:** Clearly establish roles and groups to manage user permissions. Assign roles based on job function (e.g., Project Manager, Team Member) and use groups for teams or departments. This ensures users have only the access they need, following a "least privilege" model to prevent security risks.

**2. Streamline Workflows:** Automate the entire user lifecycle, including onboarding, role changes, and offboarding. This instantly grants or revokes access, reducing administrative effort and closing potential security gaps when employees join, change roles, or leave.

**3. Monitor and Audit:** Continuously monitor user activities and access rights. Implement a system to log who accessed what and when. Regular audits help identify and address unusual activity or policy violations, ensuring security policies are consistently enforced and data remains secure.

## **TASK INITIATION:**

## Milestone 1: Users

### Create Users:

#### Steps:

1. Open **ServiceNow** and log in to your account.
2. From the left navigation pane, click on **All** and use the search bar to look for **Users**.
3. Under the **System Security** section in the results, select **Users**.
4. On the Users page, click the **New** button to start creating a new user record.
5. Fill in the required user details, such as name, email, and any other necessary information.
6. Once all details are entered, click **Submit** to create the new user.

### Create one more user:

The screenshot shows the ServiceNow user creation form. The top navigation bar includes 'servicenow', 'All', 'Favorites', 'History', 'Workspaces', 'Admin', and a user profile 'User - alice p'. A search bar is on the right. Below the navigation bar, there are tabs for 'User - alice p' and 'alice p'. The form is divided into two main sections. The left section contains fields for 'User ID' (alice), 'First name' (alice), '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' (alice@gmail.com), 'Identity type' (Human), 'Language' (-- None --), 'Calendar integration' (Outlook), 'Time zone' (System (America/Los\_Angeles)), 'Date format' (System (yyyy-MM-dd)), 'Business phone', and 'Mobile phone'. Below these are buttons for 'Update', 'Set Password', and 'Delete'. At the bottom, there are 'Related Links' (View linked accounts, View Subscriptions, Reset a password) and a 'Table' section with tabs for 'Entitled Custom Tables', 'Roles', 'Groups', 'Delegates', 'Subscriptions', and 'User Client Certificates'. The 'Table' section shows a table with columns 'Table', 'Application', and 'Role'.

Table	Application	Role
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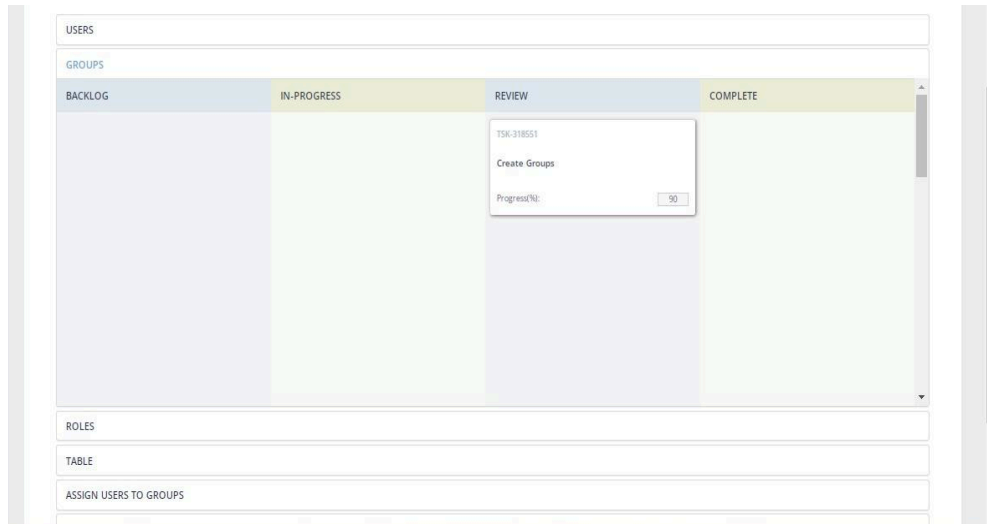
1. Enter the details for the second user.
2. Click **Submit** to save the new user.

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' (bob), '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 labeled 'Click to add...'. At the top of the form are buttons for 'Update', 'Set Password', and 'Delete'. Below the form is a 'Related Links' section with links for 'View linked accounts', 'View Subscriptions', and 'Reset a password'. At the bottom, there is a tabbed interface with tabs for 'Entitled Custom Tables', 'Roles', 'Groups', 'Delegates', 'Subscriptions', and 'User Client Certificates'. The 'Groups' tab is currently selected, showing a table with columns for 'Table', 'Application', and 'Role'.

## Milestone 2: Group

### Create Groups:

1. From the navigation pane, click on **All** and search for **Groups**.  
Under the **System Security** section in the results, select **Groups**.
2. On the Groups page, click the **New** button to create a new group.
3. Enter the required group details, such as the group name and description.
4. Once all details are entered, click **Submit** to save the group.



## Milestone 3: Roles

### Create Roles:

1. From the navigation pane, click on **All** and search for **Roles**.
2. Under the **System Security** section in the results, select **Roles**.
3. On the Roles page, click the **New** button to create a new role.
4. Enter the required details for the role, such as role name and description.
5. Once all details are filled in, click **Submit** to save the new role.

servicenow All Favorites History Workspaces Admin 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. To create another role, click on **New** again.

8. Enter the role details as **Team Member**.

9. Click **Submit** to save this role.

servicenow All Favorites History Workspaces Admin Role - Team member

Name Team member Application Global Elevated privilege ☐

Description

Update Delete

Contains Roles (1) Applications with Role (1) Modules with Role Custom Tables

for text Search

Role = Team member

Contains

u\_task\_table2\_user

1 to 1 of 1

## Milestone 4: Table

### Create Table:

1. From the navigation pane, click on **All** and search for **Tables**.
2. Under **System Definition**, select **Tables**.
3. Click **New** to create a new table.
4. Fill in the details:
5. **Label:** *Project Table*
6. Check the boxes for **Create module** and **Create mobile module**.
7. In the New **Menu Name**, enter the *Project Table*.
8. Under **Table Columns**, add the required columns.
9. Click **Submit** to save the table

The screenshot shows the ServiceNow interface for creating a new table. The top navigation bar includes 'servicenow', 'All', 'Favorites', 'History', 'Workspaces', and 'Admin'. The current page is 'Table - project table'. The main content area shows the 'Columns' tab with a list of columns for the 'project table'. The columns are defined as follows:

Column label	Type	Reference	Max length	Default value	Display
description	String	(empty)	40		false
Created	Date/Time	(empty)	40		false
Sys ID	Sys ID (GUID)	(empty)	32		false
end date	Date	(empty)	40		false
project name	String	(empty)	40		false
Updated by	String	(empty)	40		false
Updates	Integer	(empty)	40		false
project manager	String	(empty)	40		false
status	Choice	(empty)	40		false
Project Id	Integer	(empty)	40		false

### Create one more table:

10. Fill in the details:

**Label:** *Task Table 2*

Check the boxes for **Create module** and **Create mobile module** if required.

In **New Menu Name**, enter *Task Table 2*.

Under **Table Columns**, add the required columns.

11. Click **Submit** to save the new table.

The screenshot shows the ServiceNow interface for configuring a new table named 'task table2'. The 'Columns' tab is active, displaying a list of dictionary entries. The 'Label' is 'task table2' and the 'Name' is 'u\_task\_table2'. The 'Application' is 'Global'. The 'Table Columns' section shows a search bar and a list of 13 columns.

Column label	Type	Reference	Max length	Default value	Display
Sys ID	Sys ID (GUID)	(empty)	32		false
Created	Date/Time	(empty)	40		false
task id	Integer	(empty)	40		false
Updated by	String	(empty)	40		false
Class	System Class Name	(empty)	80	javascript:current.getTableName();	false
Updates	Integer	(empty)	40		false
assign to	String	(empty)	40		false
due date	Date	(empty)	40		false
comments	String	(empty)	40		false
Updated	Date/Time	(empty)	40		false
Created by	String	(empty)	40		false
task name	String	(empty)	40		false
status	Choice	(empty)	40		false

## Milestone 5: Assign Users To Groups

### Assign users to project team group

1. Open **ServiceNow** and log in to your account.
2. From the navigation pane, click on **All** and search for **Groups**.
3. Under **System Security**, select **Groups**.
4. From the list, open the **Project Team** group.
5. Scroll to the **Group Members** section.



6. Click **Edit** to manage the members.
7. Select **Alice P** and **Bob P** from the available users, then click **Save**.

The screenshot shows the ServiceNow interface for configuring a group named 'project team'. The top navigation bar includes 'servicenow', 'All', 'Favorites', 'History', 'Workspaces', 'Admin', and a search bar. The breadcrumb trail is 'Group - project team'. The main form contains fields for 'Name' (project team), 'Group email', 'Manager', 'Parent', and 'Description'. Below the form are 'Update' and 'Delete' buttons. The 'Roles' section is active, showing 'Group Members (2)' and 'Groups'. A table lists the group members:

User
Bob p
alice p

The table has a search bar and a 'User' column. The pagination shows '1 to 2 of 2'.

## Milestone 6: Assign Roles To Users

### Activity 1:

#### Assign Roles To Alice User

1. Open ServiceNow and log in to your account.
2. From the navigation pane, click on All and search for Users.
3. Under System Security, select Users.
4. From the list, open the Project Manager user.
5. In the user form, scroll to the Groups section.
6. Click Edit, select Project Member, and save the changes.

- Next, in the Roles section, click Edit and add the roles u\_project\_table and u\_task\_table.
- Click Save, then Update the form to apply the changes.

The screenshot shows the ServiceNow user management interface for a user named 'alice p'. The form includes fields for personal and contact information, as well as checkboxes for account settings. The 'Roles' section is highlighted, showing a table of roles assigned to the user.

Role	State	Inherited	Inheritance Count
u_project_table_user	Active	false	
project member	Active	false	
u_task_table2_user	Active	false	

## Activity 2:

### Assign Roles To Bob User

- Open ServiceNow and log in to your account.
- From the navigation pane, click on **All** and search for **Users**.
- Under **System Security**, select **Users**.
- From the list, open the **Bob P** user.
- In the user form, scroll to the **Groups** section.
- Click **Edit**, assign **Team Member** and the required **Table Role**, then save the changes.
- Click on the profile icon and **Impersonate User** as **Bob P**.

- Once impersonated, you should be able to see **Task Table 2** in the navigation pane

The screenshot shows the ServiceNow User Profile page for User - Bob p. The page includes fields for Last name, Title, Department, Password needs reset, Locked out, Active, Web service access only, Internal Integration User, Calendar Integration, Time zone, Date format, Business phone, and Mobile phone. Below these fields are buttons for Update, Set Password, and Delete. There are also links for View linked accounts, View Subscriptions, and Reset a password. At the bottom, there is a table of roles.

Role	State	Inherited	Inheritance Count
Team member	Active	false	
u_task_table2_user	Active	false	

## Milestone 7:Application Access

### Assign Table Access To Application

- When a table is created, ServiceNow automatically generates an application and a module for it.
- In the Application Navigator, search for the **Project Table** application.
- Open the application, then click **Edit Module**.
- Assign the **Project Member** role to this application.
- Next, search for the **Task Table 2** application and open it.
- Click **Edit Application**, then assign both the **Project Member** and **Team Member** roles.

**servicenow** All Favorites History Workspaces 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 u\_project\_table\_user

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

Modules Order Search Actions on selected rows... New

Application menu = project table

**servicenow** All Favorites History Workspaces Admin Application Menu - project table Search

Application Menu project table Update Delete

Roles u\_project\_table\_user

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

Modules Order Search Actions on selected rows... New

Application menu = project table

Title	Table	Active	Filter	Order	Link type	Device type	Roles	Updated
project tables	project table [u_project_table]	true			List of Records		u_project_table_user	2025-09-05 11:40:10

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## Milestone 8: Access Control List

### Create ACL

1. Open ServiceNow and log in to your account.
2. From the navigation pane, click on All and search for ACL.
3. Under System Security, select Access Control (ACL).

4. At the top, click Elevate Role to gain the necessary permissions.
5. Click New to create a new ACL.
6. Fill in the required details for the ACL.

The screenshot shows the ServiceNow 'Access Control - New Record' form. At the top, there's a navigation bar with 'servicenow' logo and tabs for 'All', 'Favorites', 'History', and 'Admin'. The main header is 'Access Control - New Record' with a search bar and a 'Submit' button. A warning message 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]), 'status' (dropdown), 'Description' (text area), 'Applies To' (No. of records matching the condition: 1), 'Add Filter Condition', 'Add "OR" Clause', and a table for conditions with columns for field, operator, and value. A 'Conditions' section is visible at the bottom, and a footer note states: 'Access Control Rules have two decision types, and these types will behave differently depending on conditions.'

7. Scroll down to the Requires Role section.
8. Double-click to insert a new row.
9. Assign the Task Table and Team Member role.
10. Click Submit to save the ACL.
11. Repeat the process to create four additional ACLs for the specified fields.

servicenow

All Favorites History Workspaces Admin

Access Controls

Search

Access Controls Name Search

All > Name >> u\_task\_table

Name	Decision Type	Operation	Type	Active	Updated by	Updated
u_task_table2	Allow If	delete	record	true	admin	2025-09-05 11:42:40
u_task_table2	Allow If	write	record	true	admin	2025-09-05 11:42:40
u_task_table2	Allow If	read	record	true	admin	2025-09-05 11:42:40
u_task_table2	Allow If	create	record	true	admin	2025-09-05 11:42:40
u_task_table2.u_assign_to	Allow If	write	record	true	admin	2025-09-05 12:21:31
u_task_table2.u_due_date	Allow If	write	record	true	admin	2025-09-05 12:22:26
u_task_table2.u_status	Allow If	write	record	true	admin	2025-09-05 12:19:46
u_task_table2.u_task_id	Allow If	write	record	true	admin	2025-09-05 12:23:45
u_task_table2.u_task_name	Allow If	write	record	true	admin	2025-09-05 12:24:38
u_team_member	Allow If	create	record	true	admin	2025-09-05 11:36:12
u_team_member	Allow If	delete	record	true	admin	2025-09-05 11:36:12
u_team_member	Allow If	write	record	true	admin	2025-09-05 11:36:12
u_team_member	Allow If	read	record	true	admin	2025-09-05 11:36:12
VA Channel Integration ACL	Allow If	execute	REST_Endpoint	true	admin	2023-04-05 00:28:13
VA Designer Config	Allow If	execute	REST_Endpoint	true	admin	2024-05-22 12:09:23
VaCallbackPropertyUtil	Allow If	execute	client_callable_script_include	true	admin	2022-05-09 01:51:24
ValidateAesVersion	Allow If	execute	client_callable_script_include	true	admin	2022-01-11 10:48:04
ValidateAmplitudeProfileUser	Allow If	execute	REST_Endpoint	true	admin	2024-06-13 13:13:06

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12. Click the profile icon at the top right corner.

13. Select Impersonate User.

14. Choose the Bob user.

15. From the navigation pane, go to All and open Task Table 2 under the application menu.

16. Verify that the Comment and Status fields have edit access.

servicenow

All Favorites History

task table 2 - Create Created

task table 2  
New record

Submit

task id

task name

status -- None --

assigned to

comments

due date

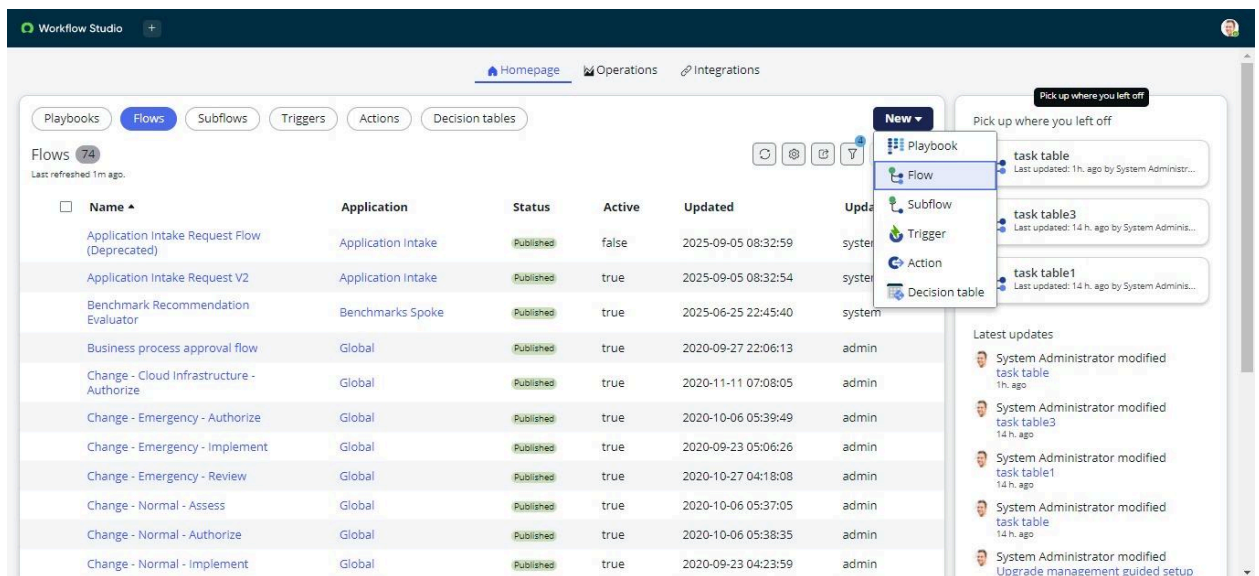
Submit

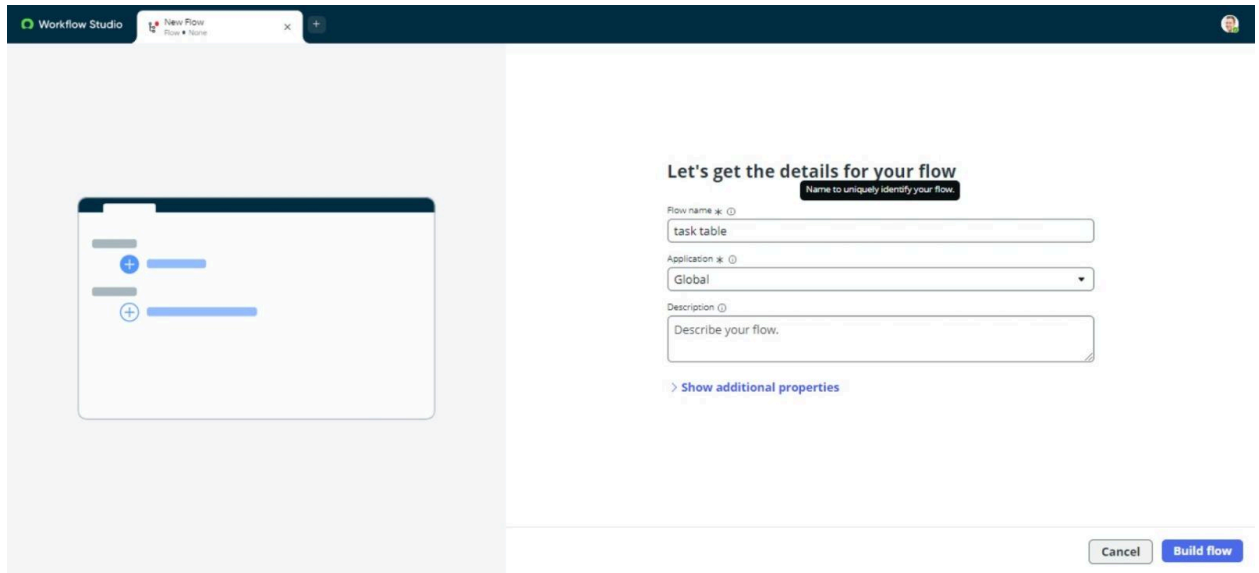
## Milestone 9: Flow

### Create a Flow To Assign Operation Tickets To Group

#### Activity 1:

1. Open **ServiceNow** and log in to your account.
2. From the navigation pane, click on **All** and search for **Flow Designer**.
3. Under **Process Automation**, select **Flow Designer**.
4. Once Flow Designer opens, click **New** and choose **Flow**.
5. In the **Flow Properties**, enter the **Flow Name** as *Task Table*.
6. Set the **Application** to *Global*.
7. Click **Build Flow** to start designing the flow.

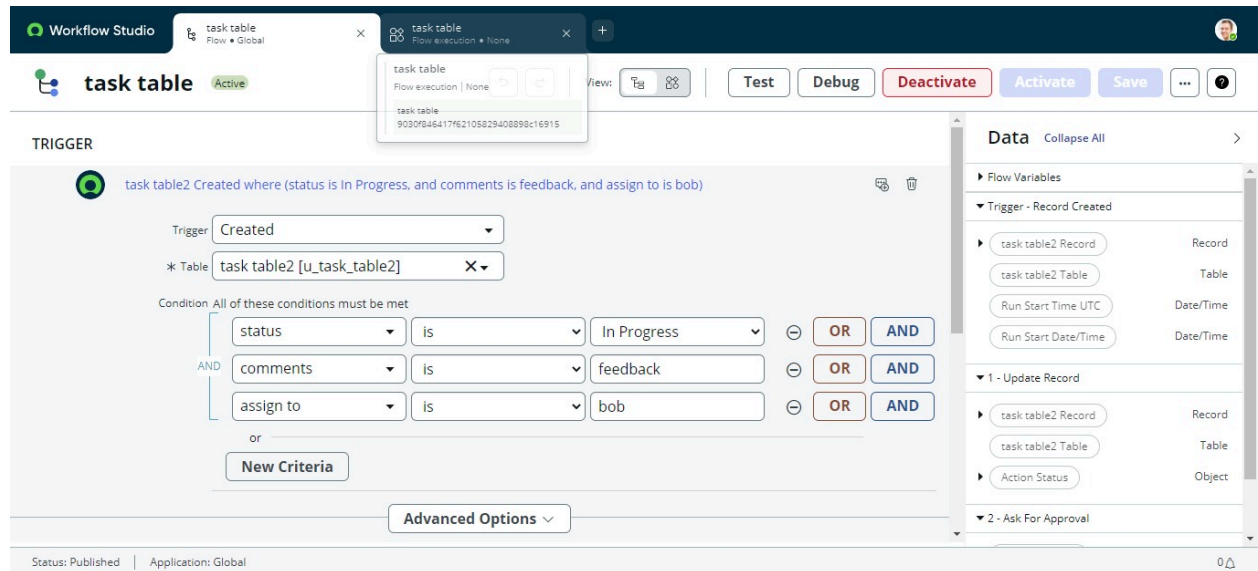




## Activity 2:

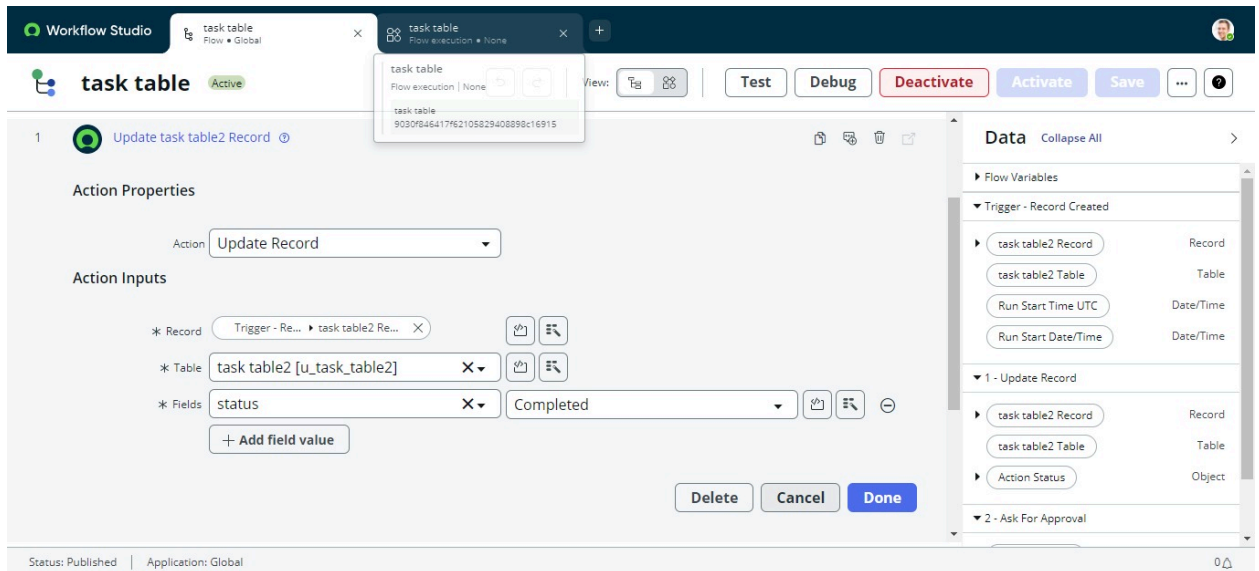
1. In the Flow Designer, click **Add a Trigger**.
2. From the available options, search for **Create Record** and select it.
3. Set the **Table Name** to *Task Table*.
4. Define the conditions as follows:
  - **Field:** Status → **Operator:** Is → **Value:** In Progress
  - **Field:** Comments → **Operator:** Is → **Value:** Feedback
  - **Field:** Assigned To → **Operator:** Is → **Value:** Bob
5. Once all conditions are set, click **Done** to save the trigger.





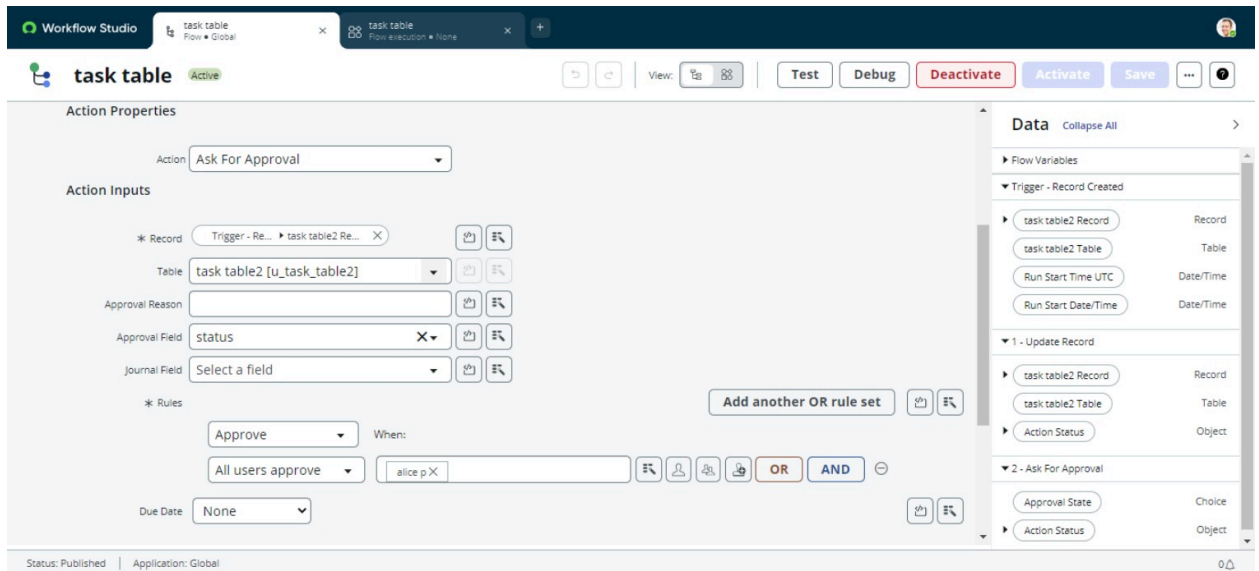
### Activity 3:

1. In the Flow Designer, click **Add an Action**.
2. From the options, search for **Update Records** and select it.
3. In the **Record** field, drag the fields from the **Data Pill** panel on the right side.
4. The **Table** will be automatically assigned after selecting the record.
5. Add the field **Status** and set its value to *Completed*.
6. Click **Done** to save the action.



#### Activity 4:

1. In the **Actions** section of Flow Designer, click **Add an Action**.
2. From the list of actions, search for **Ask for Approval** and select it.
3. In the **Record** field, drag the fields from the **Data Pill** panel on the right side.
4. The **Table** will be automatically assigned after selecting the record.
5. Set the **Approval Field** to *Status*.
6. Assign **Alice P** as the approver.
7. Click **Done** to save the action.



8. Go to the **Application Navigator** and search for the **Task Table**.
9. Verify that the **Status** field is updated to *Complete*.
10. Again in the **Application Navigator**, search for **My Approvals**.
11. Under **Service Desk**, click on **My Approvals**.
12. You will see an approval request assigned to **Alice P**.
13. Right-click on the request and select **Approve**.

## Conclusion:

This scenario demonstrates a structured approach to project management by clearly defining the roles of Alice and Bob within the workflow. With Alice providing oversight and Bob focusing on execution, the team collaborates effectively to drive progress. The use of tables organizes essential project data, making it easier to track tasks, monitor updates, and measure overall progress. This system not only promotes accountability but also enhances communication and transparency, ultimately supporting the successful completion of projects.

