



**Sridevi Arts & Science
College Ponneri**

**PROJECT NAME: OPTIMIZING USER ,GROUP AND ROLE
MANAGEMENT WITH ACCESS
CONTROL AND WORKFLOWS**

TEAM ID: NM2025TMID19627

A PROJECT REPORT

Submitted by

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BACHELOR

OF

COMPUTER APPLICATIONS

**SRIDEVI ARTS AND SCIENCE COLLEGE
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SEPTEMBER-2025

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

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:

1. Define User Roles Clearly: Establish distinct roles for Alice (Project Manager) and Bob (Team Member) to ensure clarity in responsibilities and access rights within the project management tool.

2. Implement Access Control Mechanisms: Create a system that restricts Bob's access to project creation and editing features while allowing him to view and update his assigned tasks, thereby preventing unauthorized changes.

3. Streamline Workflow Processes: Develop a structured workflow for task assignment and progress tracking, ensuring that Alice can easily assign tasks to Bob and monitor their completion in a timely manner.

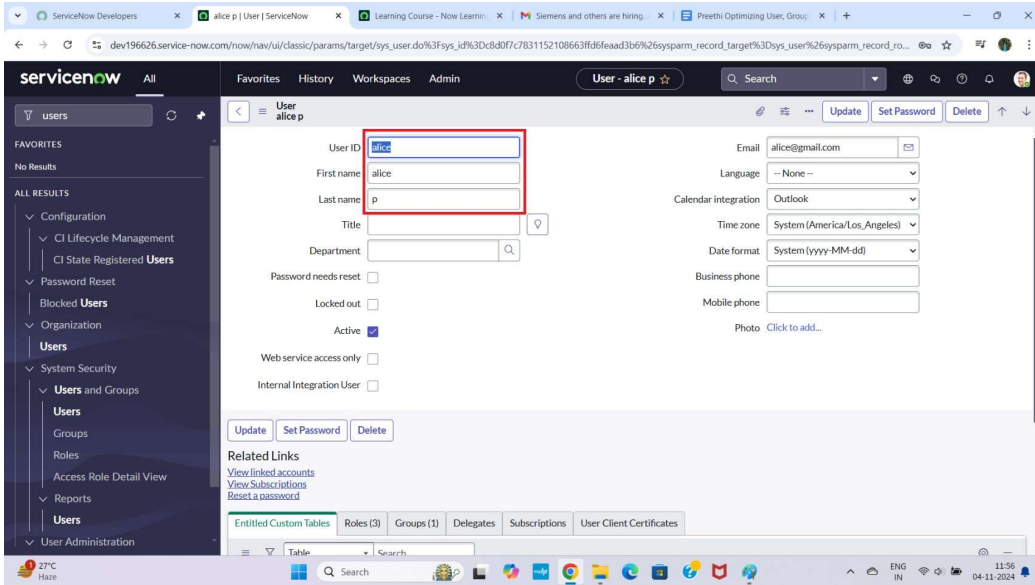
Skills: Users, Groups, Roles, Tables, Access Control List, Flow Designer

TASK INITIATION

Milestone 1 : Users

Activity 1: Create Users

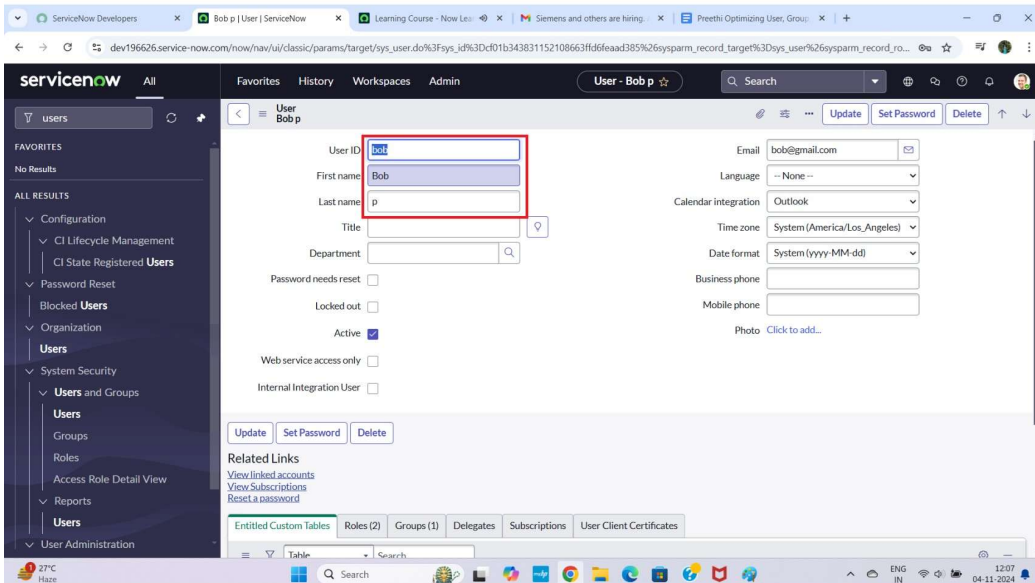
1. Open service now
2. Click on All >> search for users
3. Select Users under system security
4. Click on new
5. Fill the following details to create a new user
6. Click on submit



The screenshot shows the ServiceNow User Administration interface for a user named 'alice p'. The left sidebar contains a navigation menu with options like 'Configuration', 'CI Lifecycle Management', 'Password Reset', 'Blocked Users', 'Organization', 'Users', 'System Security', 'Users and Groups', 'Groups', 'Roles', 'Access Role Detail View', 'Reports', and 'User Administration'. The main content area displays the user's details, including User ID (alice), First name (alice), Last name (p), Title, Department, Password needs reset, Locked out, Active (checked), Web service access only, and Internal Integration User. The right sidebar contains fields for Email (alice@gmail.com), Language, Calendar integration (Outlook), Time zone (System (America/Los Angeles)), Date format (System (yyyy-MM-dd)), Business phone, Mobile phone, and Photo. At the bottom, there are buttons for 'Update', 'Set Password', and 'Delete', and a section for 'Related Links' with links to 'View linked accounts', 'View Subscriptions', and 'Reset a password'.

Create one more user:

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

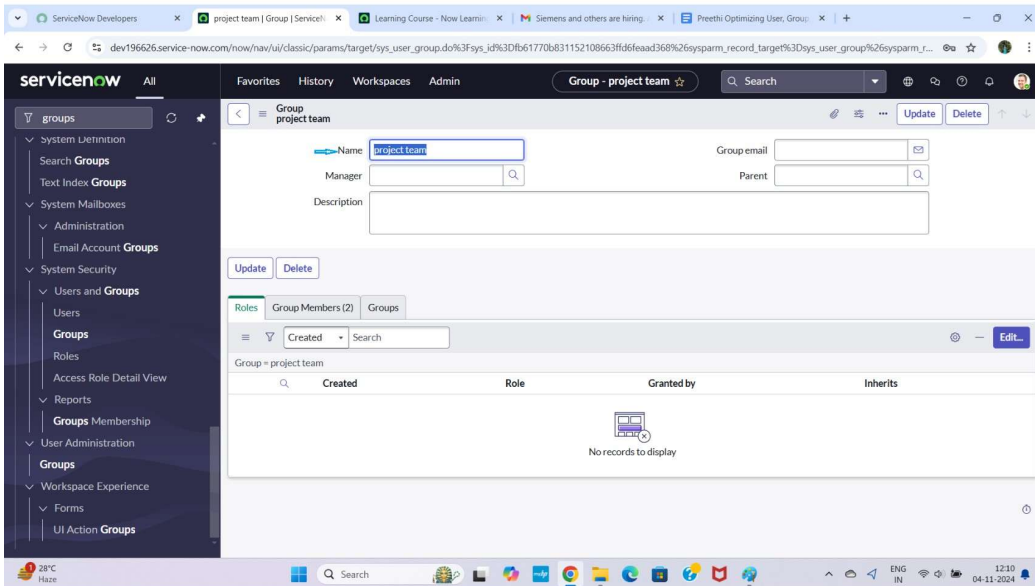


The screenshot shows the ServiceNow User Administration interface for a user named 'Bob p'. The left sidebar contains a navigation menu with options like 'Configuration', 'CI Lifecycle Management', 'Password Reset', 'Blocked Users', 'Organization', 'Users', 'System Security', 'Users and Groups', 'Groups', 'Roles', 'Access Role Detail View', 'Reports', and 'User Administration'. The main content area displays the user's details, including User ID (Bob), First name (Bob), Last name (p), Title, Department, Password needs reset, Locked out, Active (checked), Web service access only, and Internal Integration User. The right sidebar contains fields for Email (bob@gmail.com), Language, Calendar integration (Outlook), Time zone (System (America/Los Angeles)), Date format (System (yyyy-MM-dd)), Business phone, Mobile phone, and Photo. At the bottom, there are buttons for 'Update', 'Set Password', and 'Delete', and a section for 'Related Links' with links to '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



ServiceNow Groups creation form for 'project team'.

Fields to fill:

- Name: project team
- Group email: [empty]
- Manager: [empty]
- Parent: [empty]
- Description: [empty]

Buttons: Update, Delete

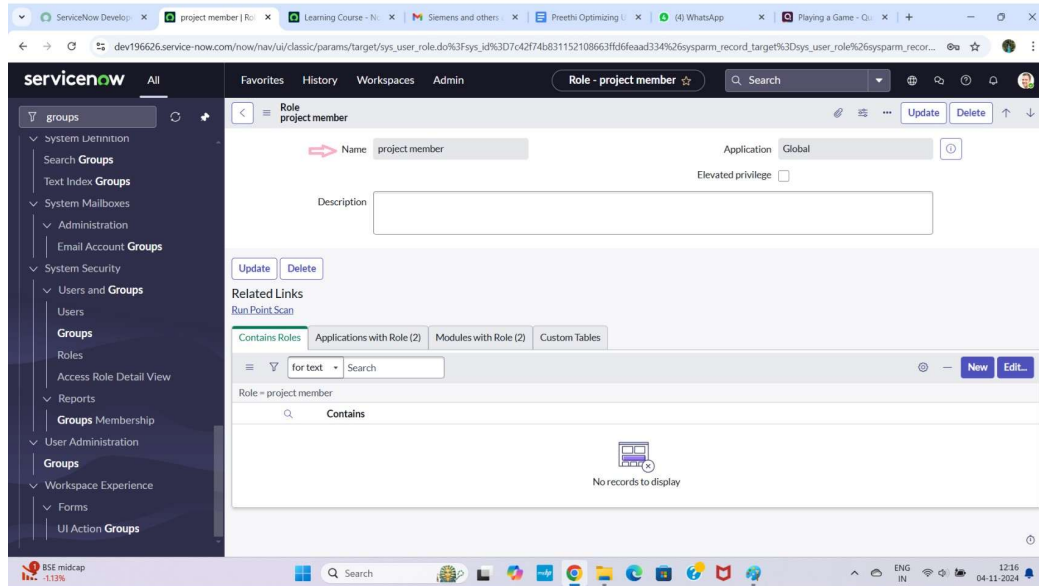
Roles section: Group Members (2), Groups

Created	Role	Granted by	Inherits
No records to display			

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

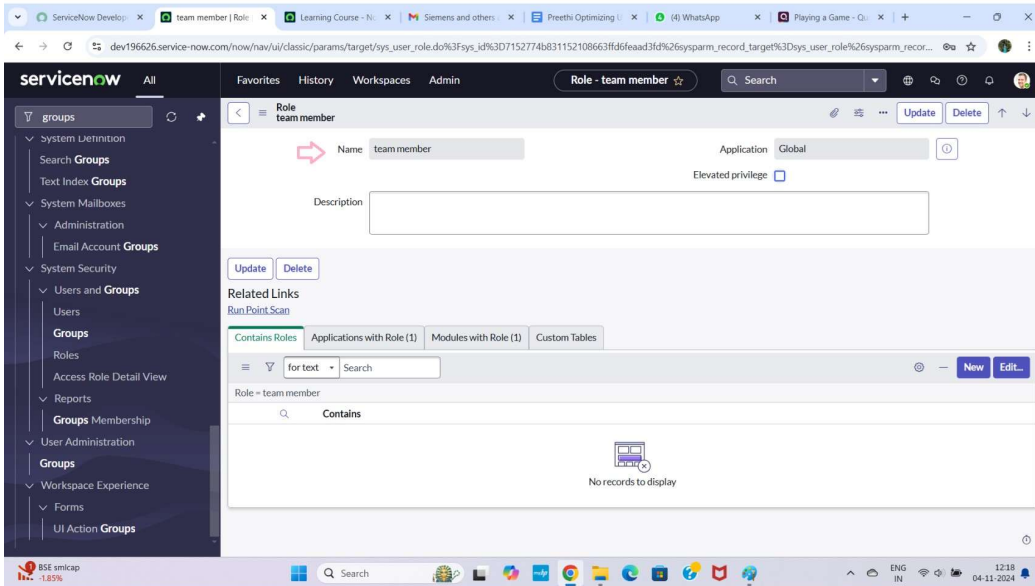


Create one more role:

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

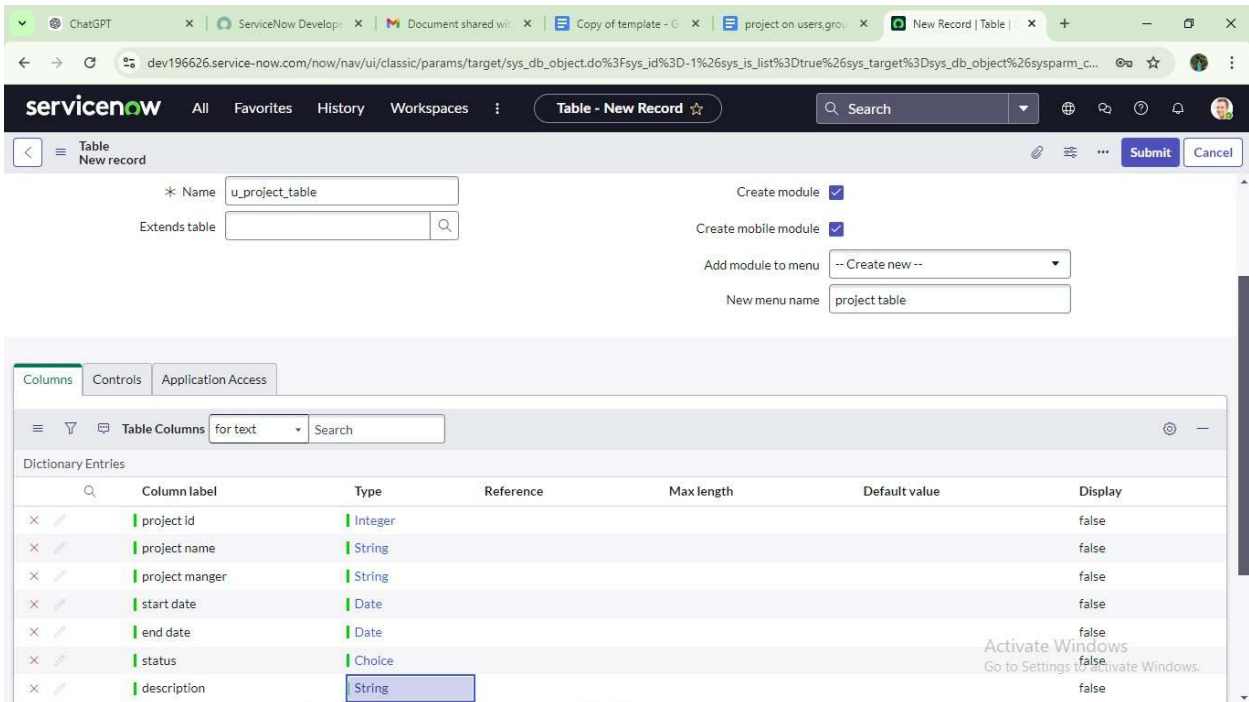
Milestone 4 : Table Activity 1: Create Table

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 interface for configuring a role named 'team member'. The left sidebar contains a navigation menu with categories like 'groups', 'system definition', 'system mailboxes', 'system security', 'reports', 'user administration', and 'workspace experience'. The main content area shows the role configuration form with fields for 'Name' (team member), 'Application' (Global), and 'Description'. Below the form are 'Update' and 'Delete' buttons, and a 'Related Links' section. A table titled 'Contains Roles' is visible, showing no records.

8. Click on submit



The screenshot shows the ServiceNow interface for configuring a new table named 'u_project_table'. The left sidebar is the same as the previous screenshot. The main content area shows the 'Table - New Record' form. Fields include 'Name' (u_project_table), 'Extends table' (empty), 'Create module' (checked), 'Create mobile module' (checked), 'Add module to menu' (dropdown), and 'New menu name' (project table). Below the form are tabs for 'Columns', 'Controls', and 'Application Access'. The 'Columns' tab is active, showing a table of dictionary entries.

Columns	Controls	Application Access
Table Columns		
Dictionary Entries		
Column label	Type	Reference
project id	Integer	
project name	String	
project manger	String	
start date	Date	
end date	Date	
status	Choice	
description	String	

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...

service-now 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...					

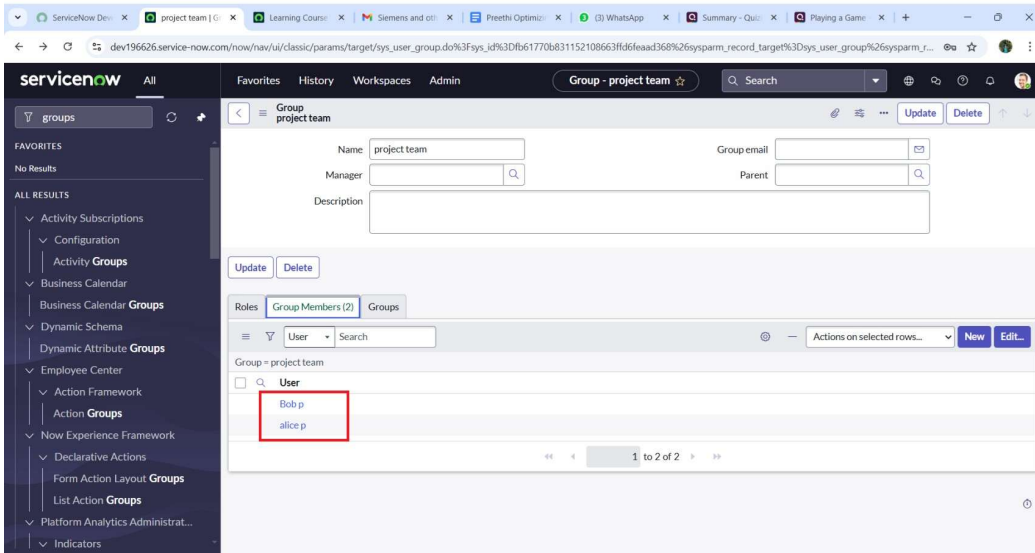
Activate Windows
Go to Settings to activate Windows.

Delete Update Delete All Records

Milestone 5 : Assign users to groups

Activity 1: Assign users to project team group

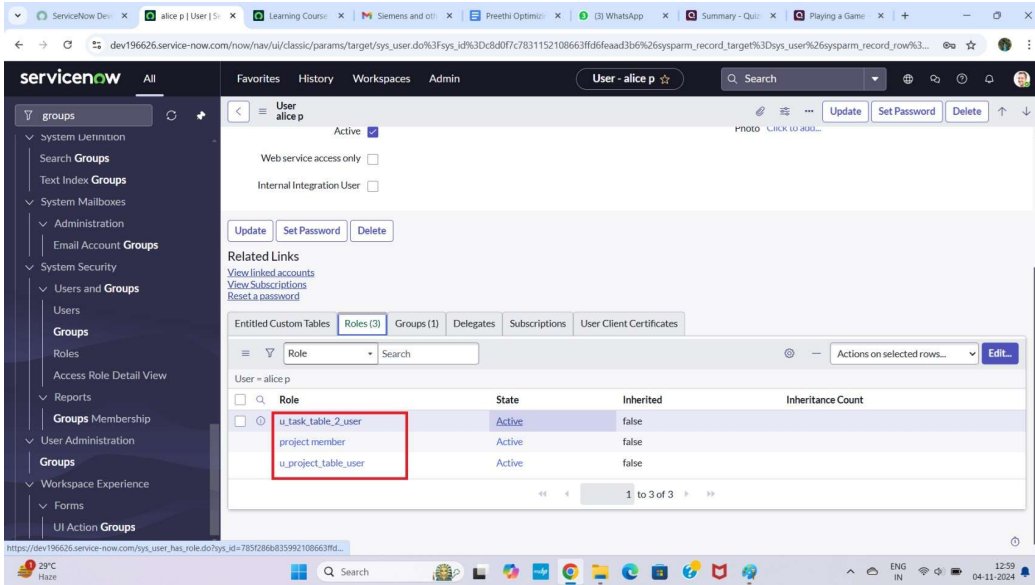
1. Open service now.
2. Click on All >> search for groups
3. Select tables under system definition
4. Select the project team group
5. Under group members
6. Click on edit
7. Select alice p and bob p and save



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.



ServiceNow User Profile: User - alice p

Active ☒

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

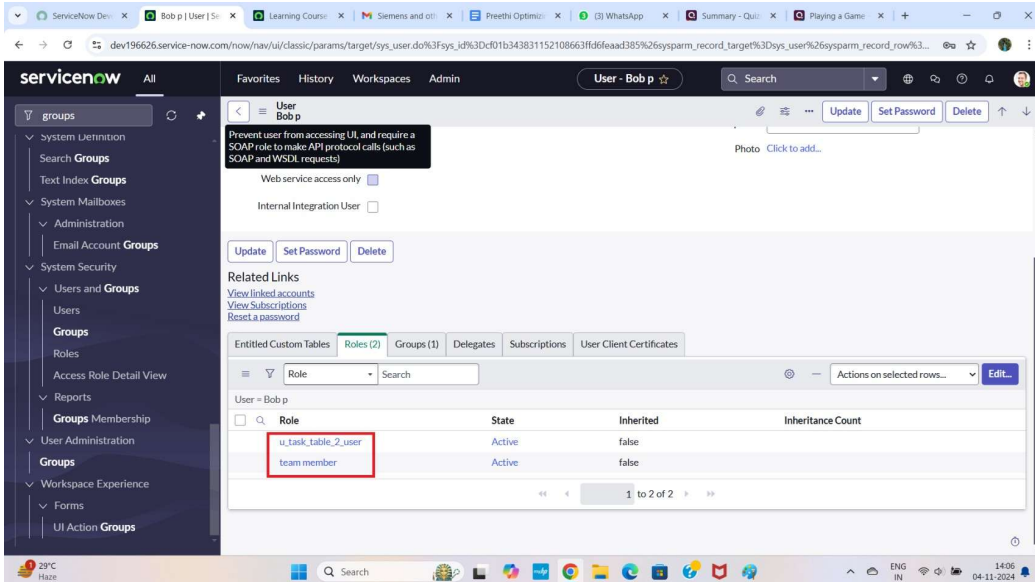
User = alice p

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

1 to 3 of 3

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 Admin console showing user management for 'User - Bob p'. The 'Roles' tab is selected, displaying a table of roles assigned to the user.

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

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

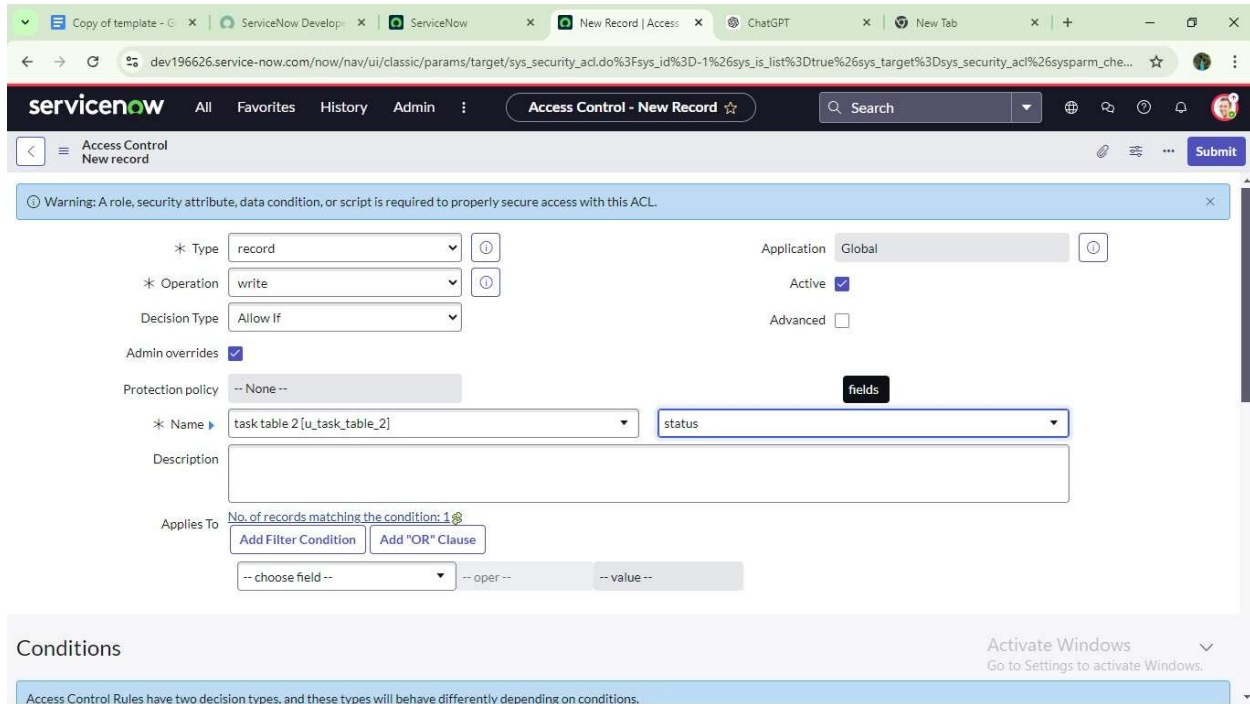
Update Delete

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]

Description:

status

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

Add Filter Condition Add "OR" Clause

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

Conditions

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_ad_list.do%3Fsysparm_query%3Dsys_created_onONToday%40javascript%3Ags.beginningOfToday...

servicenow All Favorites History Workspaces Access Controls Search

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

All > Created on Today

<input type="checkbox"/>	Name	Decision Type	Operation	Type	Active	Updated by	Updated
<input type="checkbox"/>	u_leave_request	Allow If	delete	record	true	admin	2024-10-22 02:27:59
<input type="checkbox"/>	u_leave_request	Allow If	create	record	true	admin	2024-10-22 02:27:59
<input type="checkbox"/>	u_task_table	Allow If	read	record	true	admin	2024-10-22 04:21:28
<input type="checkbox"/>	u_task_table	Allow If	write	record	true	admin	2024-10-22 04:20:15
<input type="checkbox"/>	u_task_table.u_assigned_to	Allow If	write	record	true	admin	2024-10-22 04:33:53
<input type="checkbox"/>	u_task_table.u_due_date	Allow If	write	record	true	admin	2024-10-22 04:33:14
<input type="checkbox"/>	u_task_table.u_task_id	Allow If	write	record	true	admin	2024-10-22 04:27:47
<input type="checkbox"/>	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
<input type="checkbox"/>	u_task_table_2	Allow If	read	record	true	admin	2024-10-22 21:26:57
<input type="checkbox"/>	u_task_table_2	Allow If	read	record	true	admin	2024-10-22 21:05:07
<input type="checkbox"/>	u_task_table_2	Allow If	write	record	true	admin	2024-10-22 21:28:27
<input type="checkbox"/>	u_task_table_2	Allow If	create	record	true	admin	2024-10-22 21:05:06
<input type="checkbox"/>	u_task_table_2	Allow If	delete	record	true	admin	2024-10-22 21:05:07
<input type="checkbox"/>	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.

1 to 20 of 23

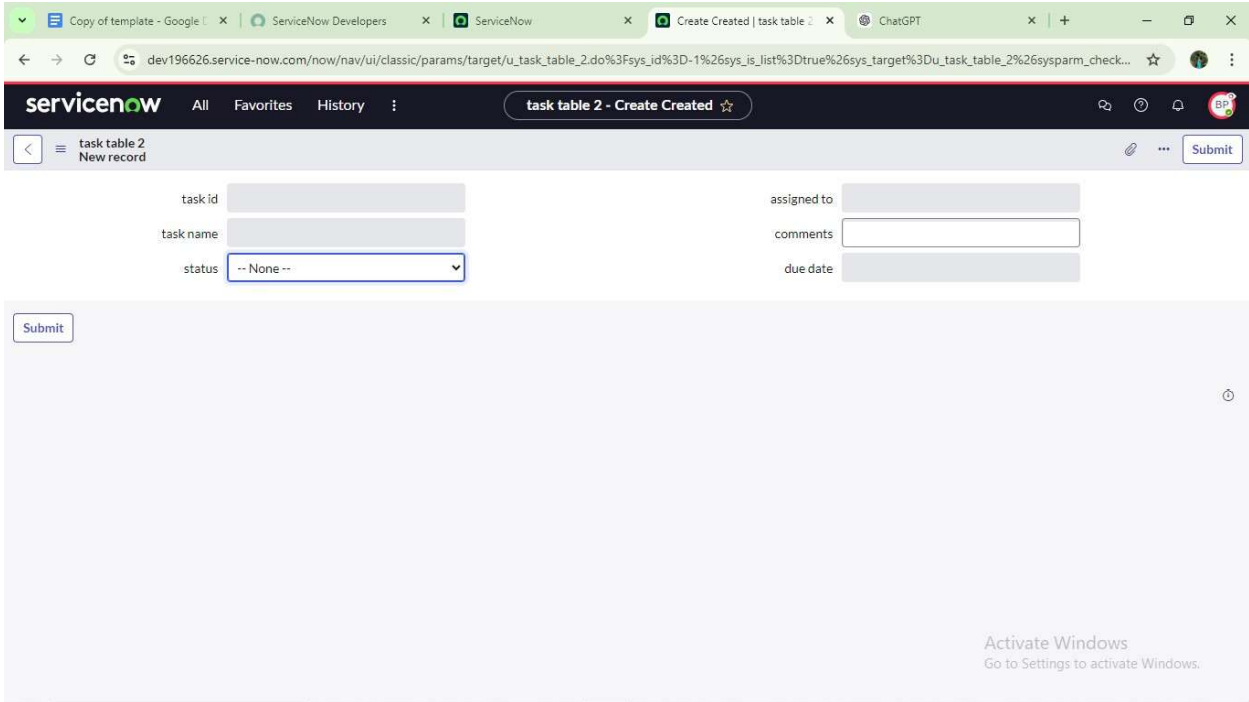
12. Click on profile on top right side

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



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.

Project on user... ServiceNow Dev... ServiceNow... task table | Wor... Created 2024-10-22 2... ChatGPT... New Tab

dev196626.service-now.com/now/nav/ui/classic/params/target/u_task_table_2.do%3Fsys_id%3D08adb02f839992108663ffd6fead3bb%26sysparm_record_target%3Du_task_t...

servicenow All Favorites History task table 2 - Created 2024-10-22 2... Search

flow

FAVORITES
No Results

ALL RESULTS

- Process Automation
 - Workflow Studio
 - Flow Designer
 - Flow & Action Designer
 - Today's Executions
 - Active Flows
 - Content Definitions

assigned to bob

comments

due date

Activate Windows
Go to Settings to activate Windows.

https://dev196626.service-now.com/\$flow-designer.do?sysparm_nostack=true

Project on user... ServiceNow Dev... ServiceNow... Homepage - Flow... Created 2024-10-22 2... ChatGPT... New Tab

dev196626.service-now.com/now/workflow-studio/home/flow

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	2024-09-23 04:23:59
Business process approval flow	Global	Published	true	2020-09-23 04:23:59
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

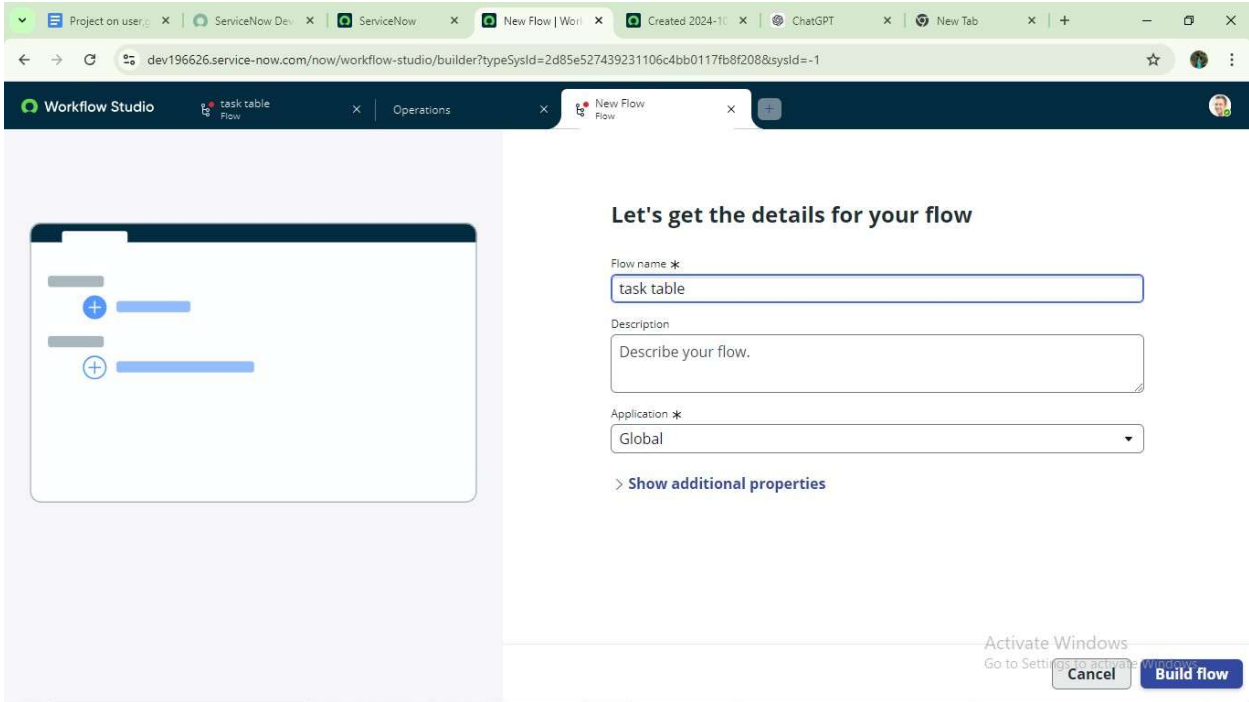
- Playbook
- Flow
- Subflow
- Action
- Decision table

Pick up where you left off

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

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 Flow

Let's get the details for your flow

Flow name *

task table

Description

Describe your flow.

Application *

Global

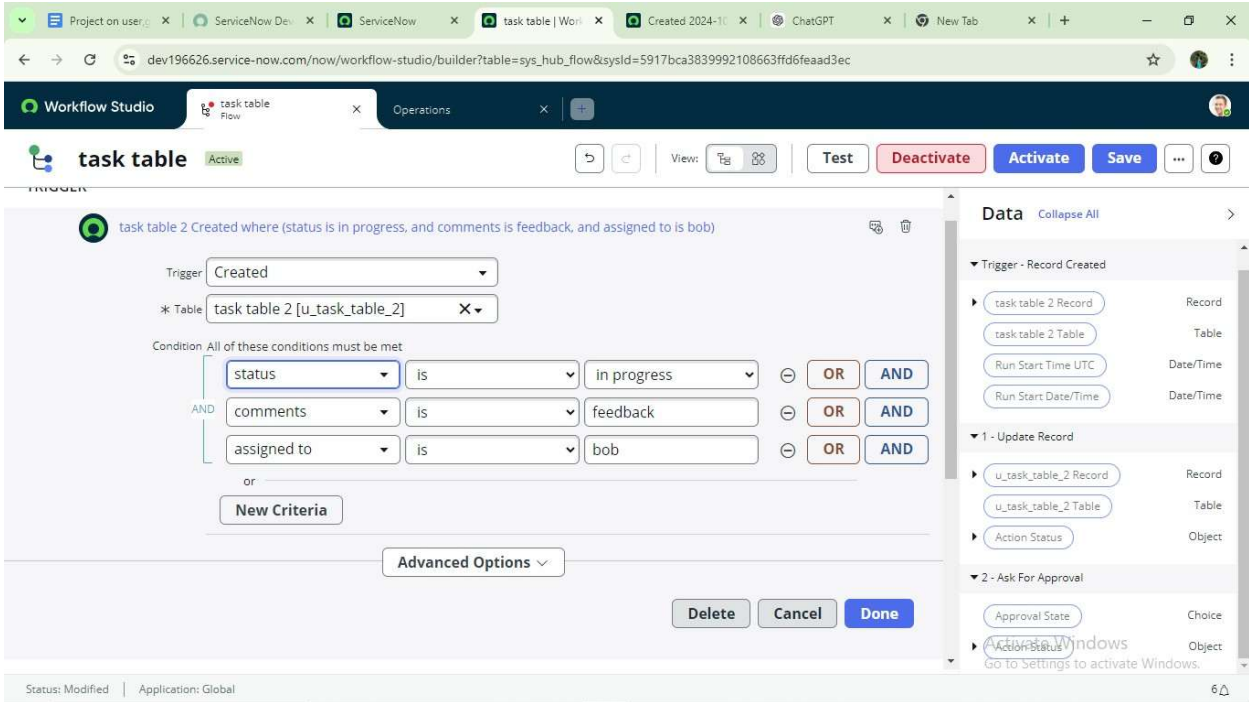
> Show additional properties

Activate Windows
Go to Settings to activate Windows

Cancel Build flow

next step:

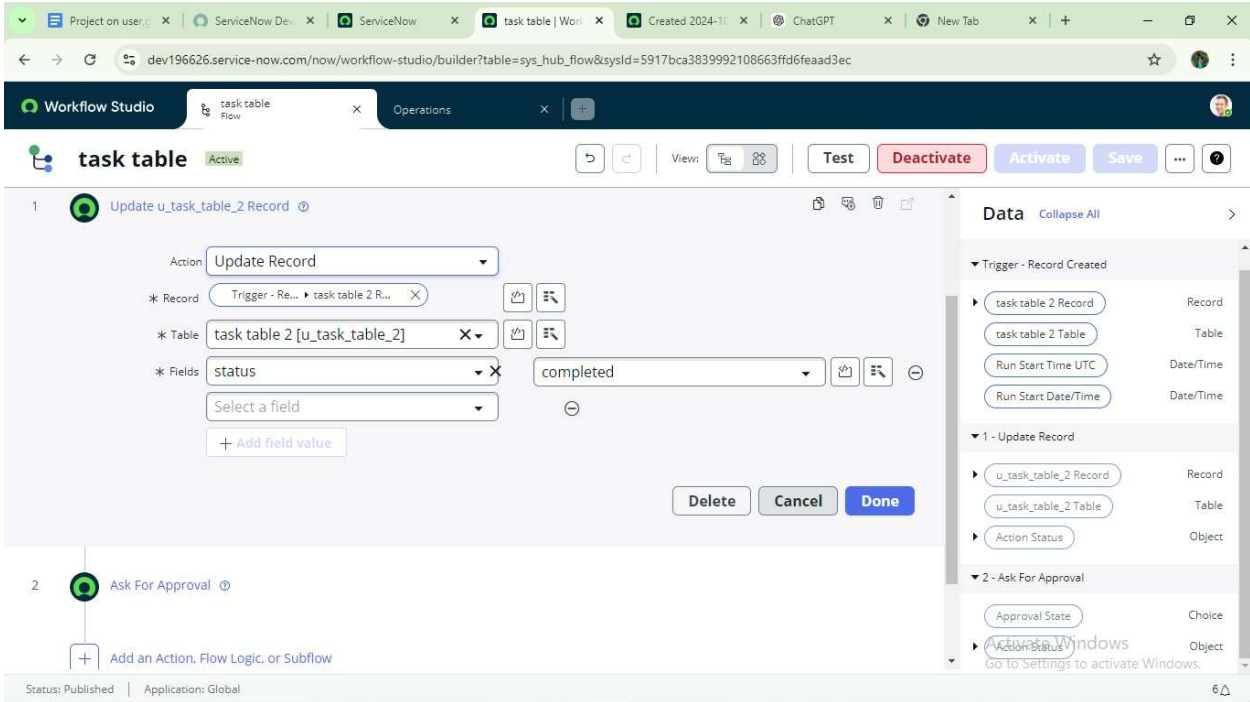
1. Click on Add a trigger
2. Select the trigger in that Search for “create record” and select that.
3. Give the table name as “ task table ”.
4. Give the Condition as Field : status Operator :is Value : in progress
Field : comments Operator :is Value : feedback
Field : assigned to Operator :is Value : 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' pane with a list of available 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 workflow is named "task table" and is currently "Active". It consists of two steps:

- 1. Update u_task_table_2 Record**: This step is configured with the action "Update Record". The record field is set to "Trigger - Re... task table 2 R...", the table is "task table 2 [u_task_table_2]", and the field to be updated is "status" with the value "completed".
- 2. Ask For Approval**: This step is currently empty.

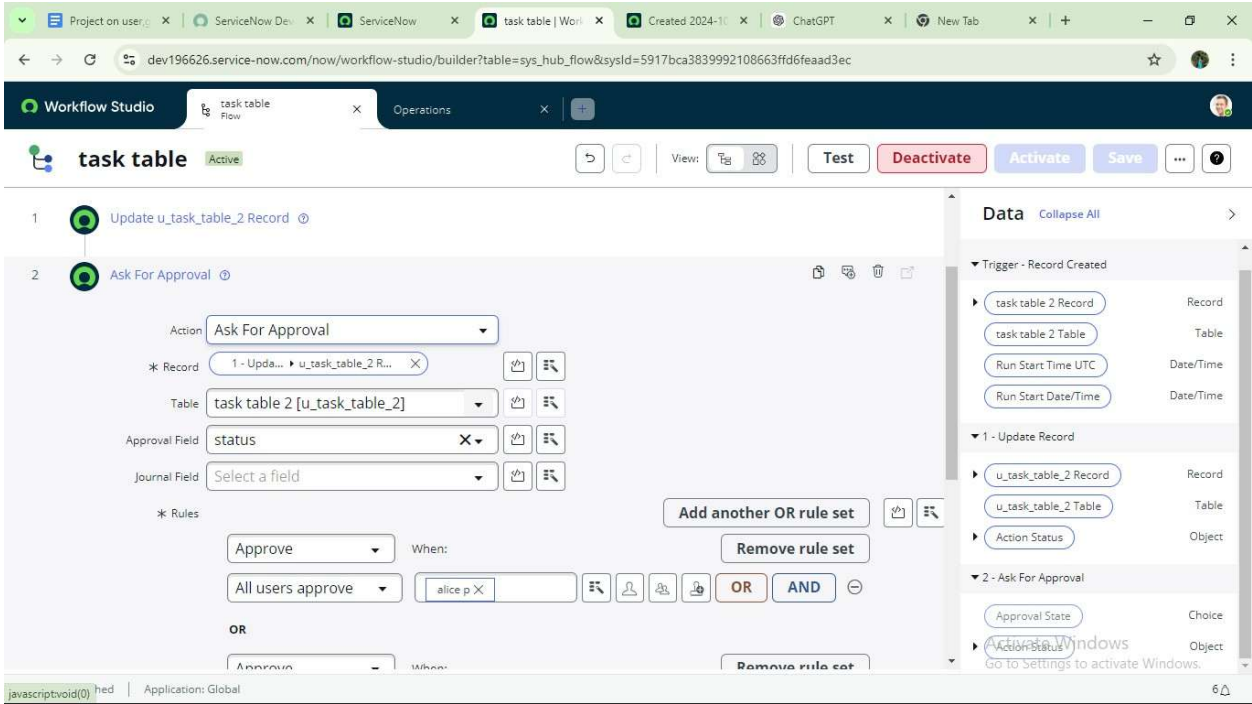
The right-hand pane shows the "Data" section, which lists the data available for the workflow steps:

- Trigger - Record Created**: Includes "task table 2 Record" (Record), "task table 2 Table" (Table), "Run Start Time UTC" (Date/Time), and "Run Start Date/Time" (Date/Time).
- 1 - Update Record**: Includes "u_task_table_2 Record" (Record), "u_task_table_2 Table" (Table), and "Action Status" (Object).
- 2 - Ask For Approval**: Includes "Approval State" (Choice) and "Action Status" (Object).

The bottom status bar indicates the workflow 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.



The screenshot shows the ServiceNow Workflow Studio interface for a workflow named 'task table'. The workflow consists of two steps:

- Update u_task_table_2 Record**: This step is configured with the following details:
 - Action**: Ask For Approval
 - Record**: 1 - Update... u_task_table_2 R...
 - Table**: task table 2 [u_task_table_2]
 - Approval Field**: status
 - Journal Field**: Select a field
 - Rules**:
 - Rule 1: **Approve** When: **All users approve** (with a condition 'alice p X').
 - Rule 2: **Approve** When: (empty).
- Ask For Approval**: This step is currently empty.

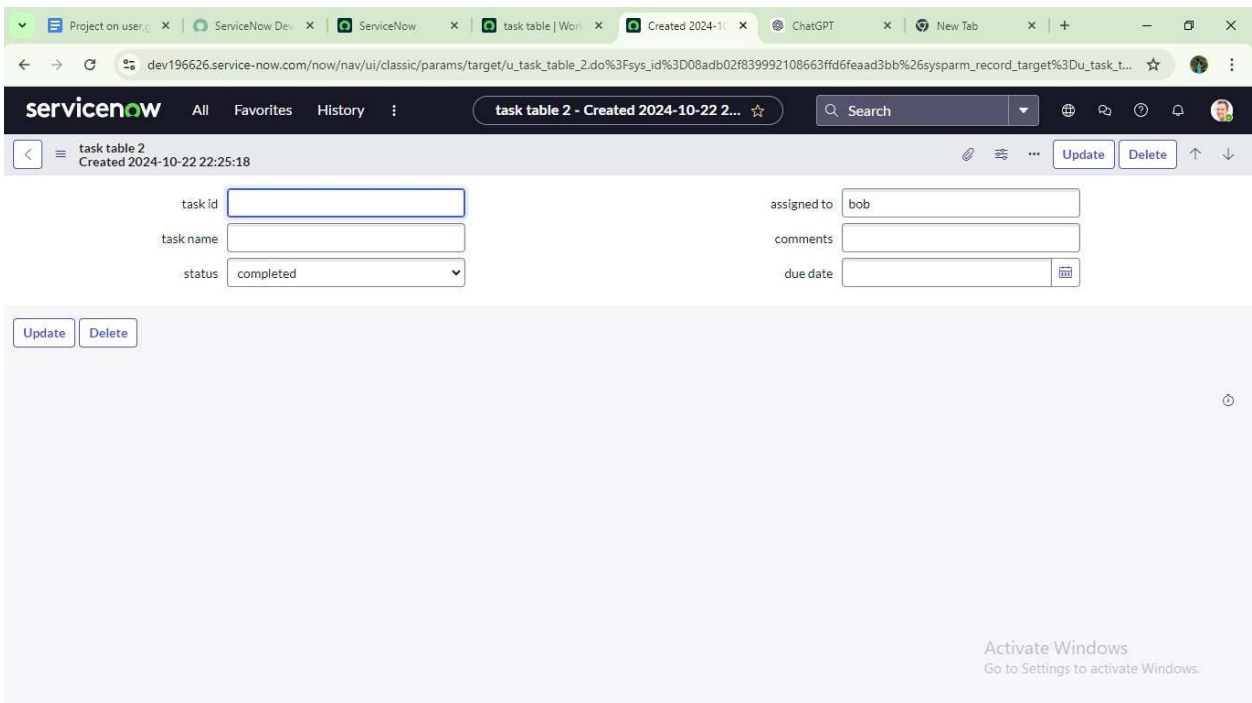
The right-hand pane shows the **Data** section, which lists the data objects used in the workflow:

- Trigger - Record Created**:
 - task table 2 Record (Record)
 - task table 2 Table (Table)
 - Run Start Time UTC (Date/Time)
 - Run Start Date/Time (Date/Time)
- 1 - Update Record**:
 - u_task_table_2 Record (Record)
 - u_task_table_2 Table (Table)
 - Action Status (Object)
- 2 - Ask For Approval**:
 - Approval State (Choice)
 - Action Status (Object)

The bottom status bar indicates 'Application: Global'.

9.Go to application navigator search for task table.

10.It status field is updated to completed

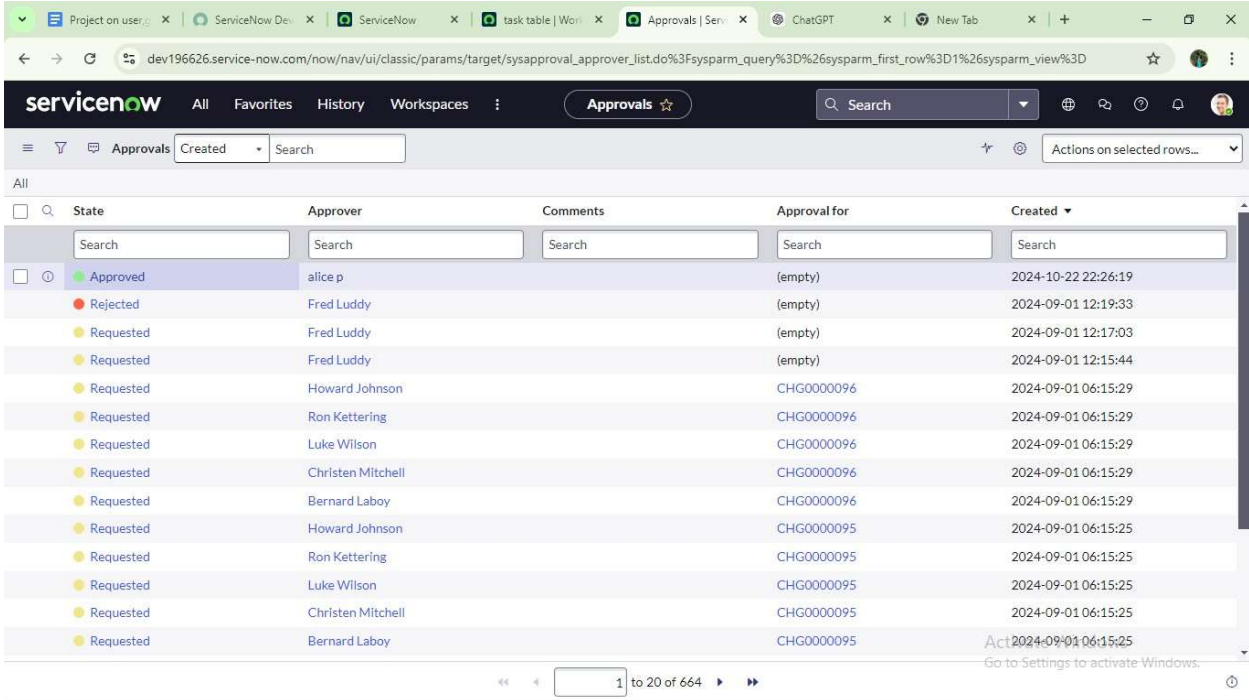


The screenshot shows the ServiceNow application navigator interface for the 'task table 2' record. The record details are as follows:

Field	Value
task id	
task name	
status	completed
assigned to	bob
comments	
due date	

The record was created on 2024-10-22 22:25:18. The interface includes 'Update' and 'Delete' buttons at the top right and bottom left. An 'Activate Windows' watermark is visible in the bottom right corner.

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 'Approved' by 'alice p' on '2024-10-22 22:26:19'. Subsequent rows show 'Rejected' and 'Requested' states by various approvers like Fred Luddy, Howard Johnson, Ron Kettering, Luke Wilson, Christen Mitchell, and Bernard Laboy, all dated '2024-09-01'.

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 :

This scenario highlights a structured approach to project management, showcasing the roles of Alice and Bob within a defined workflow. With Alice's oversight and Bob's execution, the team effectively collaborates to ensure project success. The use of tables organizes key information, facilitating easy tracking of projects, tasks, and progress updates. Overall, this system promotes accountability, enhances communication, and leads to the successful completion of projects.

Tab 2

