

Optimizing User,Group and Role Management with Access control And workflows

Team Id: NM2025TMID14222

Team Members:

Team Leader: Janani.S

Team Member 1 : Yuvashree.R

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ProblemStatement:

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:

To optimize the management of users, groups, and roles by implementing structured access control policies and automated workflows, ensuring secure, efficient, and compliant access to systems and data across the organization.

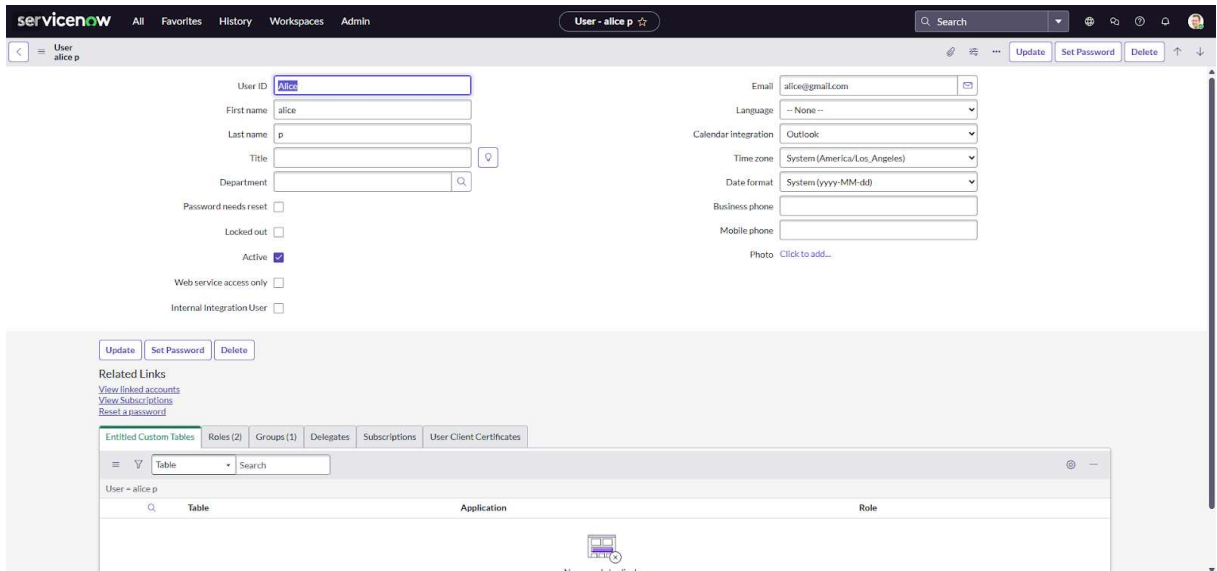
Skills: Tensorflow,Oracle DB

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. The top navigation bar includes 'servicenow', 'All', 'Favorites', 'History', 'Workspaces', and 'Admin'. The user profile 'User - alice p' is selected. The form contains the following fields and options:

- User ID:**
- First name:**
- Last name:**
- Title:**
- Department:**
- Email:**
- Language:**
- Calendar integration:**
- Time zone:**
- Date format:**
- Business phone:**
- Mobile phone:**
- Photo:**
- Password needs reset:** ☐
- Locked out:** ☐
- Active:** ☒
- Web service access only:** ☐
- Internal integration user:** ☐

Buttons at the top right: Update, Set Password, Delete. Buttons at the bottom left: 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:

User - alice p	Table	Application	Role

Create one more user:

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

servicenow All Favorites History Workspaces Admin User - bob p Search Update Set Password Delete

User ID: Q

First name:

Last name:

Title:

Department:

Password needs reset: ☐

Locked out: ☐

Active: ☒

Web service access only: ☐

Internal Integration User: ☐

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

Search

User = bob p

Table	Application	Role
No records to display		

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 All Favorites History Workspaces Admin **Group - Project Team** Search

Group Project Team

Name Group email

Manager Parent

Description

Update Delete

Roles Group Members (2) Groups

Created Search Edit...

Group = Project Team

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

servicenow All Favorites History Workspaces Admin **Role - project member** Search

Role project member

Name Application

Elevated privilege ☐

Description

Update Delete

Related Links
[Run Point Scan](#)

Contains Roles Applications with Role Modules with Role Custom Tables

for text Search New Edit...

Role = project member

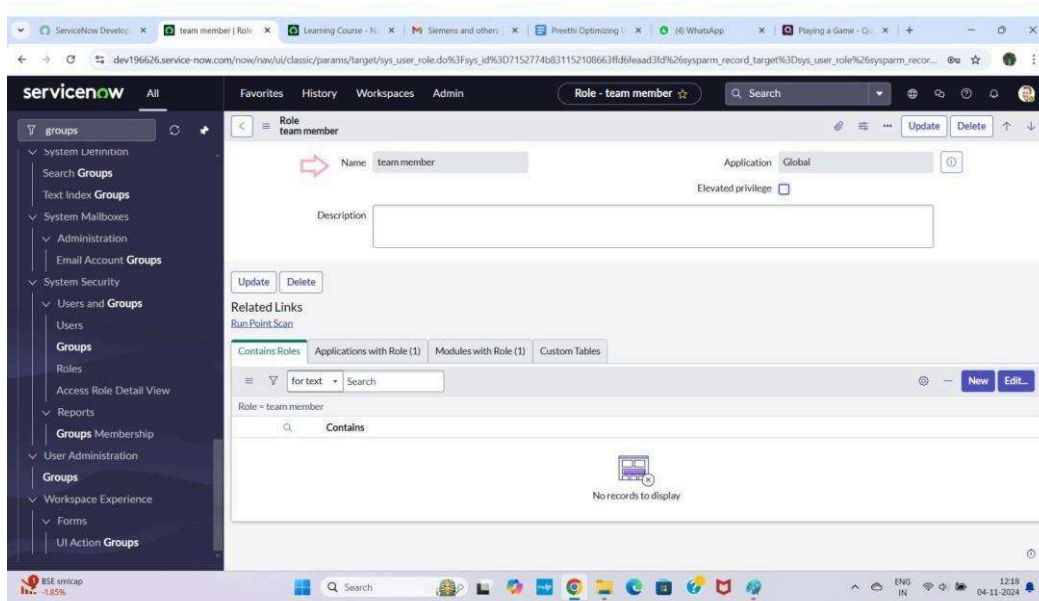
Contains
No records to display

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



8. Click on submit

dev196626.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_c...

servicenow All Favorites History Workspaces **Table - New Record** Search

Table New record

* Name

Extends table

Create module ☒

Create mobile module ☒

Add module to menu -- Create new --

New menu name

Columns Controls Application Access

Table Columns for text Search

Dictionary Entries

	Column label	Type	Reference	Max length	Default value	Display
<input checked="" type="checkbox"/>	project id	Integer				false
<input checked="" type="checkbox"/>	project name	String				false
<input checked="" type="checkbox"/>	project manager	String				false
<input checked="" type="checkbox"/>	start date	Date				false
<input checked="" type="checkbox"/>	end date	Date				false
<input checked="" type="checkbox"/>	status	Choice				false
<input checked="" type="checkbox"/>	description	String				false

Activate Windows
Go to Settings to activate Windows.

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...

servicenow All Favorites History Workspaces **Table - task table 2** Search

Table task table 2

Table Columns for text 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	Sys ID (GUID)	(empty)		32	false
	Created by	String	(empty)		40	false
	Created	Date/Time	(empty)		40	false
<input checked="" type="checkbox"/>	task id	Integer				false
<input checked="" type="checkbox"/>	task name	String				false
<input checked="" type="checkbox"/>	assigned to	String				false
<input checked="" type="checkbox"/>	due date	Date				false
<input checked="" type="checkbox"/>	status	Choice				false
<input checked="" type="checkbox"/>	comments	String				false

Insert a new row...

Activate Windows
Go to Settings to activate Windows.

Milestone 5 : Assign users to groups

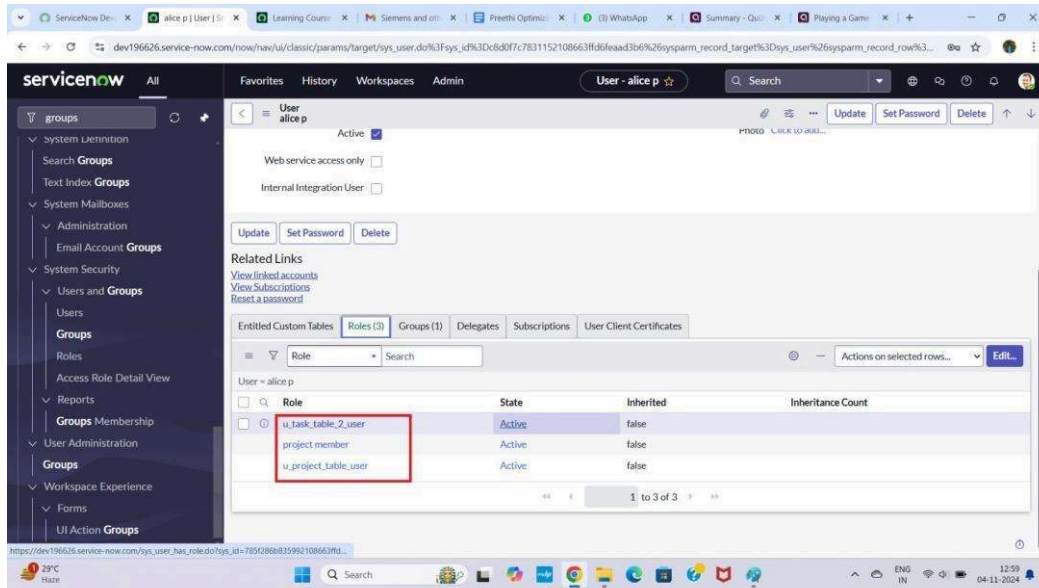
Activity 1: Assign users to project team group

- 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.

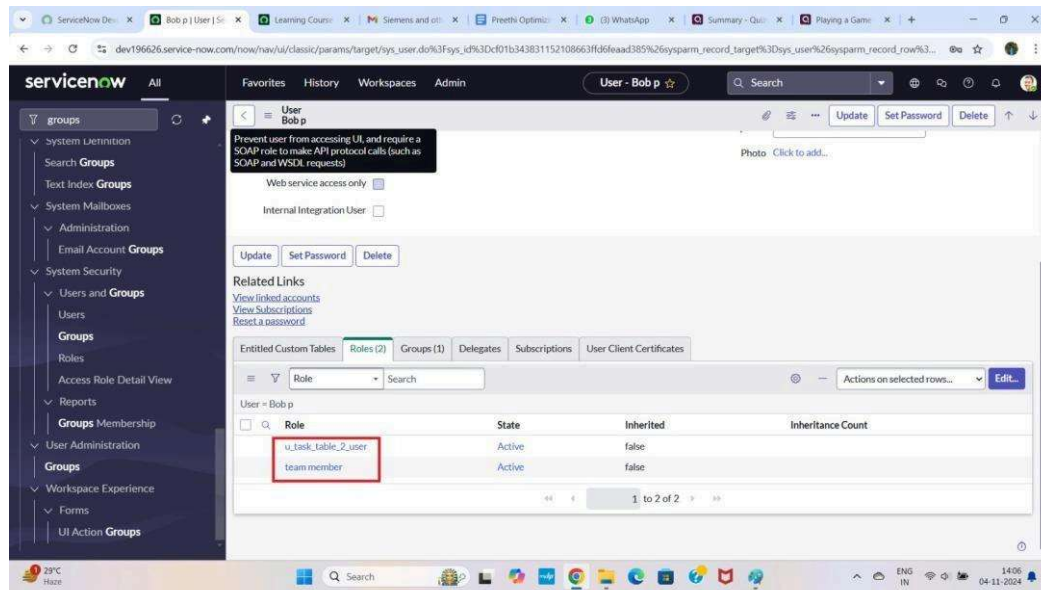


The screenshot shows the ServiceNow user interface for a user named 'alice p'. The 'Roles' tab is selected, showing a table of roles assigned to the user. The roles listed are 'u_task_table_2_user', 'project member', and 'u_project_table_user', all with a state of 'Active'.

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

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.



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%3D9705334f831152108663ffd6feaad362

servicenow All Favorites History Admin Application Menu - project table Search

Application Menu
project table

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 Active ☒

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

Roles

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

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%3D114bece3835992108663ffd6feaad3dc

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

Application Menu
task table 2

Title Application Active ☒

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

Roles

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

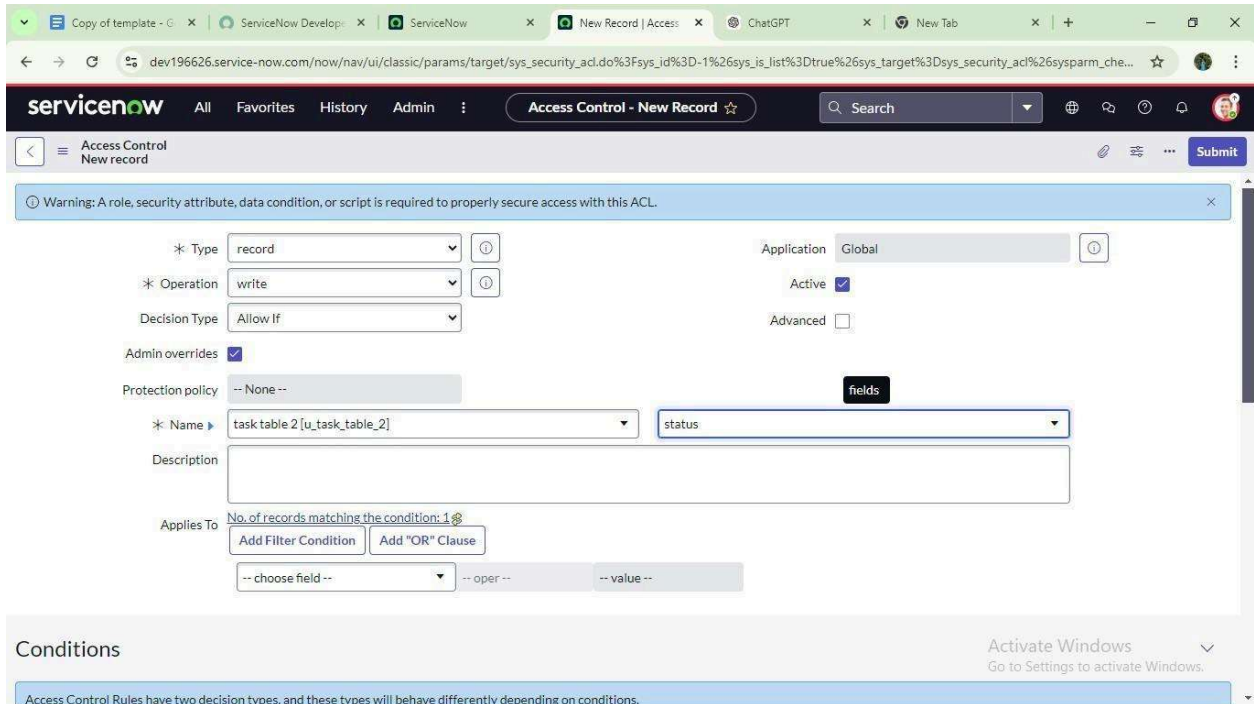
Update Delete

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] status

Description:

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

Add Filter Condition Add "OR" Clause

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

Conditions

Activate Windows
Go to Settings to activate Windows.

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_acl_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

1 to 20 of 23

Activate Windows
Go to Settings to activate Windows.

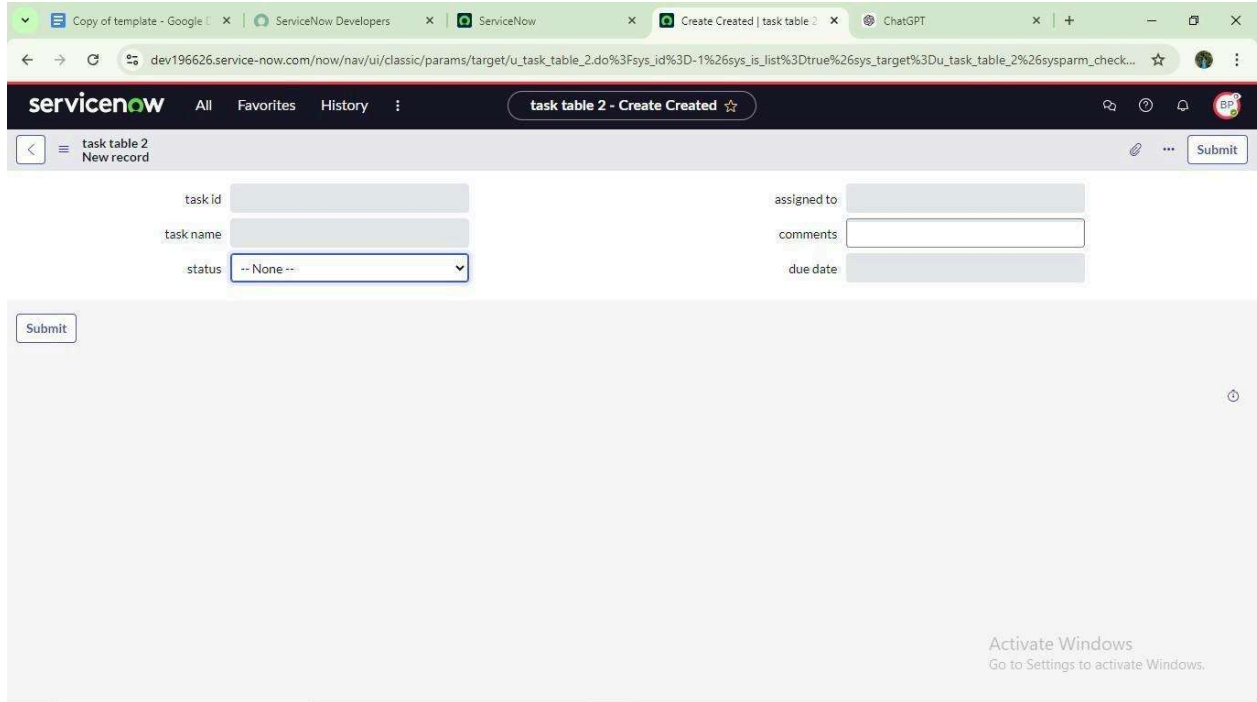
12. Click on profile on top right side

13. Click on impersonate user

14. Select bob user

15. Go to all and select task table2 in the application menu bar

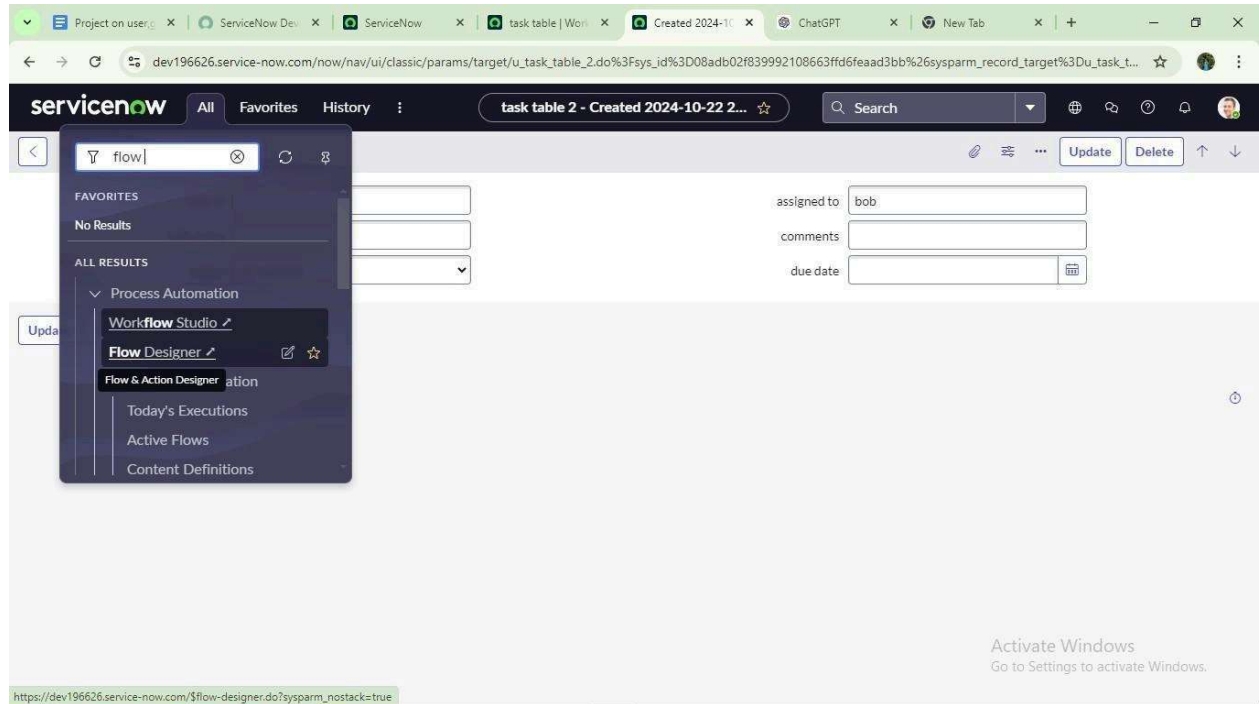
16. Comment and status fields are have the edit access



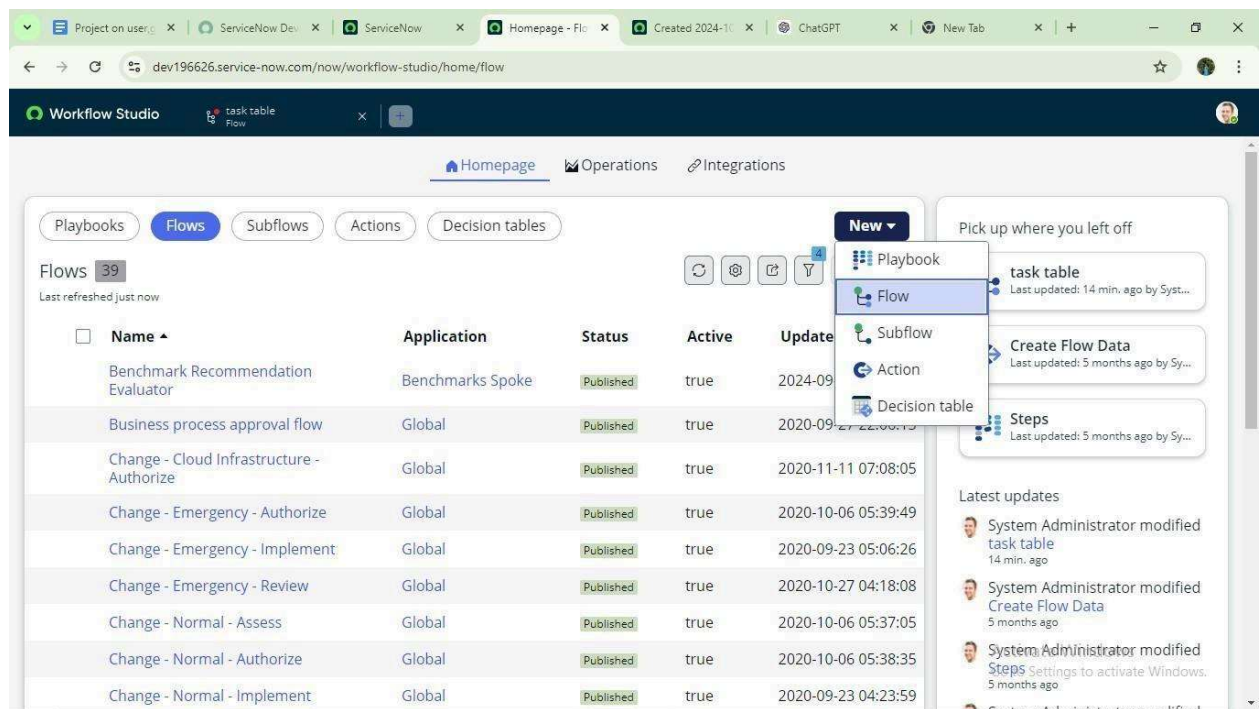
Milestone 9: Flow

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.



The screenshot shows the ServiceNow 'task table 2' form. A search dropdown is open with the text 'flow'. The dropdown shows 'No Results' under 'FAVORITES' and 'ALL RESULTS' under 'Process Automation'. The 'ALL RESULTS' list includes 'Workflow Studio', 'Flow Designer', 'Flow & Action Designer', 'Today's Executions', 'Active Flows', and 'Content Definitions'. The 'Flow Designer' item is highlighted. The form fields include 'assigned to' (bob), 'comments', and 'due date'.

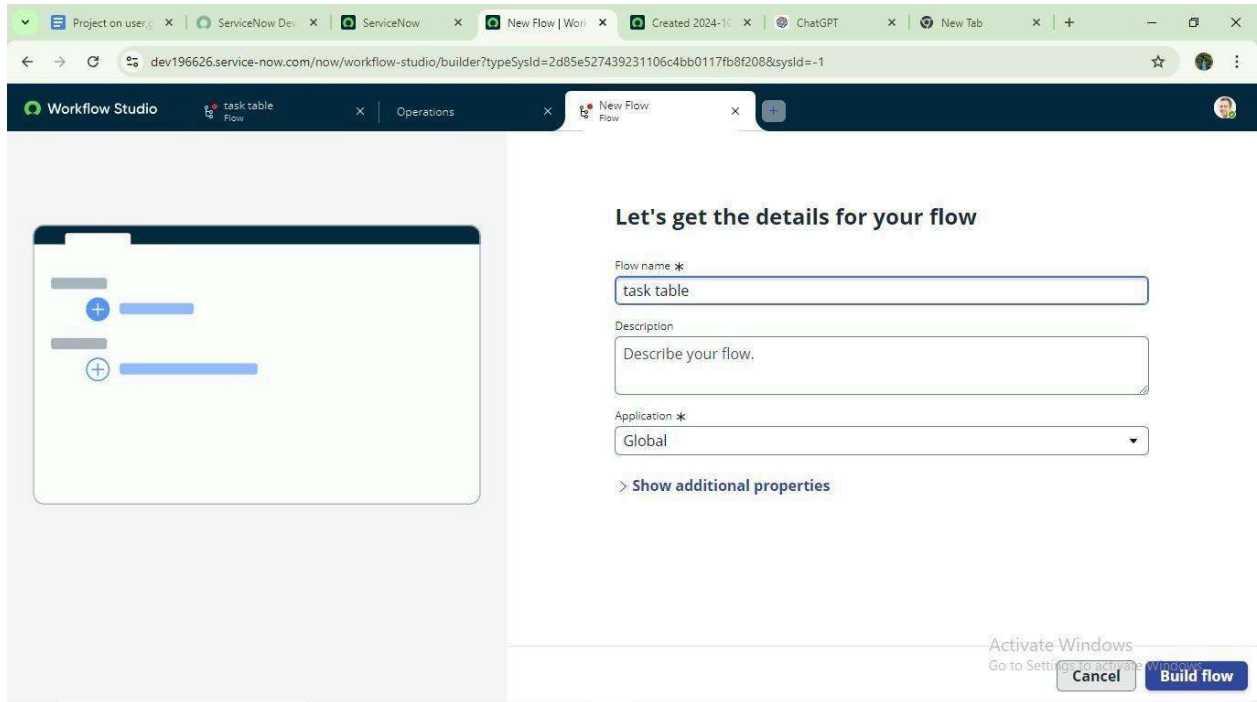


The screenshot shows the ServiceNow Workflow Studio 'Flows' list. The 'New' dropdown is open, showing options: 'Playbook', 'Flow', 'Subflow', 'Action', and 'Decision table'. The 'Flow' option is selected. The 'Flows' list table is displayed below.

Name	Application	Status	Active	Update
Benchmark Recommendation Evaluator	Benchmarks Spoke	Published	true	2024-09-27 14:08:05
Business process approval flow	Global	Published	true	2020-09-27 14:08:05
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

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
- Custom Administrator modified



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

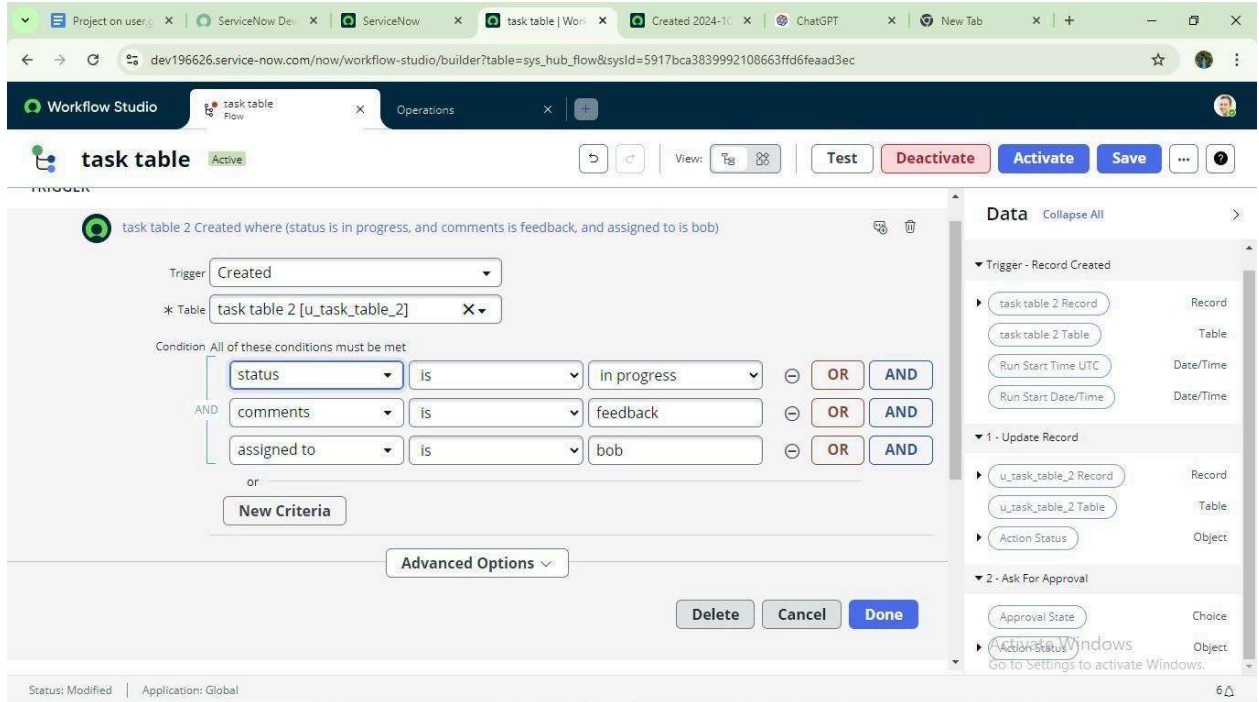
> Show additional properties

Activate Windows
Go to Settings to activate Windows.

Cancel Build flow

next step:

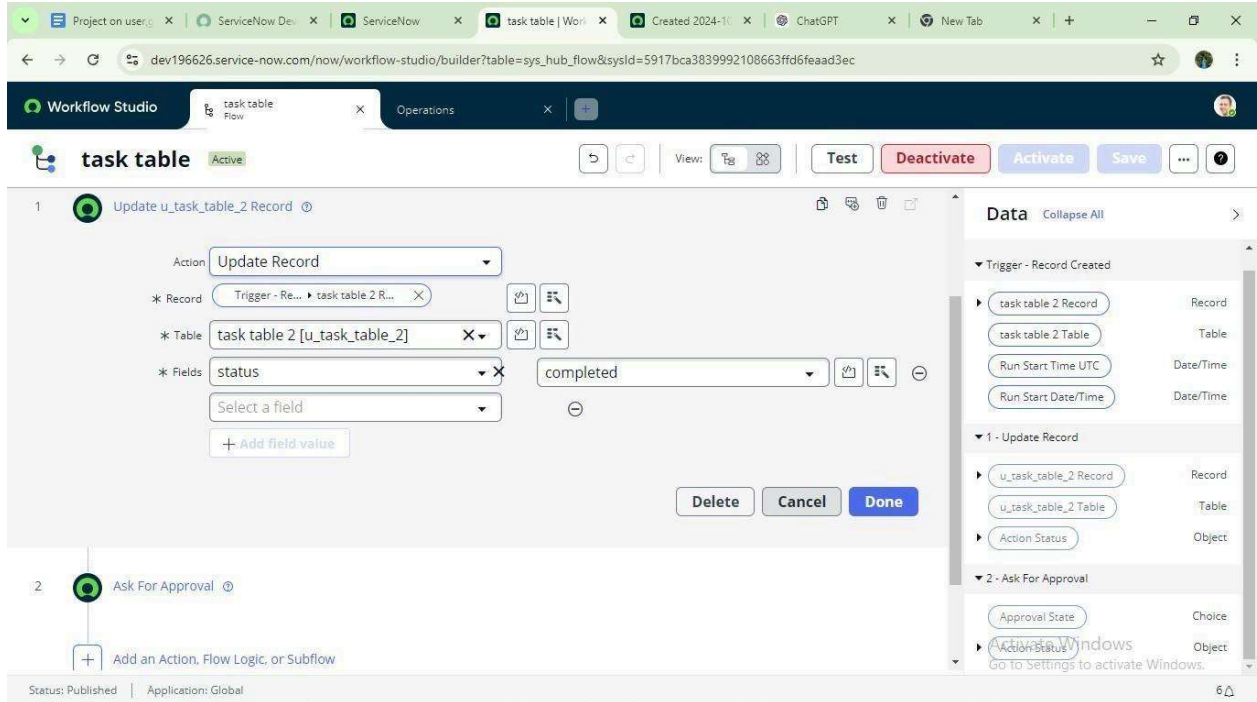
1. Click on Add a trigger
2. Select the trigger in that Search for “create record” and select that.
3. Give the table name as “ task table ”.
4. Give the Condition as Field : status Operator :is Value : in progress
Field : comments Operator :is Value : feedback
Field : assigned to Operator :is Value : bob
5. After that click on Done.



The screenshot shows the ServiceNow Workflow Studio interface. The main workspace displays a trigger configuration for a flow named "task table". The trigger is set to "Created" and is associated with the table "task table 2 [u_task_table_2]". The condition is defined as "All of these conditions must be met" with three criteria: "status" is "in progress", "comments" is "feedback", and "assigned to" is "bob". The criteria are connected by "AND" operators. The right-hand pane shows the "Data" section with a list of fields available for the trigger, including "task table 2 Record", "task table 2 Table", "Run Start Time UTC", "Run Start Date/Time", "u_task_table_2 Record", "u_task_table_2 Table", "Action Status", "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 main canvas displays a workflow with two steps:

- Update u_task_table_2 Record**: This step is configured with the following details:
 - Action**: Update Record
 - Record**: Trigger - Re... > task table 2 R...
 - Table**: task table 2 [u_task_table_2]
 - Fields**: status (set to completed)
- Ask For Approval**: This step is currently empty.

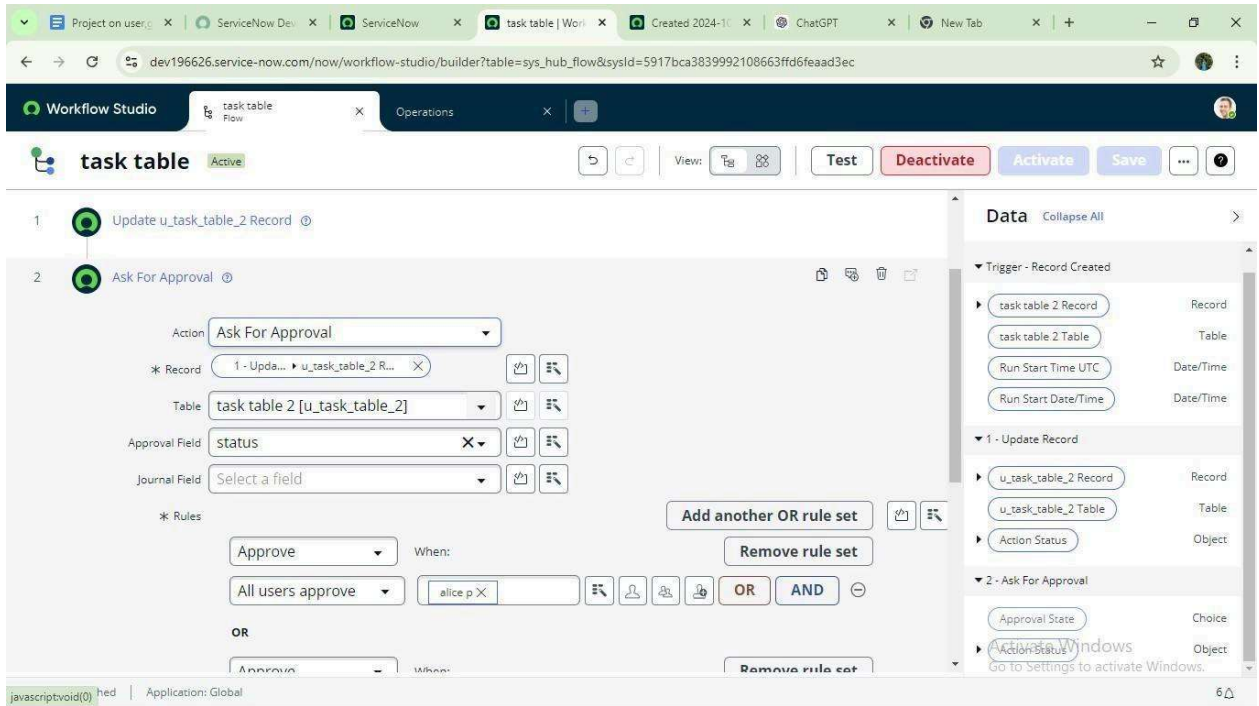
The right-hand pane shows the **Data** navigation tree, which includes:

- 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)

At the bottom of the canvas, there is a button labeled "Add an Action, Flow Logic, or Subflow". The status bar at the very bottom indicates "Status: Published" and "Application: 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.



Workflow Studio interface showing the 'task table' workflow. The workflow consists of two steps:

- Update u_task_table_2 Record
- Ask For Approval

The 'Ask For Approval' step is configured with the following details:

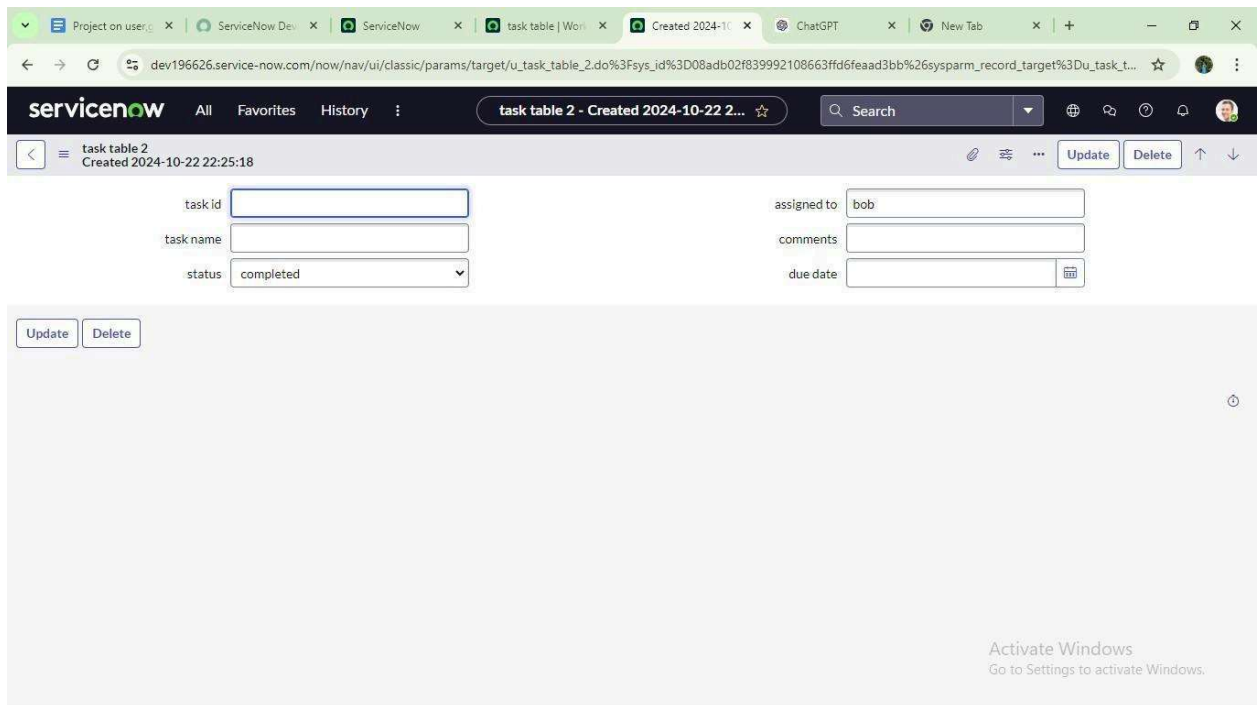
- Action: Ask For Approval
- Record: 1 - Upda... u_task_table_2 R...
- Table: task table 2 [u_task_table_2]
- Approval Field: status
- Journal Field: Select a field
- Rules:
 - Approve
 - When: All users approve
 - alice p
 - OR
 - Remove rule set

The 'Data' panel on the right shows the data flow, including:

- Trigger - Record Created
- 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
- Actions Windows

9.Go to application navigator search for task table.

10.It status field is updated to completed

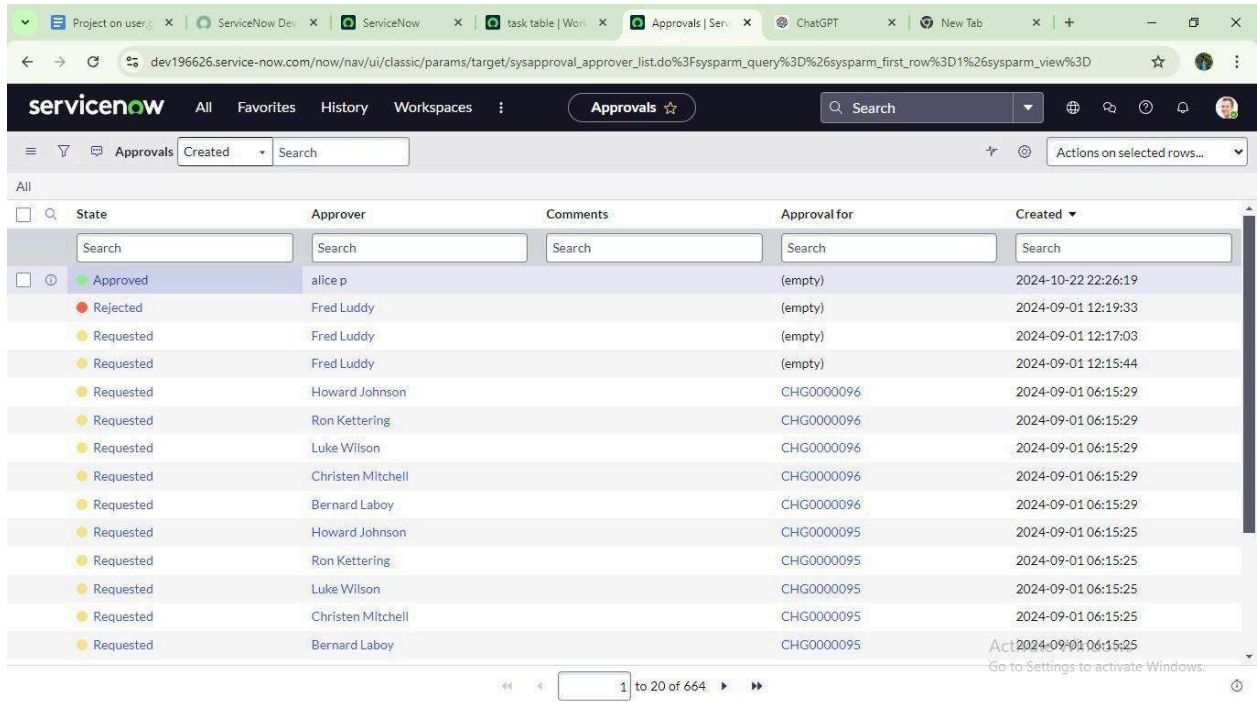


ServiceNow application navigator showing the 'task table 2' record. The record details are as follows:

- task id: [input field]
- task name: [input field]
- status: completed
- assigned to: bob
- comments: [input field]
- due date: [input field]

The 'Update' and 'Delete' buttons are visible at the bottom of the record details.

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 highlighted as 'Approved' by 'alice p' on '2024-10-22 22:26:19'. Other rows show 'Requested' and 'Rejected' states for various approvers like Fred Luddy, Howard Johnson, Ron Ketterling, Luke Wilson, Christen Mitchell, and Bernard Laboy.

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 Ketterling		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 Ketterling		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.

