



**Sridevi Arts & Science
College Ponneri**

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

TEAM ID: NM2025TMID19708

A PROJECT REPORT

Submitted by

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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.

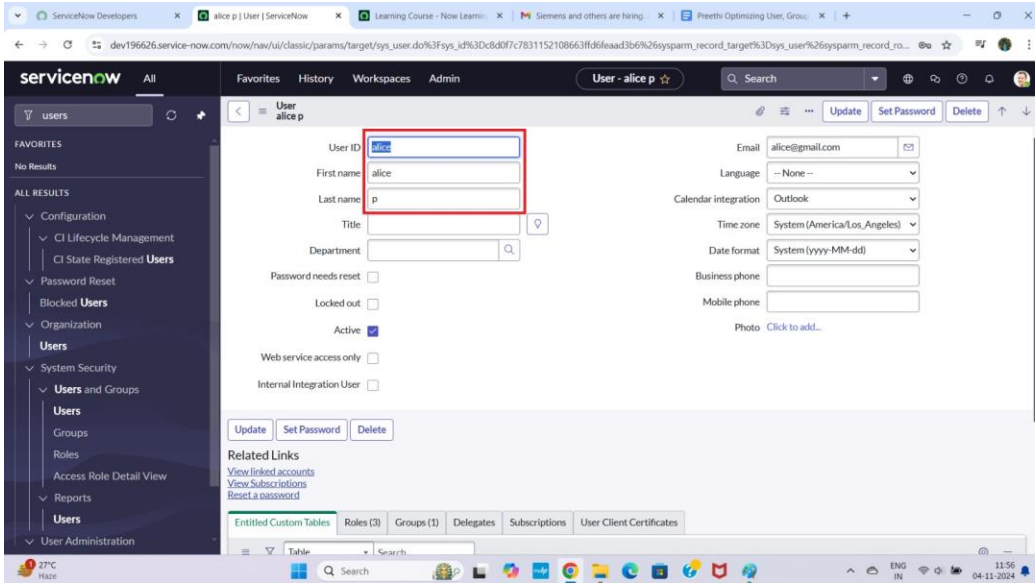
Skills: Users, Groups, Roles, Tables, Access Control List, Flow Designer

TASK INITIATION

Milestone 1 : Users

Activity 1: Create Users

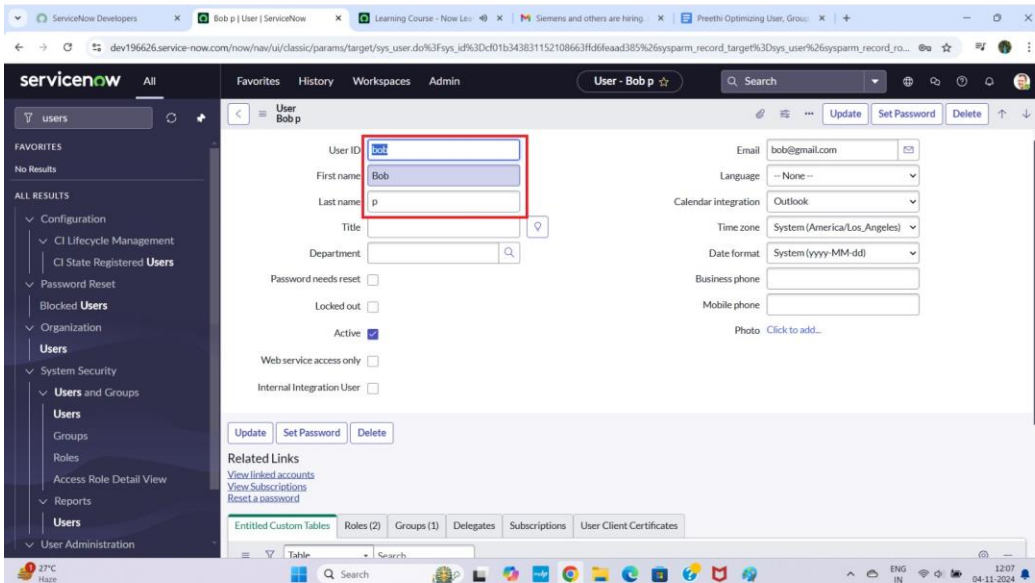
1. Open service now
2. Click on All >> search for users
3. Select Users under system security
4. Click on new
5. Fill the following details to create a new user
6. Click on submit



The screenshot shows the ServiceNow User Administration interface. The user 'alice p' is selected, and the form is displayed. The User ID field is highlighted with a red box. The form includes fields for First name, Last name, Title, Department, Email, Language, Calendar integration, Time zone, Date format, Business phone, and Mobile phone. There are also checkboxes for Password needs reset, Locked out, Active, Web service access only, and Internal Integration User. The 'Active' checkbox is checked. The 'Update' button is visible at the bottom of the form.

Create one more user:

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

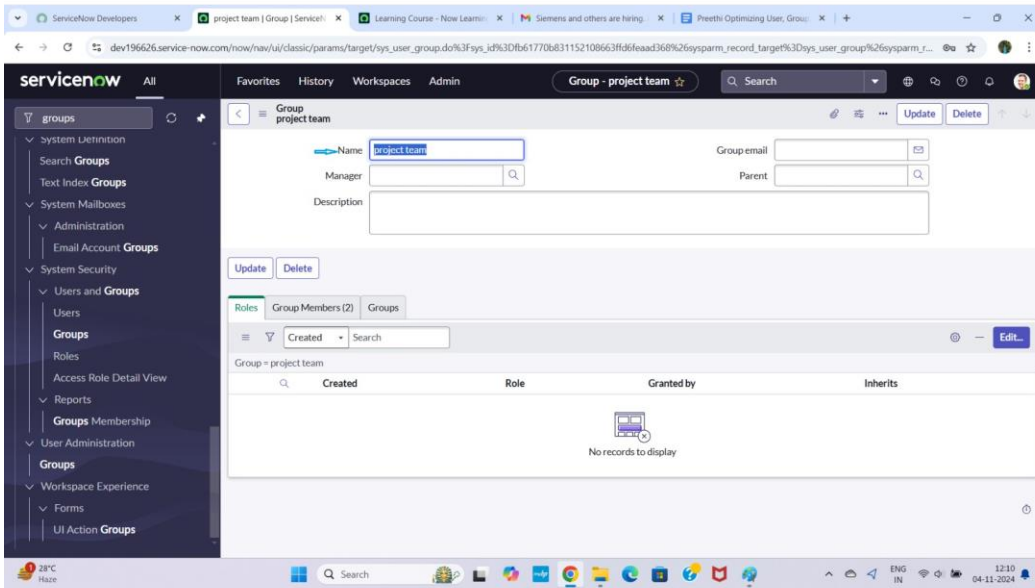


The screenshot shows the ServiceNow User Administration interface for user 'Bob p'. The User ID field is highlighted with a red box. The form includes fields for First name, Last name, Title, Department, Email, Language, Calendar integration, Time zone, Date format, Business phone, and Mobile phone. There are also checkboxes for Password needs reset, Locked out, Active, Web service access only, and Internal Integration User. The 'Active' checkbox is checked. The 'Update' button is visible at the bottom of the form.

Milestone 2 : Groups

Activity 1: Create Groups

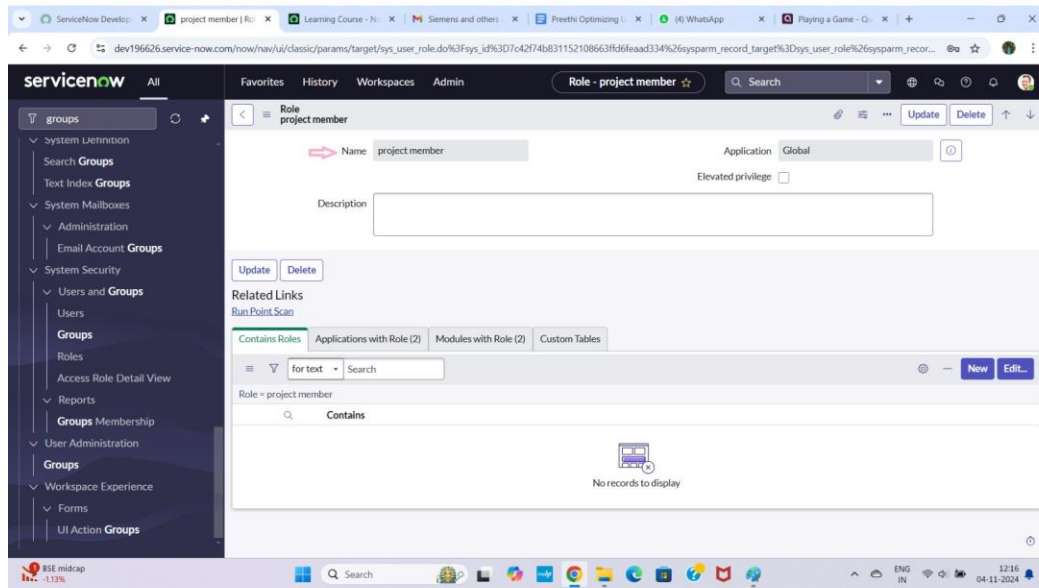
1. Open service now.
2. Click on All >> search for groups
3. Select groups under system security
4. Click on new
5. Fill the following details to create a new group
6. Click on submit



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

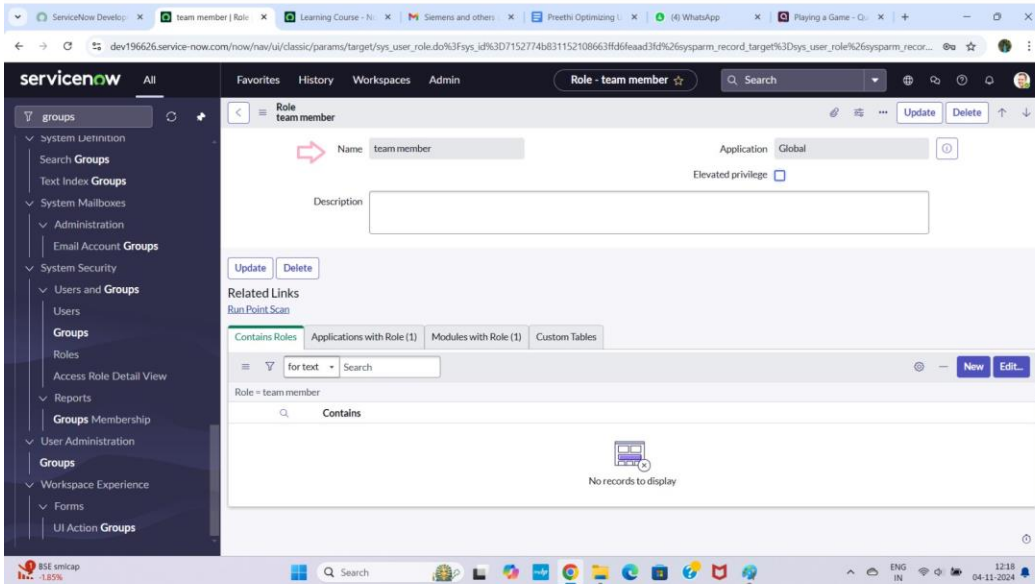


Create one more role:

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

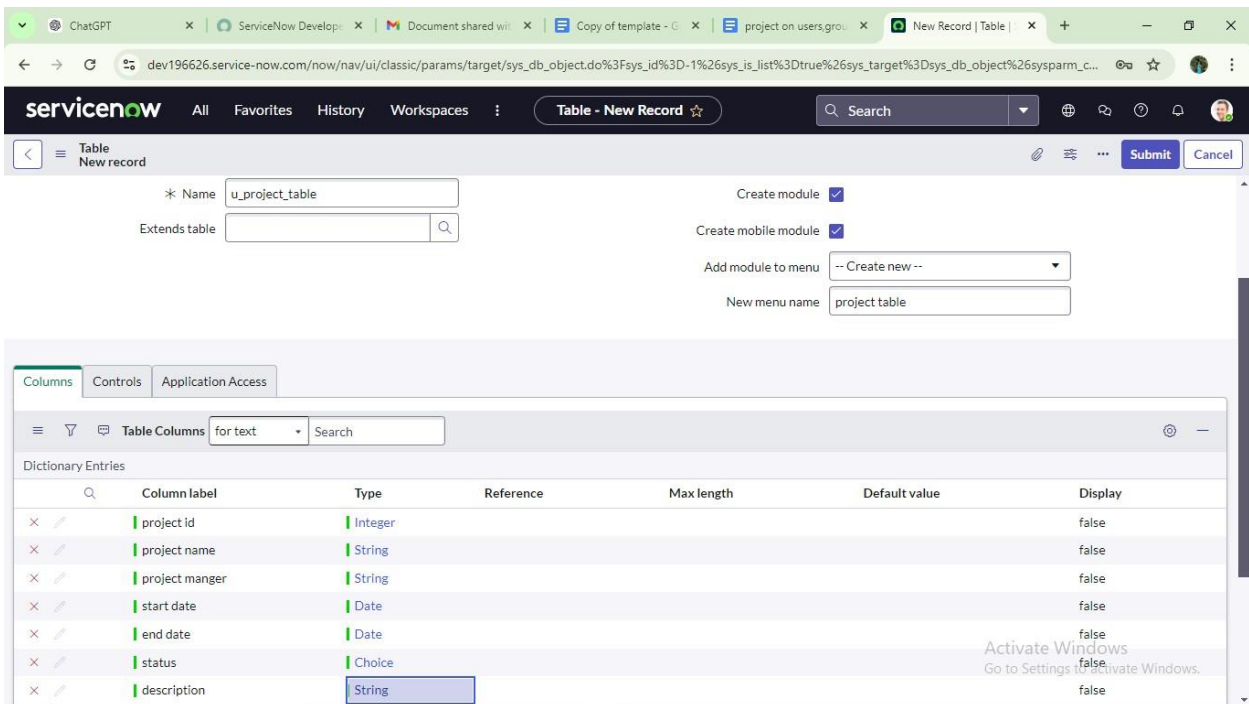
Milestone 4 : Table Activity 1: Create Table

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 'Role - team member' configuration page. The 'Name' field is set to 'team member' and the 'Application' is 'Global'. The 'Description' field is empty. Below the form, there are 'Update' and 'Delete' buttons. The 'Related Links' section shows a 'Run Point Scan' link. The 'Contains Roles' section is empty, displaying 'No records to display'.

8. Click on submit



The screenshot shows the ServiceNow 'Table - New Record' configuration page. The 'Name' field is set to 'u_project_table'. The 'Extends table' field is empty. The 'Create module' and 'Create mobile module' checkboxes are checked. The 'Add module to menu' dropdown is set to '-- Create new --' and the 'New menu name' field is set to 'project table'. Below the form, there are 'Submit' and 'Cancel' buttons. The 'Columns' tab is selected, showing a list of columns for the table.

Columns	Controls	Application Access
Table Columns	for text	Search
Dictionary Entries	Column label	Type
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...					

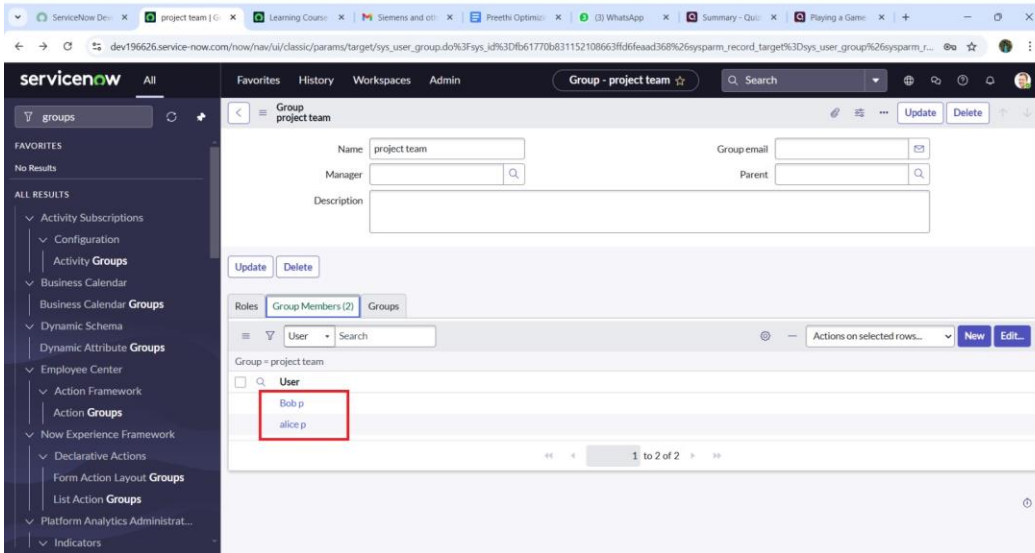
Activate Windows
Go to Settings to activate Windows.

Delete Update Delete All Records

Milestone 5 : Assign users to groups

Activity 1: Assign users to project team group

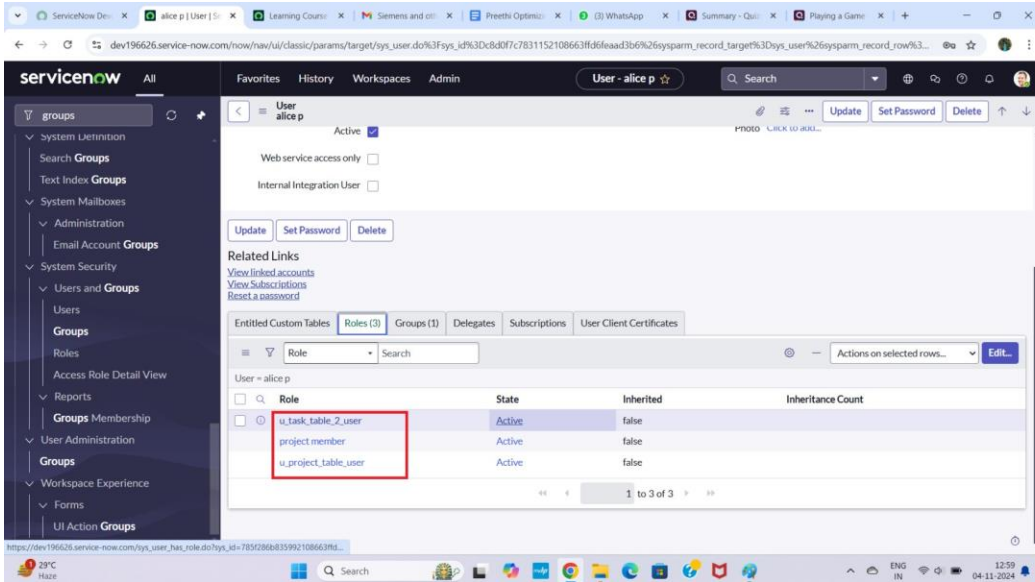
1. Open service now.
2. Click on All >> search for groups
3. Select tables under system definition
4. Select the project team group
5. Under group members
6. Click on edit
7. Select alice p and bob p and save



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

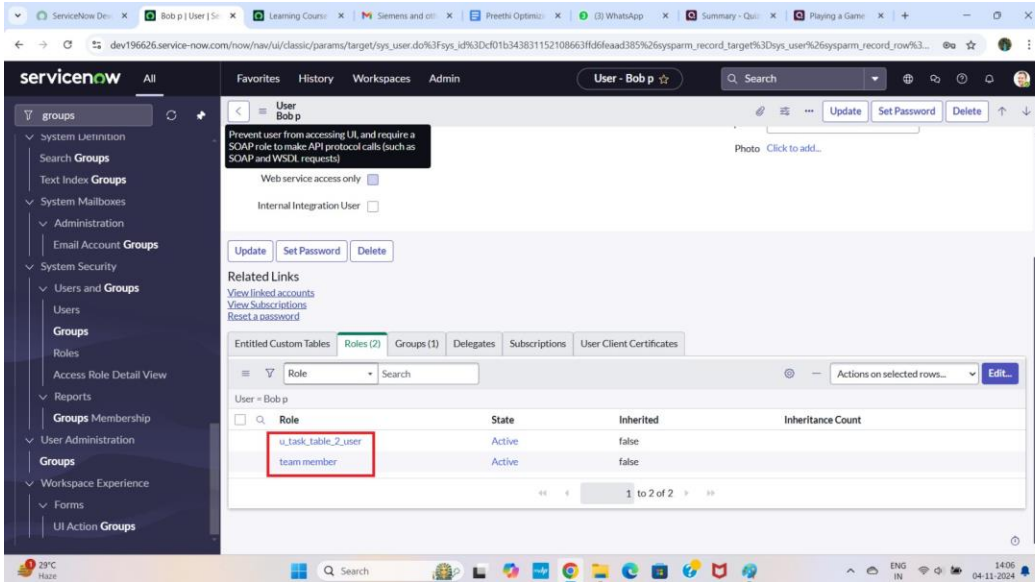
Role Search Actions on selected rows... Edit...

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.



The screenshot shows the ServiceNow user management interface for user 'Bob p'. The 'Roles' tab is selected, displaying a table of roles assigned to the user. The table has columns for 'Role', 'State', 'Inherited', and 'Inheritance Count'. Two roles are listed: 'u_task_table_2_user' and 'team member', both with an 'Active' state and an 'Inheritance Count' of 1. The 'team member' role is highlighted with a red box.

Role	State	Inherited	Inheritance Count
u_task_table_2_user	Active	false	1
team member	Active	false	1

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 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%3D114bece3835992108663ffd6fead3dc

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

Application Menu task table 2 Update Delete

* 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

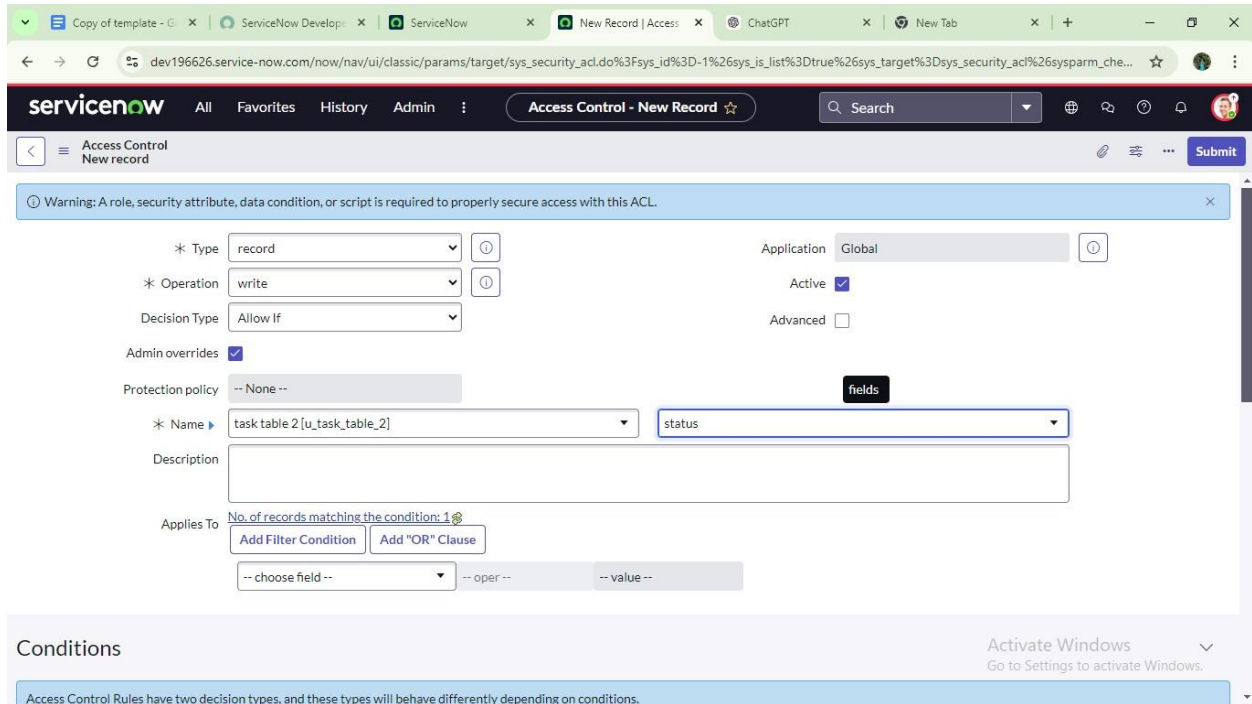
Update Delete

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



The screenshot shows the ServiceNow 'Access Control - New Record' form. The form includes the following fields and options:

- 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:** status
- Description:** (empty text area)
- Applies To:** No. of records matching the condition: 1
- Buttons:** Add Filter Condition, Add "OR" Clause
- Fields:** -- choose field --, -- oper --, -- value --

At the bottom, there is a 'Conditions' section and a warning message: '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

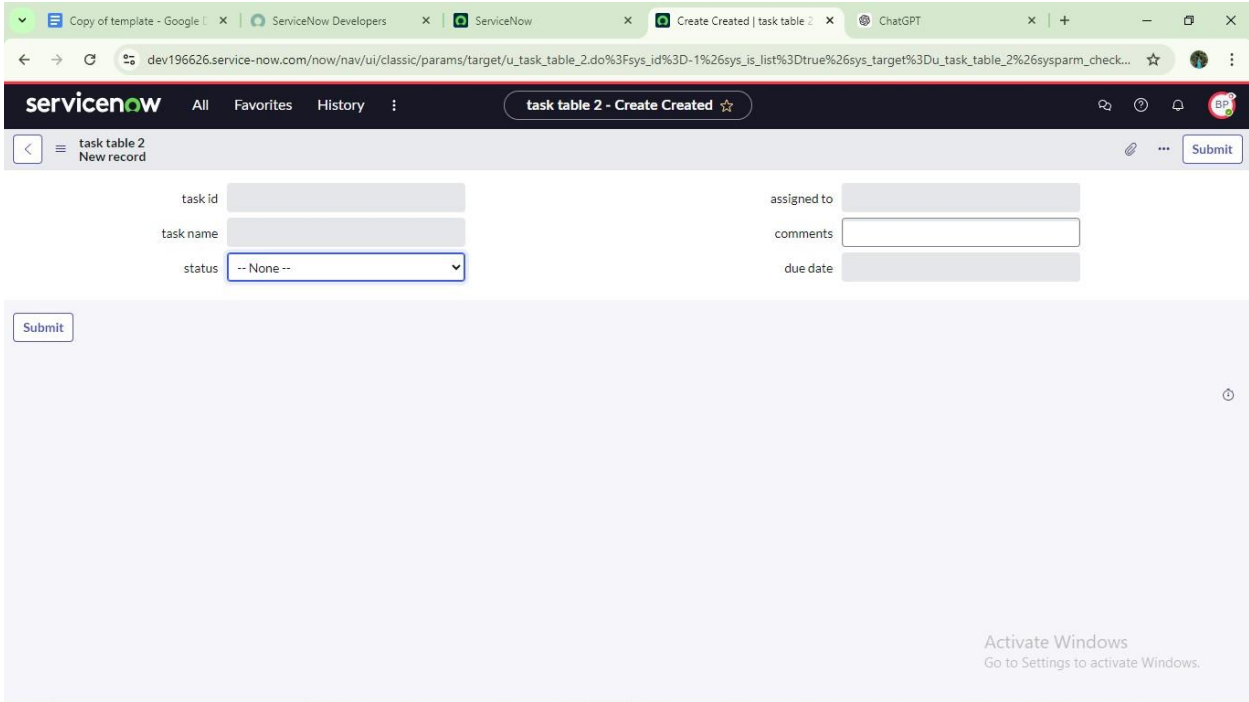
All > Created on Today

<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

1 to 20 of 23

Activate Windows. Go to Settings to activate Windows.

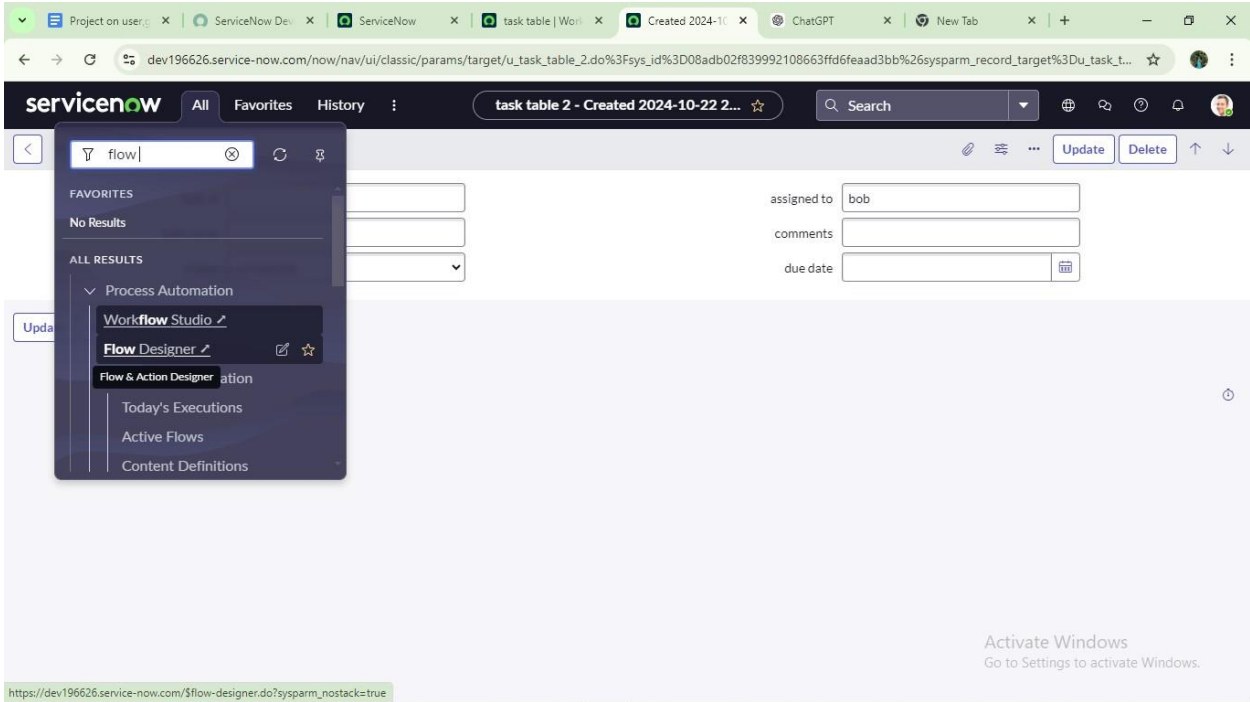
12. Click on profile on top right side
13. Click on impersonate user
14. Select bob user
15. Go to all and select task table2 in the application menu bar
16. Comment and status fields are have the edit access



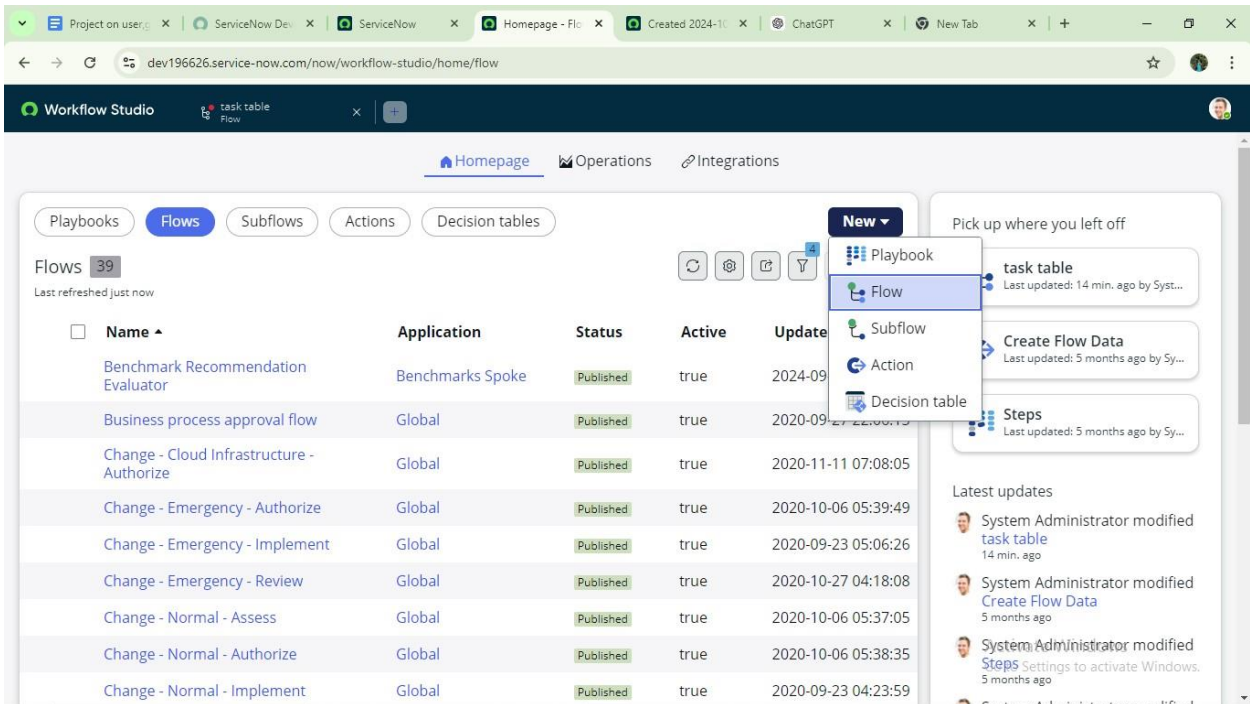
Milestone 9: Flow

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.

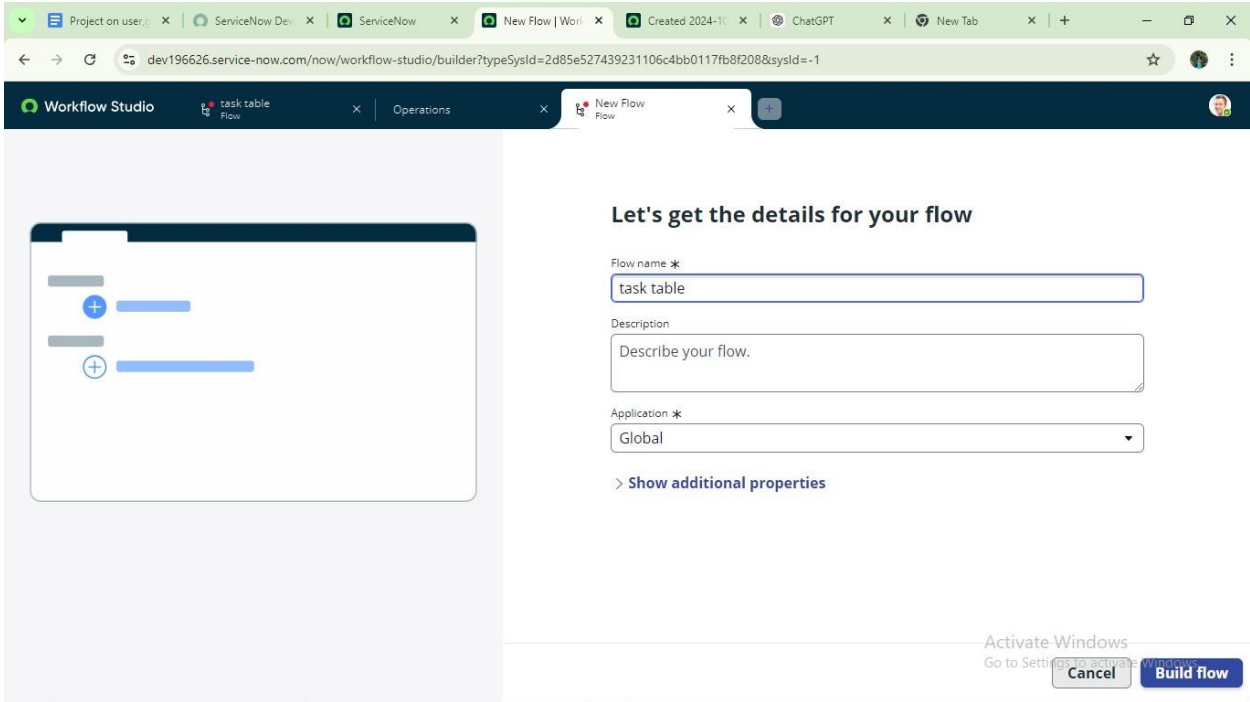


The screenshot shows the ServiceNow Flow Designer interface. The top navigation bar includes 'All', 'Favorites', and 'History'. The main header displays 'task table 2 - Created 2024-10-22 2...'. A search bar is present on the right. A dropdown menu is open, showing 'flow' in the search bar and a list of results under 'ALL RESULTS'. The results include 'Process Automation', 'Workflow Studio', 'Flow Designer', and 'Flow & Action Designer'. The 'Flow Designer' option is highlighted. On the right side of the interface, there are input fields for 'assigned to' (set to 'bob'), 'comments', and 'due date'. The bottom of the page shows a URL: 'https://dev196626.service-now.com/\$flow-designer.do?sysparm_nostack=true'.



The screenshot shows the ServiceNow Workflow Studio interface. The top navigation bar includes 'Homepage', 'Operations', and 'Integrations'. The main header displays 'Workflow Studio' and 'task table Flow'. A dropdown menu is open, showing 'New' with options: 'Playbook', 'Flow', 'Subflow', 'Action', and 'Decision table'. The 'Flow' option is highlighted. On the left side, there is a list of flows with columns: 'Name', 'Application', 'Status', 'Active', and 'Update'. The list includes flows like 'Benchmark Recommendation Evaluator', 'Business process approval flow', and 'Change - Cloud Infrastructure - Authorize'. On the right side, there is a 'Pick up where you left off' section with a list of recent tasks and a 'Latest updates' section with a list of recent system administrator modifications.

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



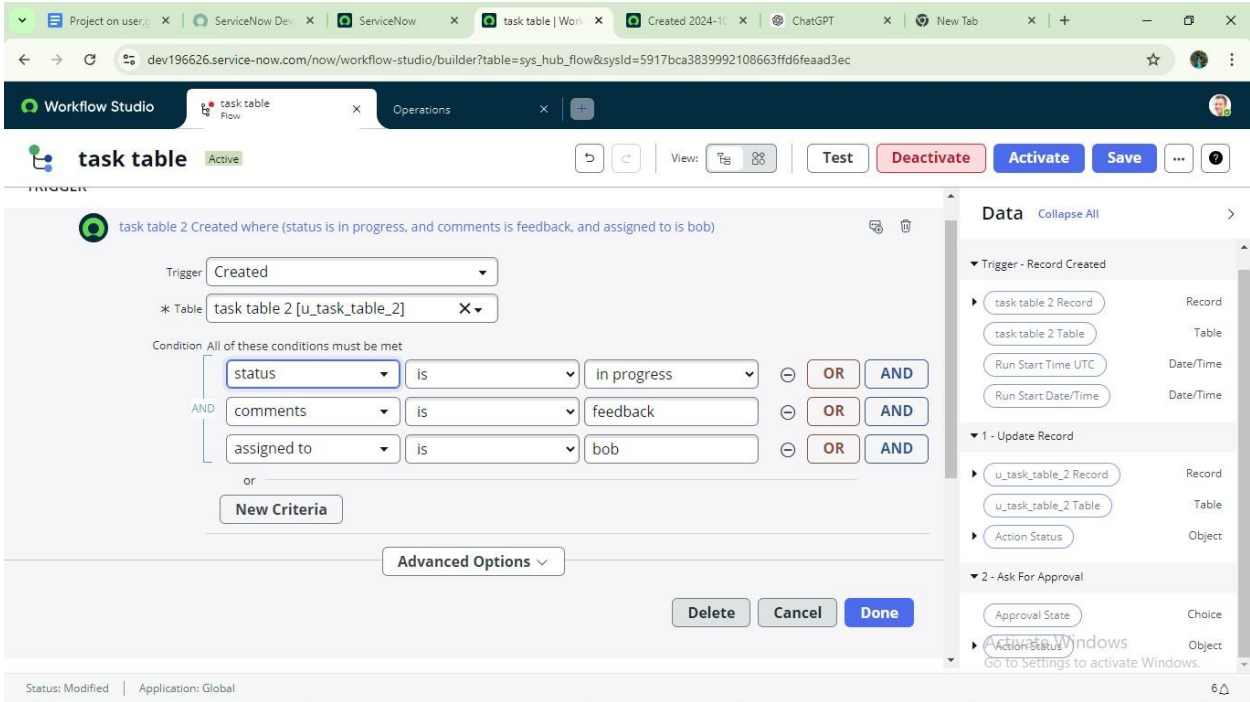
The screenshot shows the ServiceNow Workflow Studio interface. The browser tabs include 'Project on user', 'ServiceNow Dev', 'ServiceNow', 'New Flow | Wor', 'Created 2024-1', 'ChatGPT', and 'New Tab'. The address bar shows the URL: 'dev196626.service-now.com/now/workflow-studio/builder?typeSysId=2d85e527439231106c4bb0117fb8f208&sysId=-1'. The interface has a dark blue header with 'Workflow Studio' and tabs for 'task table Flow', 'Operations', and 'New Flow Flow'. The main area is split into two panels. The left panel shows a canvas with two trigger icons (a plus sign in a circle). The right panel is titled 'Let's get the details for your flow' and contains the following form fields:

- Flow name ***: A text input field containing 'task table'.
- Description**: A text area with the placeholder text 'Describe your flow.'
- Application ***: A dropdown menu with 'Global' selected.
- > Show additional properties**: A link to expand the form.

At the bottom right, there is a watermark for 'Activate Windows' and a 'Build flow' button.

next step:

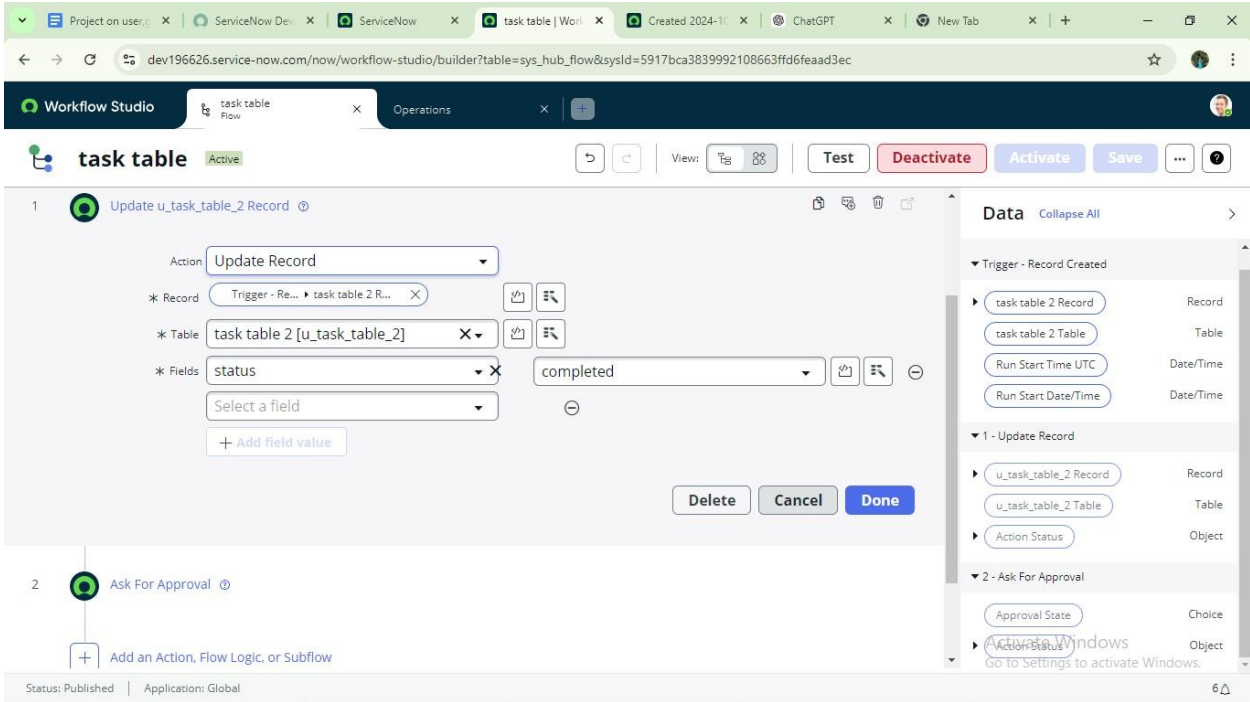
1. Click on Add a trigger
2. Select the trigger in that Search for “create record” and select that.
3. Give the table name as “task table”.
4. Give the Condition as Field : status Operator :is Value : in progress
Field : comments Operator :is Value : feedback
Field : assigned to Operator :is Value : 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' section with a list of 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 main workspace displays a workflow step named '1 Update u_task_table_2 Record'. The configuration for this step is as follows:

- Action:** Update Record
- * Record:** Trigger - Re... task table 2 R...
- * Table:** task table 2 [u_task_table_2]
- * Fields:** status (set to completed)

Below the configuration, there are buttons for 'Delete', 'Cancel', and 'Done'. A second step, '2 Ask For Approval', is partially visible below the first.

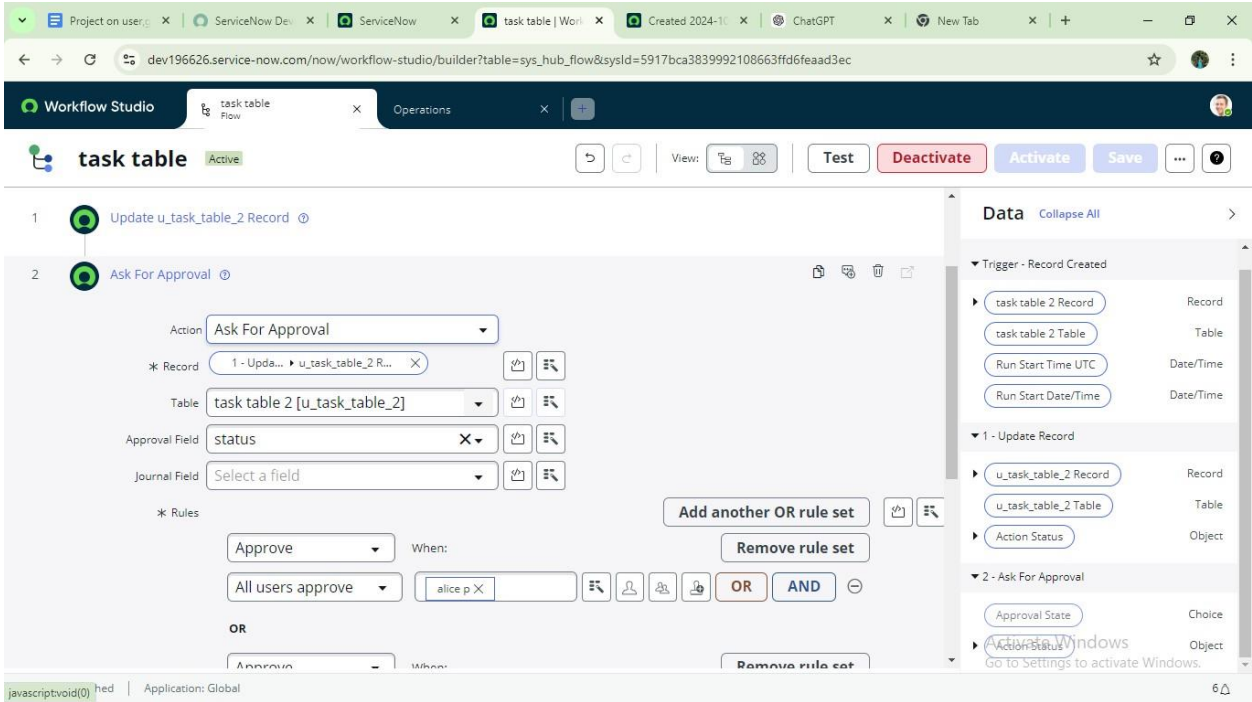
On the right side, the 'Data' panel is expanded, showing the data context for the workflow:

- 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)

At the bottom of the interface, it shows 'Status: Published' and 'Application: Global'.

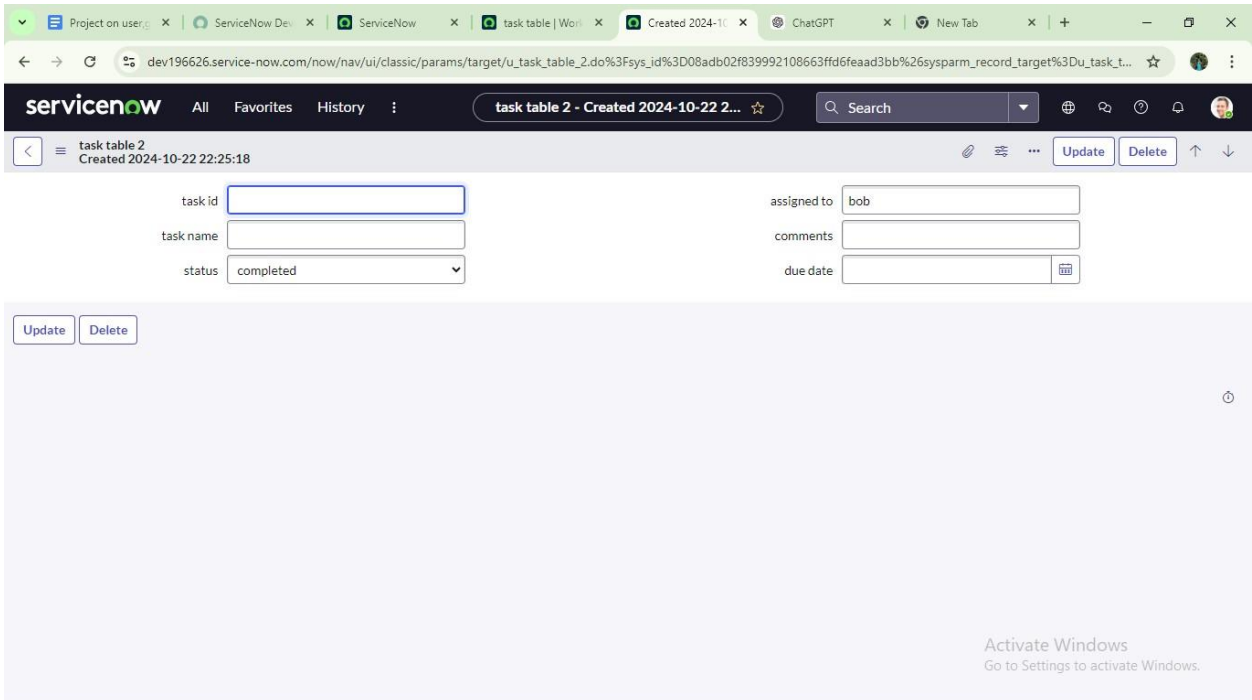
Next step:

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.

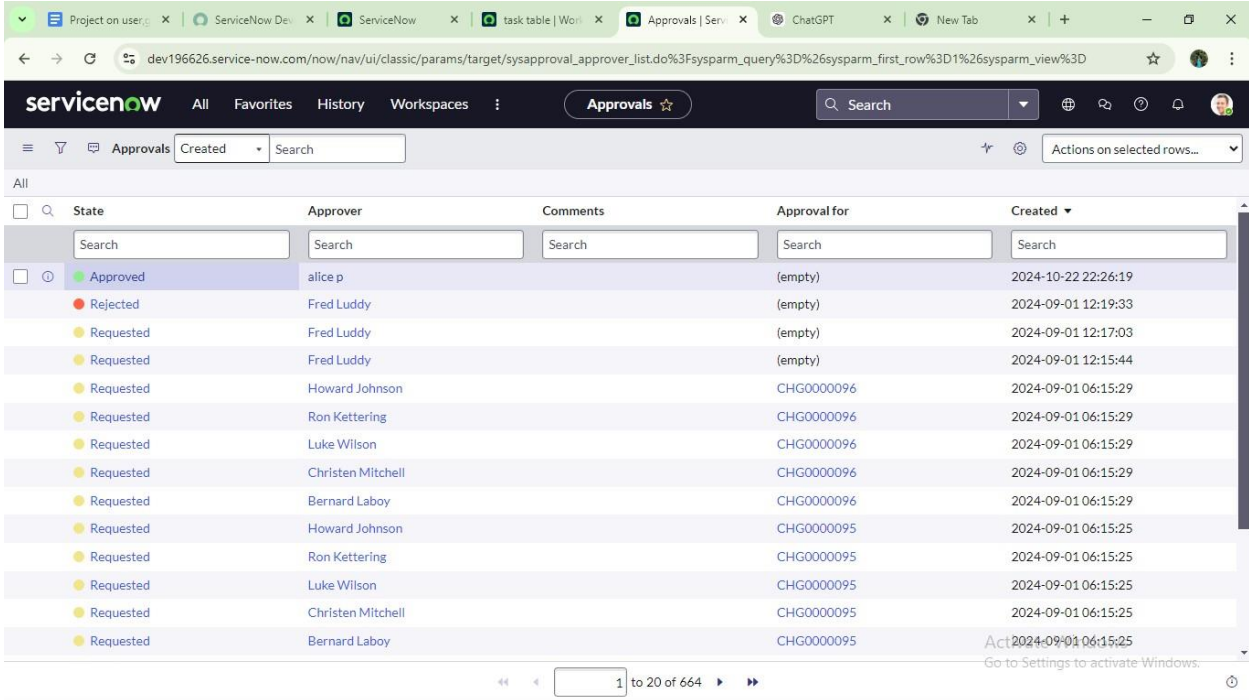


9.Go to application navigator search for task table.

10.It status field is updated to completed



11. Go to application navigator and search for my approval
12. Click on my approval under the service desk.
13. Alice p got approval request then right click on requested then select approved



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' for 'alice p' on '2024-10-22 22:26:19'. Other rows show 'Requested' status for 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.