



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

REGULATION 2021



ARUNACHALA

HITECH ENGINEERING COLLEGE

(Approved By AICTE, New Delhi & Affiliated to Anna University, Chennai)

LABORATORY RECORD

This is to certify that this is a bonafide record of the work done by Mr
..... Register number.....in
thelaboratory in theSemester.

Staff-in-charge

Head of the Department

Submitted for the University Examination held on

Internal Examiner

External Examine

Optimizing user group and role management with access control and workflow

INTRODUCTION:

Effective access management is essential for maintaining security, compliance, and operational efficiency in modern organizations. This project focuses on optimizing user group and role management by integrating access control mechanisms and workflow AIM (Automation, Integration, and Management). The objective is to streamline user provisioning, minimize manual interventions, and ensure that access rights are consistently aligned with organizational policies.

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.

PROCEDURE:

Users

Create Users

STEP 1: Open service now

STEP 2: Click on All >> search for users

STEP 3: Select Users under system security

STEP 4: Click on new

STEP 5: Fill the following details to create a new user

STEP 6: Click on submit

The screenshot displays the ServiceNow User Administration interface. The left sidebar shows the navigation menu with 'Users' selected under 'System Security'. The main content area shows the 'New User' form for 'User - Bob p'. The form fields are as follows:

- User ID: bob (highlighted with a red box)
- First name: Bob
- Last name: p
- Title: (empty)
- Department: (empty)
- Password needs reset: ☐
- Locked out: ☐
- Active: ☒
- Web service access only: ☐
- Internal Integration User: ☐
- Email: bob@gmail.com
- Language: --None--
- Calendar integration: Outlook
- Time zone: System (America/Los_Angeles)
- Date format: System (yyyy-MM-dd)
- Business phone: (empty)
- Mobile phone: (empty)
- Photo: Click to add...

Buttons at the bottom include 'Update', 'Set Password', and 'Delete'. Below the form, there are 'Related Links' and a table for 'Entitled Custom Tables'.

Groups

Create Groups

STEP 1: Open service now.

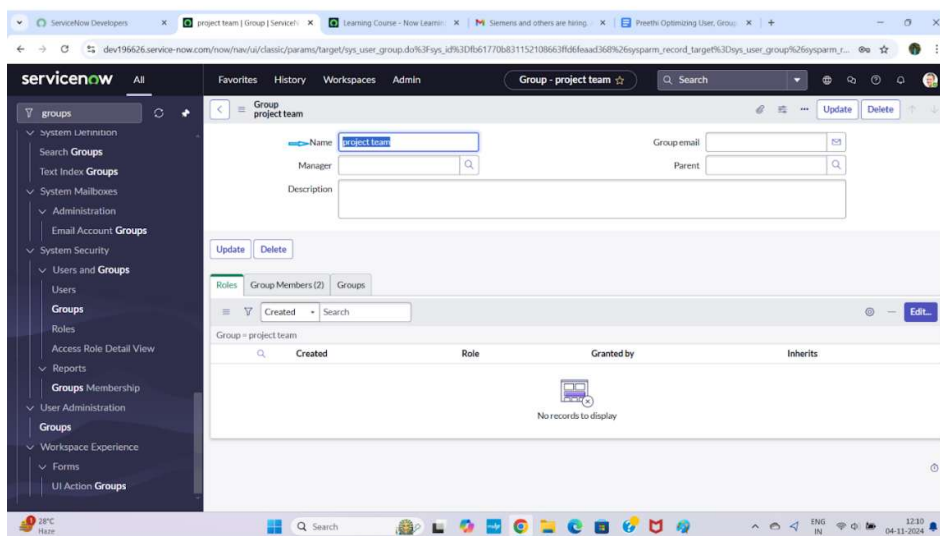
STEP 2: Click on All >> search for groups

STEP 3: Select groups under system security

STEP 4: Click on new

STEP 5: Fill the following details to create a new group

STEP 6: Click on submit



Roles

Create Role

STEP 1: Open service now.

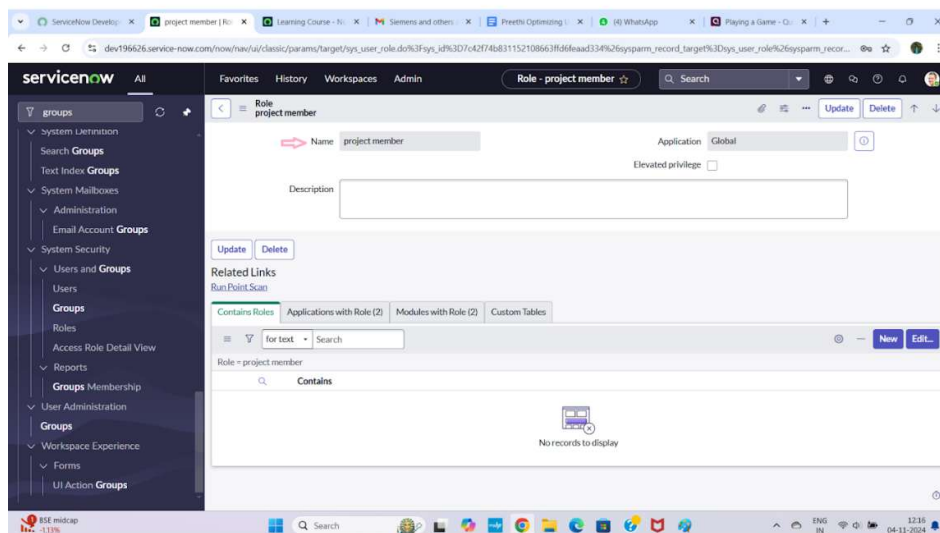
STEP 2: Click on All >> search for roles

STEP 3: Select roles under system security

STEP 4: Click on new

STEP 5: Fill the following details to create a new role

STEP 6: Click on submit



Assign users to groups

Assign roles to Alice user:

STEP 1: Open servicenow. Click on All >> search for user

STEP 2: Select tables under system definition

STEP 3: Select the project manager user

STEP 4: Under project manager

STEP 5: Click on edit

STEP 6: Select project member and save

STEP 7: click on edit add u_project_table role and u_task_table role

STEP 8: click on save and update the form.

The screenshot shows the ServiceNow user profile for 'alice.p'. The 'Roles' tab is active, displaying a table of roles assigned to the user. The roles listed are 'u_task_table_2_user', 'project member', and 'u_project_table_user'. The 'project member' role is highlighted with a red box. The table has columns for Role, State, Inherited, and Inheritance Count.

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

Assign roles to Bob user:

STEP 1: Open servicenow. Click on All >> search for user

STEP 2: Select tables under system definition

STEP 3: Select the bob p user

STEP 4: Under team member

STEP 5: Click on edit

STEP 6: Select team member and give table role and save

STEP 7: Click on profile icon Impersonate user to bob

STEP 8: We can see the task table2.

The screenshot shows the ServiceNow user management interface for user Bob p. The left sidebar contains a navigation menu with categories like System Limitation, Text Index Groups, System Mailboxes, Administration, System Security, Users and Groups, Reports, Groups Membership, User Administration, Workspace Experience, Forms, and UI Action Groups. The main content area displays the user's profile, including a warning message about SOAP role access, a photo placeholder, and buttons for Update, Set Password, and Delete. Below this, there are links for Related Links and a table of Entitled Custom Tables. The table has columns for Role, State, Inherited, and Inheritance Count. The role 'u_task_table_2_user' is highlighted with a red box, and its state is 'Active'.

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

Application access

Assign table access to application:

STEP 1: while creating a table it automatically create a application and module for that table

STEP 2: Go to application navigator search for search project table application

STEP 3: Click on edit module

STEP 4: Give project member roles to that application

STEP 5: Search for task table2 and click on edit application.

STEP 6: Give the project member and team member role for task table 2 application

The screenshot shows the ServiceNow web interface for configuring an application menu. The browser tabs include 'Copy of template - Google Doc...', 'project on users, groups, roles...', 'ServiceNow Developers', and 'project table | Application Menu'. The URL is 'dev196626.service-now.com/now/nav/ui/classic/params/target/sys_app_application.do%3Fsys_id%3D9705334f831152108663ffd6feaad362'. The page title is 'Application Menu - project table'. The main content area has a light blue header with the text: '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](#)'. Below this, there are several form fields: 'Title' (project table), 'Application' (Global), 'Active' (checked), 'Roles' (project member), 'Category' (Custom Applications), 'Hint', and 'Description'. At the bottom, there are 'Update' and 'Delete' buttons. A watermark 'Activate Windows' is visible in the bottom right corner.

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.

Copy of template - Google I xServiceNow Developers xproject table | Application M xtask table 2 | Application Mi xChatGPT x

dev196626.servicenow.com/now/nav/ui/classic/params/target/sys_app_application.do%3Fsys_id%3D114bece3835992108663ffd6feaad3dc

servicenowAllFavoritesHistoryAdminApplication Menu - task table 2Search

Application Menu
task table 2

Application Group

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

UpdateDelete

Activate Windows
Go to Settings to activate Windows.

ModulesOrderSearchActions on selected rows...New

Access control list

Create ACL

STEP 1: Open service now.

STEP 2: Click on All >> search for ACL

STEP 3: Select Access Control(ACL) under system security

STEP 4: Click on elevate role

STEP 5: Click on new

STEP 6: Fill the following details to create a new ACL

The screenshot shows the 'Access Control - New Record' form in the ServiceNow interface. The form is titled 'Access Control - New Record' and includes a search bar and a 'Submit' button. A warning message at the top states: 'Warning: A role, security attribute, data condition, or script is required to properly secure access with this ACL.' The form fields are as follows:

- * Type: record
- * Operation: write
- Decision Type: Allow If
- Admin overrides: ☒
- Protection policy: -- None --
- * Name: task table 2 [u_task_table_2]
- Description: (empty text area)
- Applies To: No. of records matching the condition: 1
- Application: Global
- Active: ☒
- Advanced: ☐
- Fields: status
- Buttons: Add Filter Condition, Add "OR" Clause
- Dropdowns: -- choose field --, -- oper --, -- value --

At the bottom, there is a 'Conditions' section with a note: 'Access Control Rules have two decision types, and these types will behave differently depending on conditions.'

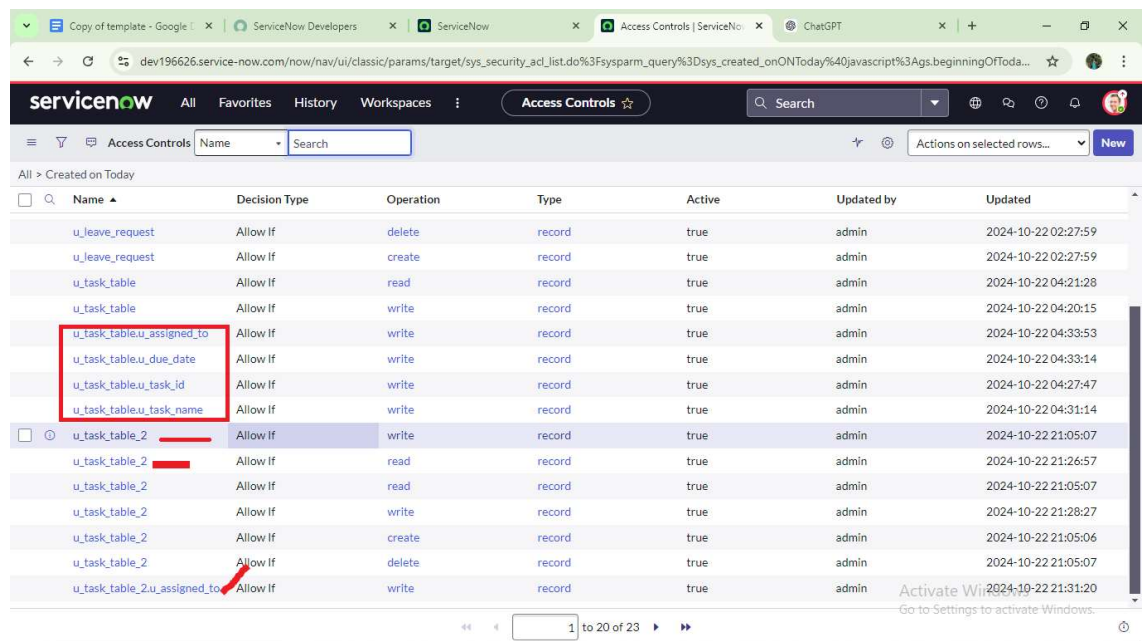
STEP 7: Scroll down under requires role

STEP 8: Double click on insert a new row

STEP 9: Give task table and team member role

STEP 10: Click on submit

STEP 11: Similarly create 4 acl for the following fields



The screenshot shows the ServiceNow Access Controls interface. The table lists ACLs with columns: Name, Decision Type, Operation, Type, Active, Updated by, and Updated. The following table represents the data visible in the screenshot:

Name	Decision Type	Operation	Type	Active	Updated by	Updated
u_leave_request	Allow If	delete	record	true	admin	2024-10-22 02:27:59
u_leave_request	Allow If	create	record	true	admin	2024-10-22 02:27:59
u_task_table	Allow If	read	record	true	admin	2024-10-22 04:21:28
u_task_table	Allow If	write	record	true	admin	2024-10-22 04:20:15
u_task_table.u_assigned_to	Allow If	write	record	true	admin	2024-10-22 04:33:53
u_task_table.u_due_date	Allow If	write	record	true	admin	2024-10-22 04:33:14
u_task_table.u_task_id	Allow If	write	record	true	admin	2024-10-22 04:27:47
u_task_table.u_task_name	Allow If	write	record	true	admin	2024-10-22 04:31:14
u_task_table_2	Allow If	write	record	true	admin	2024-10-22 21:05:07
u_task_table_2	Allow If	read	record	true	admin	2024-10-22 21:26:57
u_task_table_2	Allow If	read	record	true	admin	2024-10-22 21:05:07
u_task_table_2	Allow If	write	record	true	admin	2024-10-22 21:28:27
u_task_table_2	Allow If	create	record	true	admin	2024-10-22 21:05:06
u_task_table_2	Allow If	delete	record	true	admin	2024-10-22 21:05:07
u_task_table_2.u_assigned_to	Allow If	write	record	true	admin	2024-10-22 21:31:20

STEP 12: Click on profile on top right side

STEP 13: Click on impersonate user

STEP 14: Select bob user

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

STEP 16: Comment and status fields are have the edit access

The screenshot shows a web browser window with multiple tabs. The active tab is 'Create Created | task table 2'. The address bar shows the URL: `dev196626.service-now.com/now/nav/ui/classic/params/target/u_task_table_2.do%3Fsys_id%3D-1%26sys_list%3Dtrue%26sys_target%3Du_task_table_2%26sysparm_check...`. The ServiceNow header is visible with the logo and navigation links: 'All', 'Favorites', 'History'. The main title of the form is 'task table 2 - Create Created'. Below the title, there is a breadcrumb trail: '< task table 2 New record'. The form contains several input fields: 'task id', 'task name', 'status' (a dropdown menu currently showing '-- None --'), 'assigned to', 'comments', and 'due date'. A 'Submit' button is located at the top right of the form. At the bottom right of the page, there is a watermark that says 'Activate Windows Go to Settings to activate Windows.'

Flow

Create a Flow to Assign operations ticket to group:

STEP 1: Open service now.

STEP 2: Click on All >> search for Flow Designer

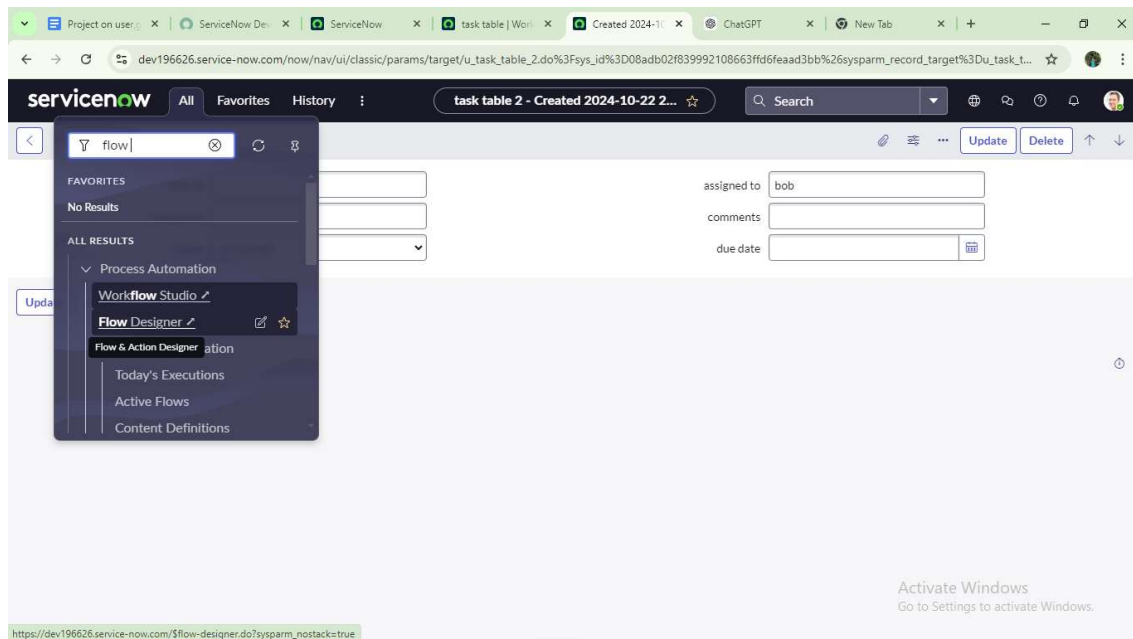
STEP 3: Click on Flow Designer under Process Automation.

STEP 4: After opening Flow Designer Click on new and select Flow.

STEP 5: Under Flow properties Give Flow Name as “ task table”.

STEP 6: Application should be Global.

STEP 7: Click build flow.



Workflow Studio

task table

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
Business process approval flow	Global	Published	true	2020-09
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

Operations

New 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:

STEP 1: Click on Add a trigger

STEP 2: Select the trigger in that Search for “create record” and select that.

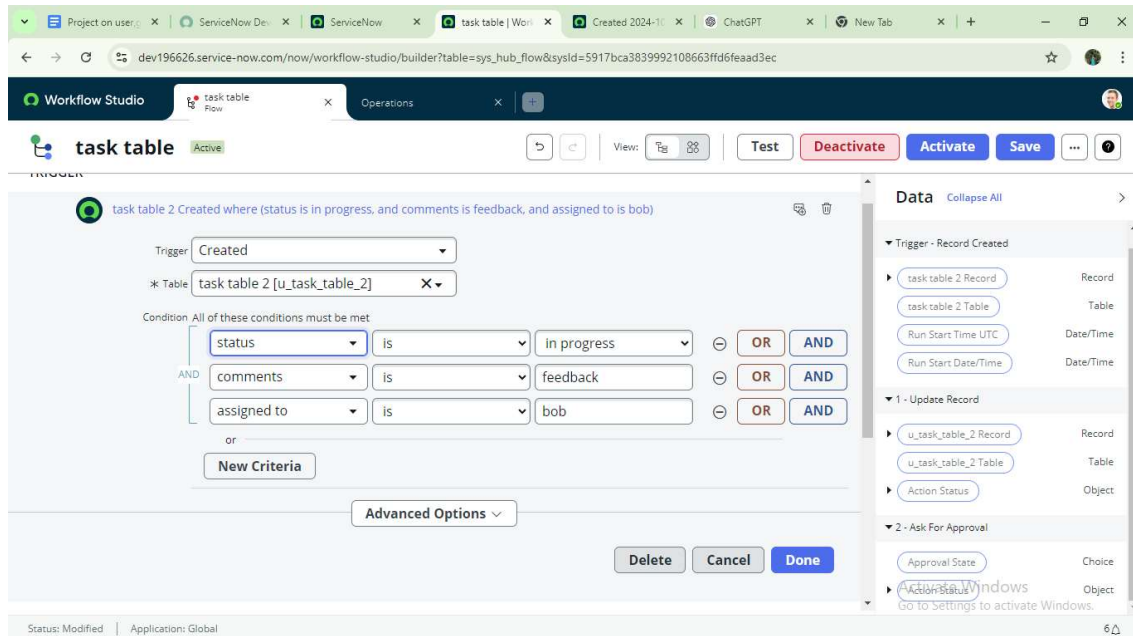
STEP 3: Give the table name as “ task table ”.

STEP 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

STEP 5: After that click on Done.



Next step:

STEP 1: Click on Add an action.

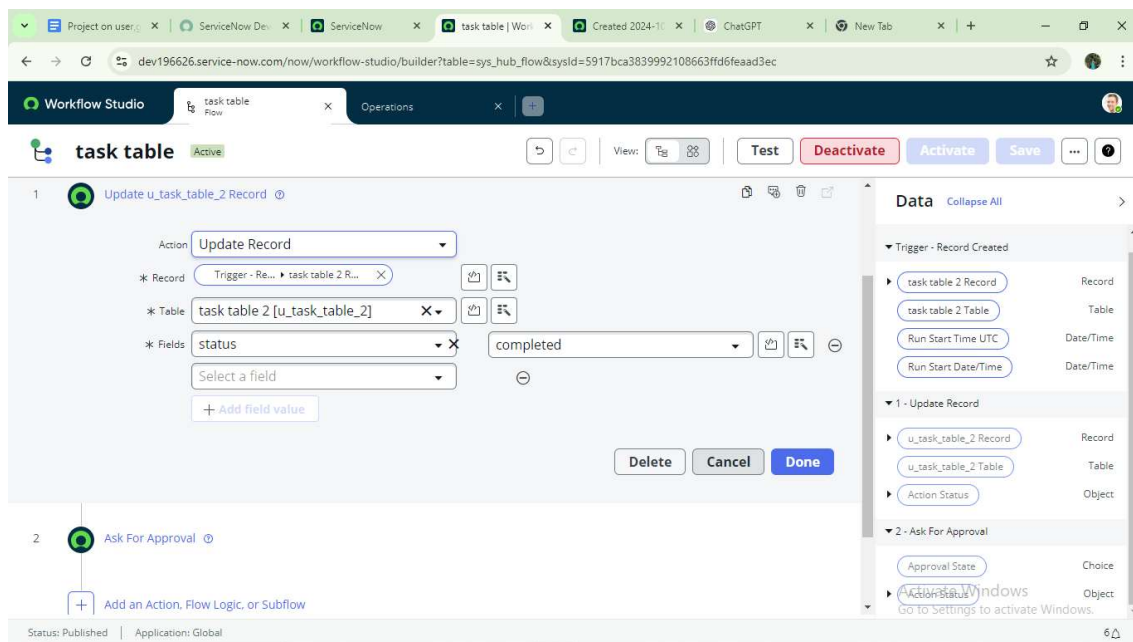
STEP 2: Select action in that ,search for “ update records”.

STEP 3: In Record field drag the fields from the data navigation from Right Side(Data pill)

STEP 4: Table will be auto assigned after that

STEP 5: Add fields as “status” and value as “completed”

STEP 6: Click on Done.



Next step:

STEP 1: Now under Actions.

STEP 2: Click on Add an action.

STEP 3: Select action in that ,search for “ ask for approval ”.

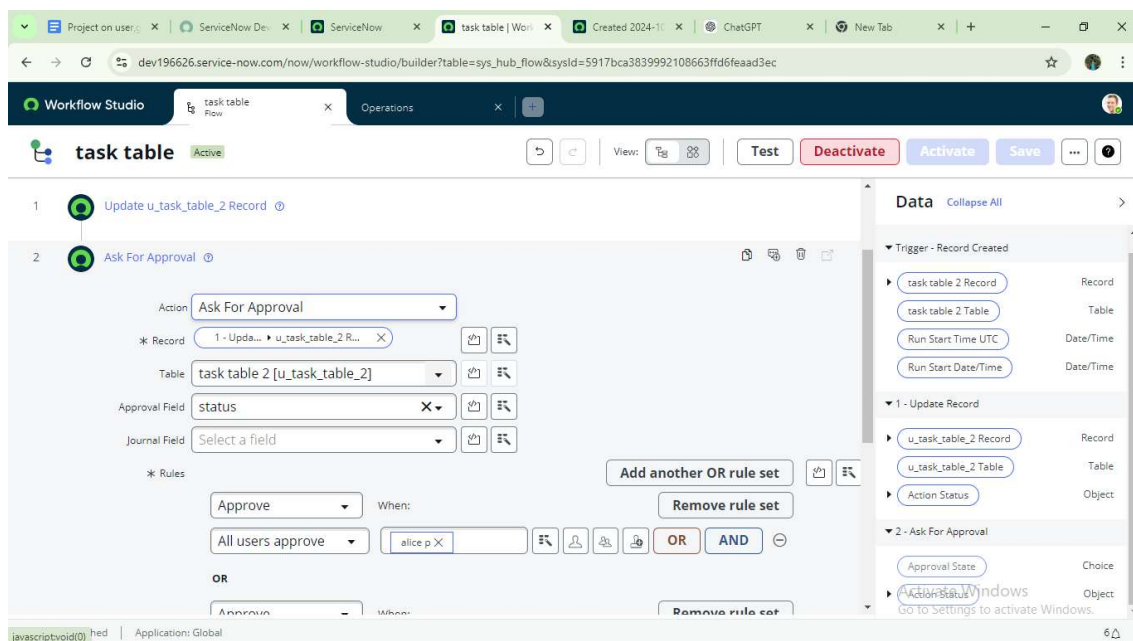
STEP 4: In Record field drag the fields from the data navigation from Right side

STEP 5: Table will be auto assigned after that

STEP 6: Give the approve field as “ status”

STEP 7: Give approver as alice p

STEP 8: Click on Done.



STEP 1: Go to application navigator search for task table.

STEP 2: It status field is updated to completed

The screenshot shows the ServiceNow interface for a record titled "task table 2 - Created 2024-10-22 22:25:18". The form contains the following fields:

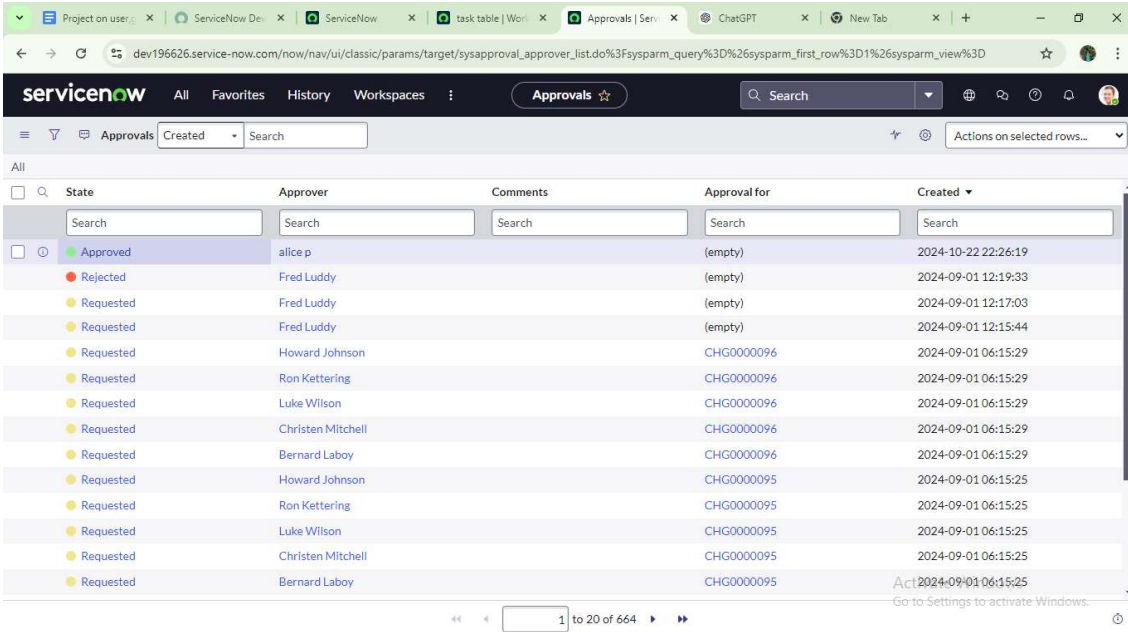
- task id:
- task name:
- status:
- assigned to:
- comments:
- due date:

At the bottom left of the form, there are "Update" and "Delete" buttons. At the bottom right, there is a watermark that says "Activate Windows Go to Settings to activate Windows."

STEP 1: Go to application navigator and search for my approval

STEP 2: Click on my approval under the service desk.

STEP 3: Alice p got approval request then right click on requested then select approved



	State	Approver	Comments	Approval for	Created
<input type="checkbox"/>	Approved	alice p		(empty)	2024-10-22 22:26:19
<input type="checkbox"/>	Rejected	Fred Luddy		(empty)	2024-09-01 12:19:33
<input type="checkbox"/>	Requested	Fred Luddy		(empty)	2024-09-01 12:17:03
<input type="checkbox"/>	Requested	Fred Luddy		(empty)	2024-09-01 12:15:44
<input type="checkbox"/>	Requested	Howard Johnson		CHG0000096	2024-09-01 06:15:29
<input type="checkbox"/>	Requested	Ron Kettering		CHG0000096	2024-09-01 06:15:29
<input type="checkbox"/>	Requested	Luke Wilson		CHG0000096	2024-09-01 06:15:29
<input type="checkbox"/>	Requested	Christen Mitchell		CHG0000096	2024-09-01 06:15:29
<input type="checkbox"/>	Requested	Bernard Laboy		CHG0000096	2024-09-01 06:15:29
<input type="checkbox"/>	Requested	Howard Johnson		CHG0000095	2024-09-01 06:15:25
<input type="checkbox"/>	Requested	Ron Kettering		CHG0000095	2024-09-01 06:15:25
<input type="checkbox"/>	Requested	Luke Wilson		CHG0000095	2024-09-01 06:15:25
<input type="checkbox"/>	Requested	Christen Mitchell		CHG0000095	2024-09-01 06:15:25
<input type="checkbox"/>	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.