

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

**NAAN MUDALVAN PROJECT TEAM**

**ID:**

**NM2025TMID17760**

**Team Leader : PRIYA DHARSHINI K**

**Team member : SAI LAKSHMI**

**Team member : RABINA RACHEL**

**Team member : RAHUL G**

**ST.JOSEPH'S COLLEGE (ARTS & SCIENCE)**

**INDEX**

1. Introduction
2. Abstract

3. Problem statement
4. Solution
5. Practical use
6. Knowledge gained
7. Milestone 1: CREATE USERS
8. Milestone 2: CREATE GROUPS
9. Milestone 3: CREATE ROLES
- 10.Milestone 4: CREATION OF TABLE
- 11.Milestone 5: ASSIGNED USERS TO GROUPS
- 12.Milestone 6: ASSIGNED A ROLES TO USERS
- 13.Milestone 7: TABLE ACCESS TO APPLICATION
- 14.Milestone 8: CREATION OF ACCESS LIST
- 15.Milestone 9: CREATE A FLOW TO ASSIGN  
OPERATIONS
- 16.Conclusion

## **INTRODUCTION**

## **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.

## **SOLUTION**

To optimize user, group, and role management with access control and workflows for the project management team, a Role-Based Access Control (RBAC) model with a defined Task Management Workflow should be implemented. This approach ensures that users (Alice and Bob) have specific permissions based on their roles, and all tasks follow a clear, sequential process.

## **PRACTICAL USE**

- **Clarity:** **Alice** knows she is the sole owner of project setup and final approval, while **Bob** knows his responsibility is to execute and update his assigned tasks.
- **Accountability:** Each task's history shows who made the last update and when, providing a clear audit trail.
- **Efficiency:** The structured workflow eliminates guesswork. **Bob** knows exactly what to do with a task at each stage, and

**Alice** can quickly see what's ready for her review.

### **KNOWLEDGE GAINED**

By implementing this system, the team gains a deeper understanding of **Role-Based Access Control (RBAC)** and **workflow management**. They learn that:

- **RBAC** isn't just about security; it's a powerful tool for defining responsibilities and clarifying roles.
- A **well-defined workflow** is essential for standardizing processes and ensuring consistency, even in a small team.
- Technology solutions (like project management software) are most effective when they are configured to support an organization's specific roles and processes, not just used out of the box.

## **MILESTONE 1: CREATE USERS**

Go to the official ServiceNow Developer portal:  
<https://developer.servicenow.com> and create a developer account.

□

- Open service now

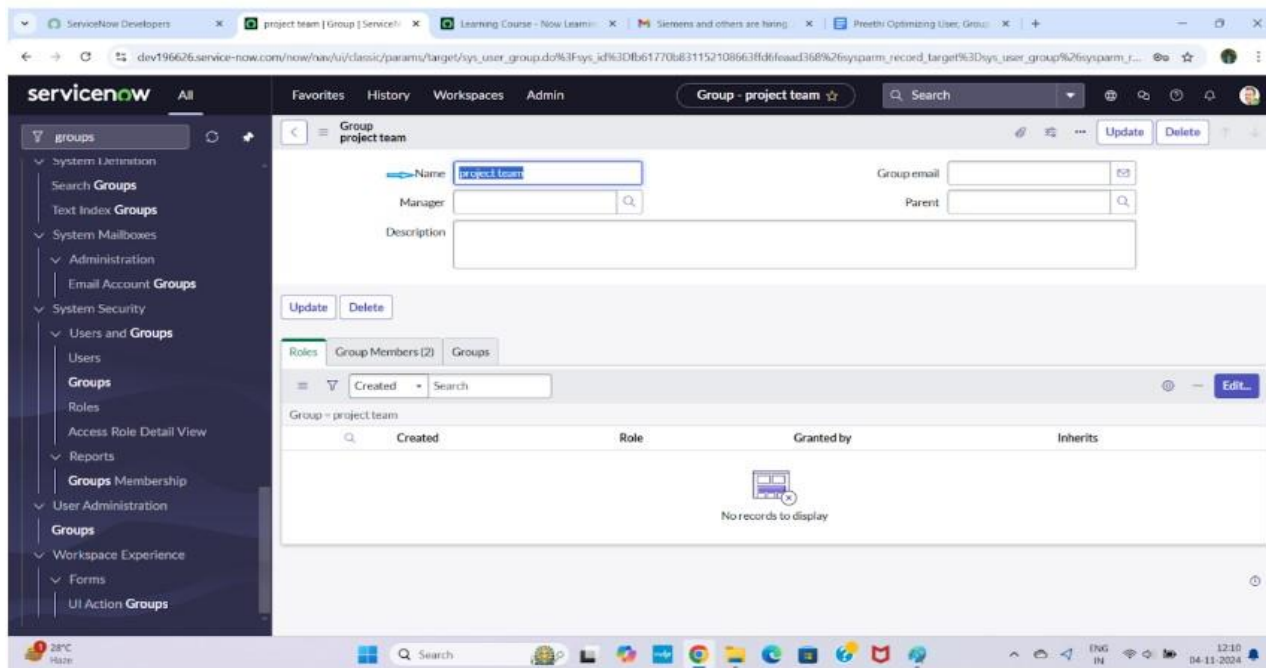
- Click on All >> search for users
- Select Users under system security
- Click on new
- Fill the following details to create a new user
- Click on submit

The screenshot shows the ServiceNow 'User' form. The 'User ID' field is highlighted with a red box. The 'First name' field contains 'alice' and the 'Last name' field contains 'p'. The 'Email' field contains 'alice@gmail.com'. The 'Active' checkbox is checked. The 'Update', 'Set Password', and 'Delete' buttons are visible at the bottom of the form.

## MILSTONE 2: CREATE GROUPS

**Log in to your ServiceNow instance and go to the Application Navigator.**

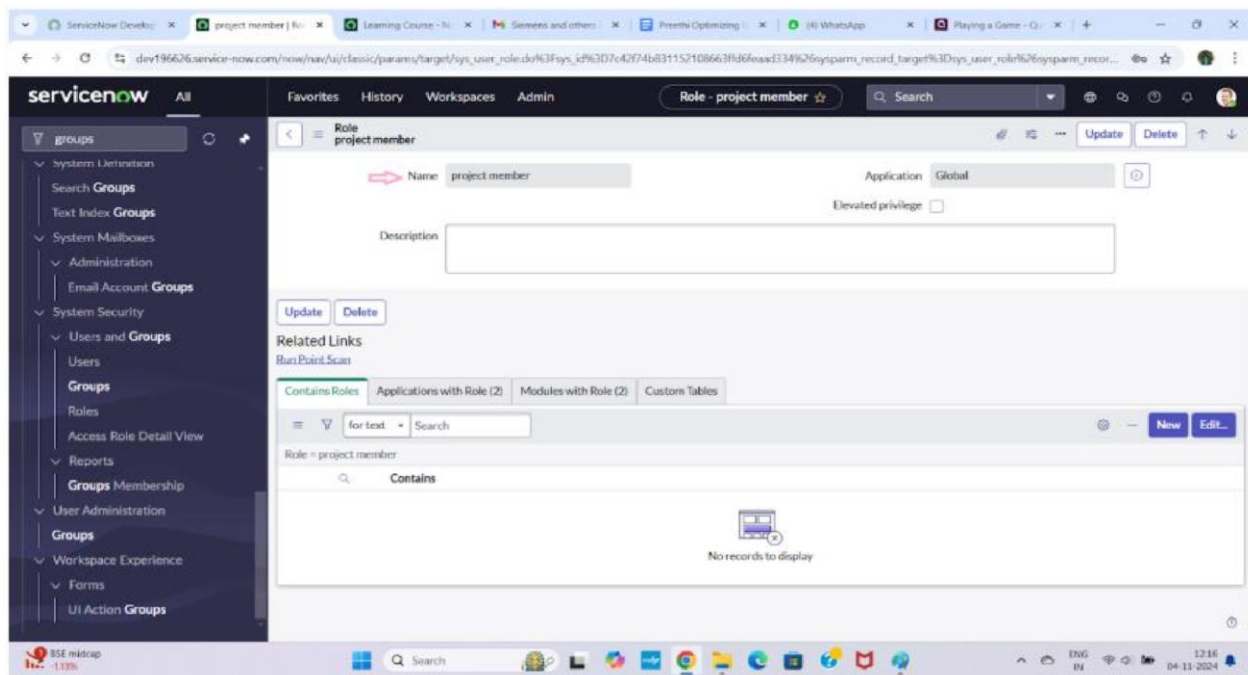
- Open service now.
- Click on All >> search for groups
- Select groups under system security
- Click on new
- Fill the following details to create a new group
- Click on submit



## MILSTONE 3: CREATE ROLES

- Open service now.
- Click on All >> search for roles
- Select roles under system security
- Click on new
- Fill the following details to create a new role
- Click on submit





## MILSTONE 4: CREATION OF TABLE

- Open service now.
- Click on All >> search for tables
- Select tables under system definition
- Click on new
- Fill the following details to create a new table  
Label : project table  
Check the boxes Create module & Create mobile module
- Under new menu name : project table
- Under table columns give the columns

ServiceNow

Table - New Record

Name:

Extends table:

Create module: ☒

Create mobile module: ☒

Add module to menu:

New menu name:

Columns Controls Application Access

Table Columns for text Search

Column label	Type	Reference	Max length	Default value	Display
project id	Integer				false
project name	String				false
project manager	String				false
start date	Date				false
end date	Date				false
status	Choice				false
description	String				false

## MILSTONE 5: ASSIGNED USERS TO GROUPS

Assign users to project team group

- Open service now.
- Click on All >> search for groups
- Select tables under system definition
- Select the project team group
- Under group members
- Click on edit
- Select alice p and bob p and save

□

ServiceNow Dev... project team | Learning Course | Siemens and on | Preethi Optimiz... | WhatsApp | Summary - Quo... | Playing a Game |

dev196626.service-now.com/now/nav/ui/classic/params/target/sys\_user\_group.do%3Fsys\_id%3D8b61770b81152100663ff6fead368%26sysparm\_record\_target%3Dsys\_user\_group%26sysparm\_r...

servicenow All

Groups

FAVORITES

No Results

ALL RESULTS

- Activity Subscriptions
- Configuration
  - Activity **Groups**
- Business Calendar
  - Business Calendar **Groups**
- Dynamic Schema
  - Dynamic Attribute **Groups**
- Employee Center
  - Action Framework
    - Action **Groups**
- Now Experience Framework
  - Declarative Actions
    - Form Action Layout **Groups**
    - List Action **Groups**
- Platform Analytics Administrat...
- Indicators

Group - project team

Name: project team Group email: Manager: Parent: Description:

Update Delete

Roles: Group Members (2) Groups

User Search

Group - project team

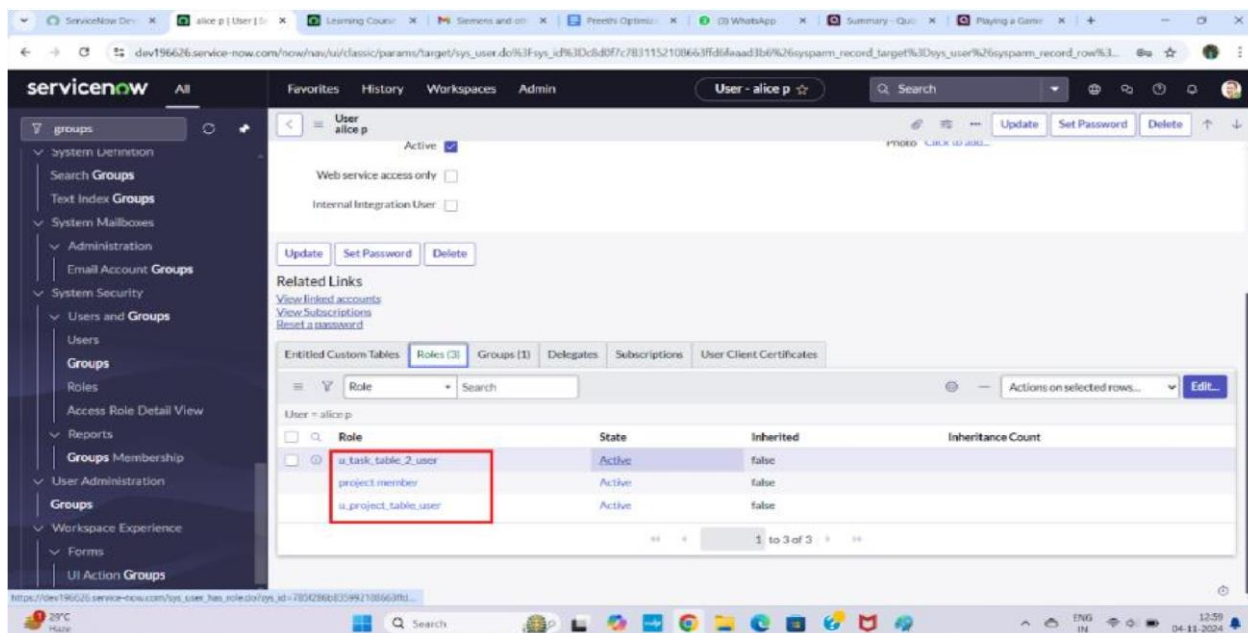
User
Bob p
alice p

1 to 2 of 2

## MILSTONE 6:

### ASSIGNED A ROLES TO USERS

- Open Servicenow.Click On All >> Search For User
- Select Tables Under System Definition
- Select The Project Manager User
- Under Project Manager
- Click On Edit
- Select Project Member And Save
- Click On Edit Add Project Table Role
- Click On Save And Update The Form



### TABLE ACCESS TO APPLICATION

- while creating a table it automatically create a application and module for that table
- Go to application navigator search for search project table application
- Click on edit module

## MILSTONE 7:

- Give project member roles to that application • Search for task table2 and click on edit application.
- Give the project member and team member role for task table 2 application

The top screenshot shows the 'Application Menu - task table 2' configuration page. It includes a search bar, a list of roles (u\_task\_table\_2\_user, project member, team member), a category dropdown set to 'Custom Applications', and fields for hint and description. The bottom screenshot shows the 'Application Menu - project table' configuration page. It includes a search bar, a list of roles (project member), a category dropdown set to 'Custom Applications', and fields for hint and description. Both screenshots show the 'Update' and 'Delete' buttons at the bottom.

## CREATION OF ACCESS CONTROL LIST

- Open service now.
- Click on All >> search for ACL
- Select Access Control(ACL) under system security

## MILSTONE 8:

- Click on elevate role
- Click on new
- Fill the following details to create a new ACL

Warning: A role, security attribute, data condition, or script is required to properly secure access with this ACL.

* Type	record	Application	Global
* Operation	write	Active	<input checked="" type="checkbox"/>
Decision Type	Allow If	Advanced	<input type="checkbox"/>
Admin overrides	<input checked="" type="checkbox"/>		
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 --

- Scroll down under requires role
- Double click on insert a new row
- Give task table and team member role
- Click on submit
- Similarly create 4 acl for the following fields

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 21:24:57
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

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

## MILSTONE 9: CREATE A FLOW TO ASSIGN OPERATIONS

- Open service now.
- Click on All >> search for Flow Designer
- Click on Flow Designer under Process Automation.
- After opening Flow Designer Click on new and select Flow.
- Under Flow properties Give Flow Name as “ task table”.
- Application should be Global.



- Click build flow.

The first screenshot shows the ServiceNow interface with a search for 'flow' in the top navigation bar. A dropdown menu is visible, listing 'Workflow Studio', 'Flow Designer', 'Flow & Action Designer', 'Today's Executions', 'Active Flows', and 'Content Definitions'. The 'Flow Designer' option is highlighted.

The second screenshot shows the 'Flow Designer' page. A table lists existing flows with columns for Name, Application, Status, Active, and Update. A 'New' button is visible, and a dropdown menu is open, showing options for 'Playbook', 'Flow', 'Subflow', 'Action', and 'Decision table'. The 'Flow' option is selected.

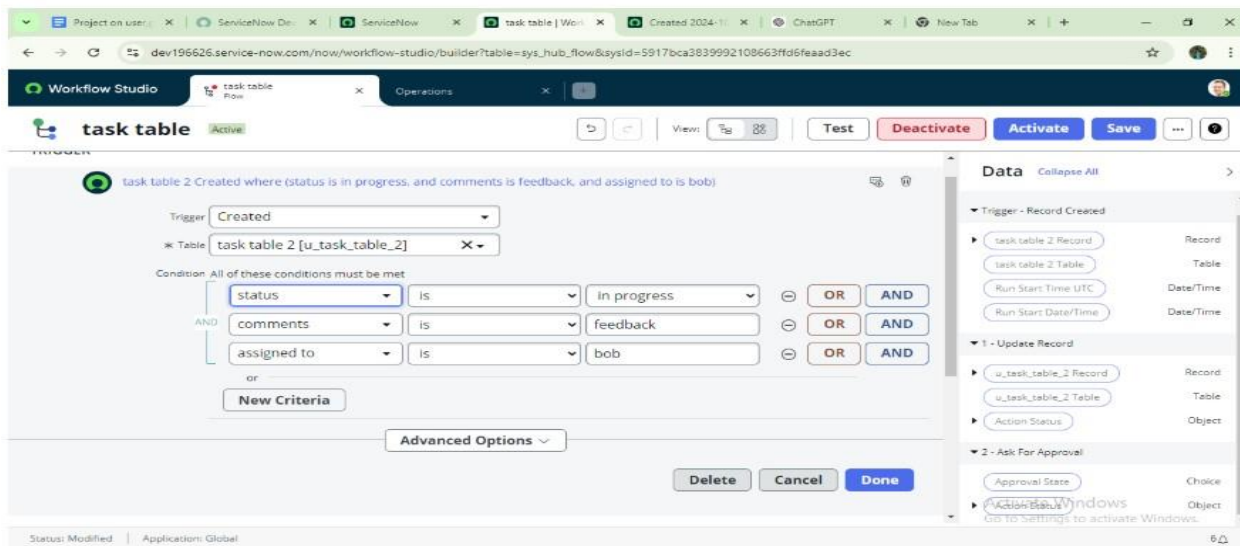
The third screenshot shows the 'New Flow' form. The 'Flow name' field is filled with 'task table'. The 'Description' field is empty. The 'Application' dropdown is set to 'Global'. A 'Build flow' button is visible at the bottom right.

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

next step:

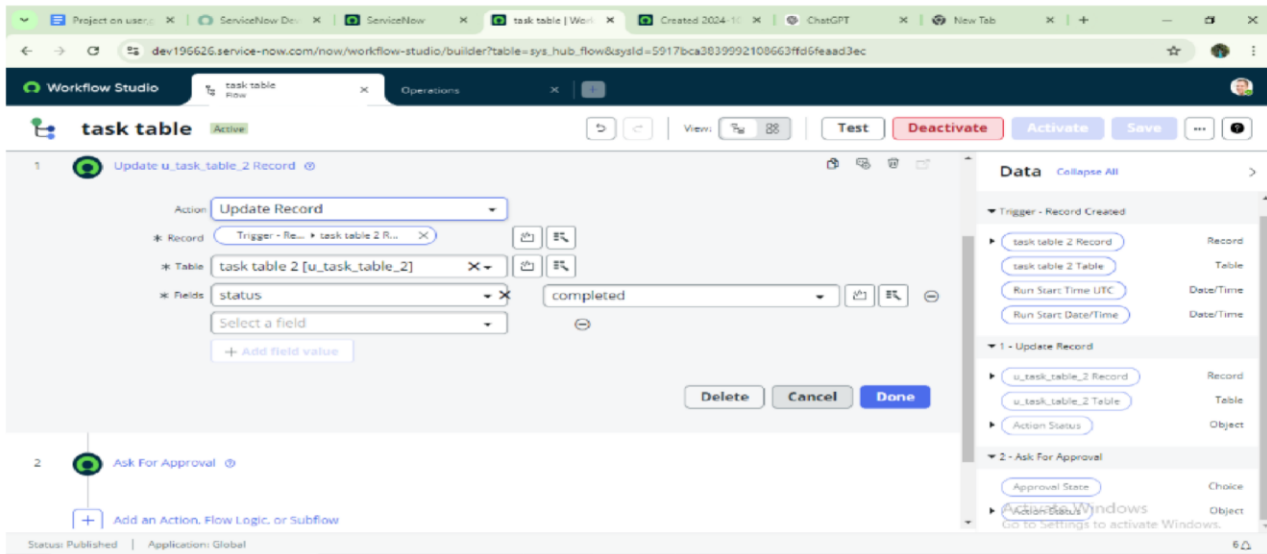


- Click on Add a trigger
- Select the trigger in that Search for “create record” and select that.
- Give the table name as “ task table ”.
- Give the Condition as Field : status Operator :is Value : in progress
  - Field : comments Operator :is Value : feedback
  - Field : assigned to Operator :is Value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



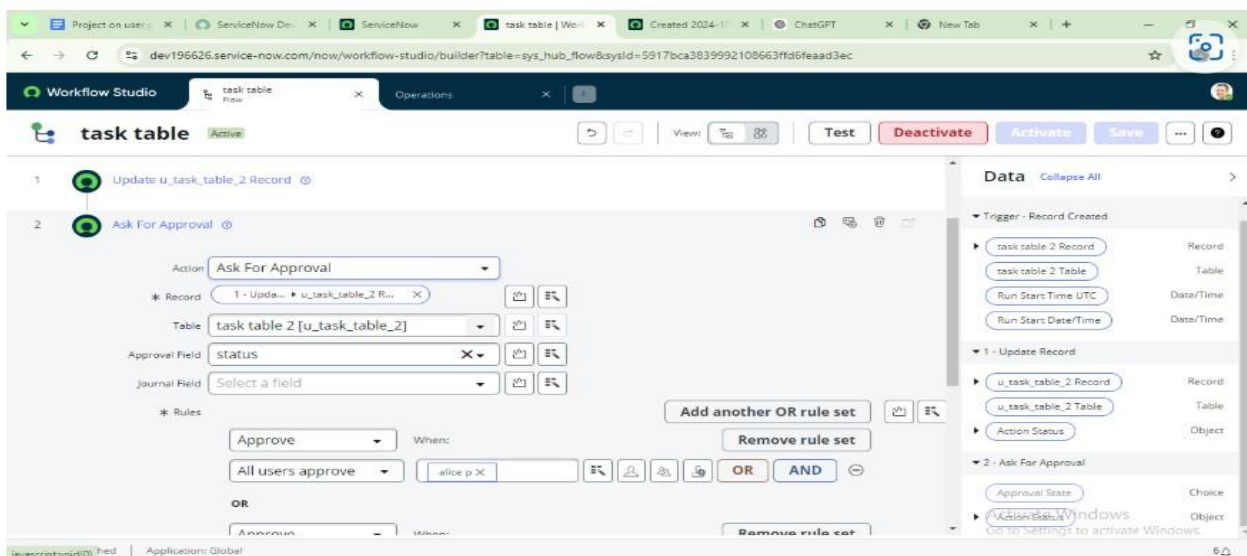
### Next step:

- Click on Add an action.
- Select action in that ,search for “ update records”.
- In Record field drag the fields from the data navigation from Right Side(Data pill)
- Table will be auto assigned after that
- Add fields as “status” and value as “completed”
- Click on Done.



## Next step:

- Now under Actions.
- Click on Add an action.
- Select action in that ,search for “ ask for approval ”.
- In Record field drag the fields from the data navigation from Right side
- Table will be auto assigned after that
- Give the approve field as “ status” • Give approver as alice p
- Click on Done.



- Go to application navigator search for task table.
- It status field is updated to completed

task table 2 - Created 2024-10-22 2...

task id:

task name:

status:

assigned to:

comments:

due date:

Update Delete

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

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.