

# **Streamlining Ticket Assignment for Efficient Support Operations**

**Team Id: NM2025TMID14070**

## **Team Members:**

**Team Leader: HEMALATHA M**

**Team Member 1 : JHANSI M**

**Team Member 2 : SWETHA S**

**Team Member 3 : SINDHU M**

## **Problem Statement:**

At ABC Corporation, the manual assignment of support tickets has led to frequent delays in resolving customer issues. This manual process often causes tickets to be routed to the wrong teams, creating bottlenecks, reducing efficiency, and impacting customer satisfaction. Without automation, the support department struggles to optimize workload distribution and maintain consistent service levels.

## **Objective:**

1. Automate Ticket Routing: Implement an intelligent system that assigns support tickets automatically to the most appropriate teams.
2. Enhance Efficiency: Reduce delays in issue resolution by minimizing manual intervention.
3. Optimize Resources: Ensure support staff are utilized effectively by balancing workload.
4. Improve Customer Experience: Provide faster responses and improved satisfaction for customers.

## Skills Required:

Service Now (Users, Roles, Incidents, Flow Designer)

Spring Framework (Backend API integration)

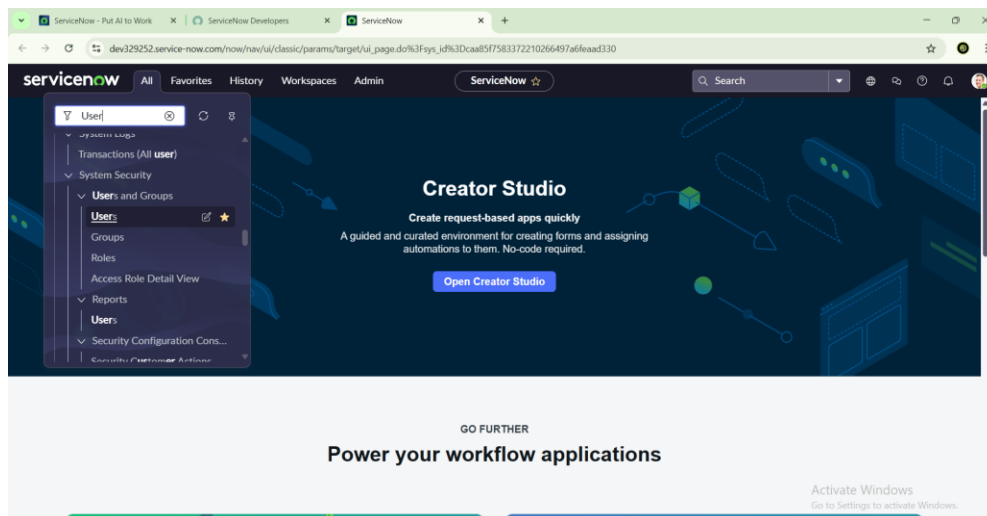
Tensor Flow (Machine Learning classification model)

## TASK INITIATION

### Milestone 1 : Users

#### Activity 1: Create Users

1. Open ServiceNow.
2. Click on All → Search for Users.
3. Select Users under System Security.
4. Click New and fill in details to create a new user.
5. Click Submit.
6. Repeat the process to create another user.



## Create one more user:

1. Create another user with the following details
2. Click on submit

## 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 Developers | New Record | User | ServiceNow

dev329252.service-now.com/now/nav/ui/classic/params/target/sys\_user.do%3Fsys\_id%3D-1%26sys\_is\_list%3Dtrue%26sys\_target%3Dsys\_user%26sysparm\_checked\_items%3D%26sysparm\_fixed\_query%...

servicenow | All | Favorites | History | Workspaces | Admin | User - New Record

Search

User

Transactions (All user)

System Security

Users and Groups

Users

Groups

Roles

Access Role Detail View

Reports

Users

Security Configuration Cons...

Security Custom Actions

Web service access only ☐

Internal Integration User ☐

Click Set Password.

Email

Language -- None --

Calendar integration Outlook

Time zone System (America/Los\_Angeles)

Date format System (yyyy-MM-dd)

Business phone

Mobile phone

Photo [Click to add...](#)

Submit

Related Links

[View linked accounts](#)

[View Subscriptions](#)

Activate Windows  
Go to Settings to activate Windows.

https://dev329252.service-now.com/syslog\_transaction\_list.do?sysparm\_userpref\_module=9d07668f0a0b26017143b6dd27710e&sysparm\_query=sys\_created\_onONToday%40javascript%3Ags.daysAgoStart%280%29%40javascript%3Ags.daysAgoEnd%280%29%5EurISTARTSWITH%...

servicenow | All | Favorites | History | Workspaces | Admin | Group - New Record

Group New record

Name Certification

Manager Board Tip

Description

Group email

Parent

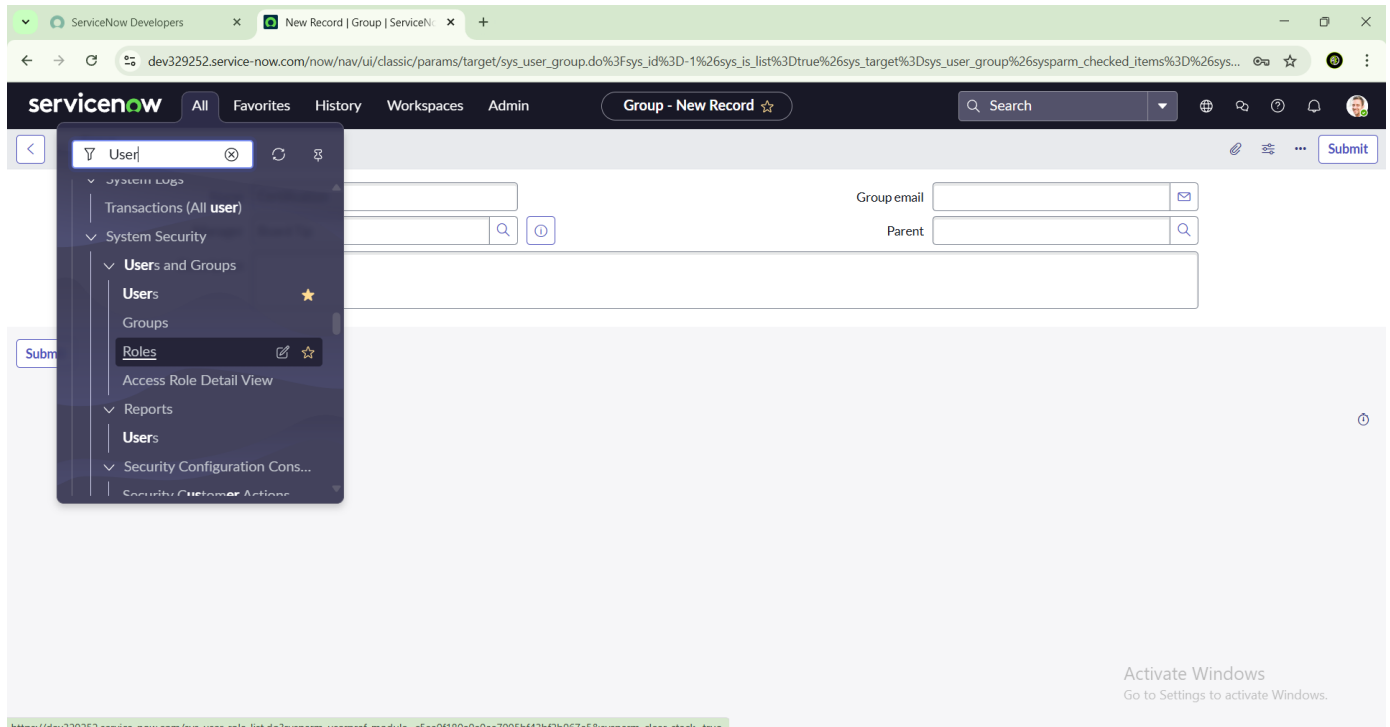
Submit

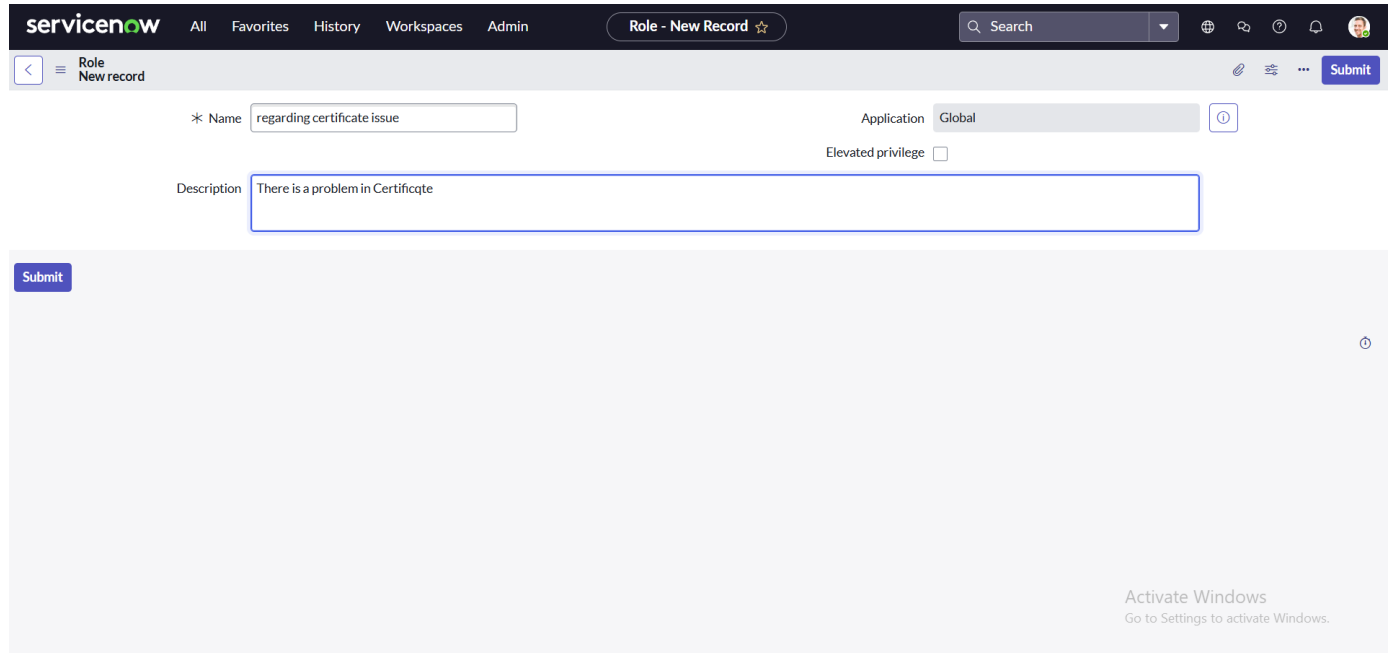
Activate Windows  
Go to Settings to activate Windows.

## 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 - New Record ☆ Search

< Role New record

\* Name regarding certificate issue Application Global

Elevated privilege ☐

Description There is a problem in Certificqte

Submit

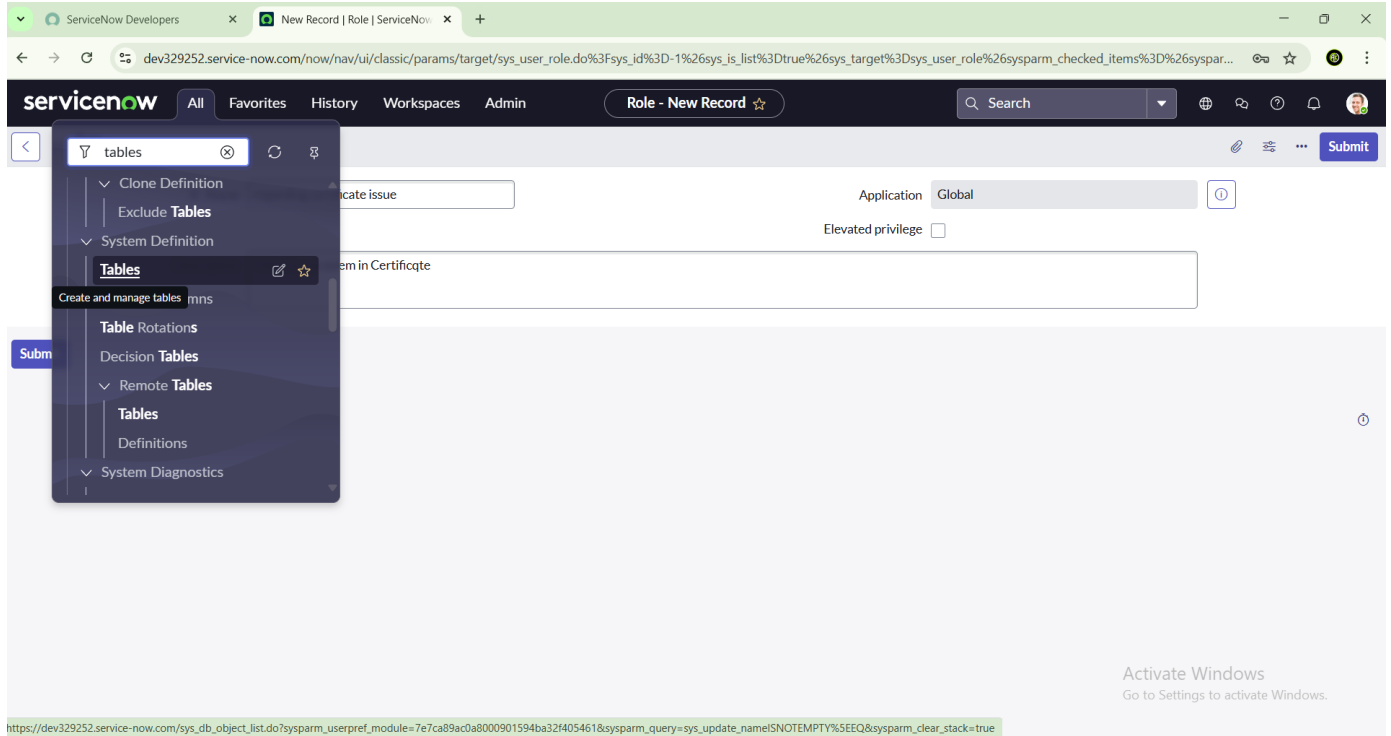
Activate Windows  
Go to Settings to activate Windows.

### 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



ServiceNow Developers | New Record | Role | ServiceNow

dev329252.service-now.com/now/nav/ui/classic/params/target/sys\_user\_role.do%3Fsys\_id%3D-1%26sys\_is\_list%3Dtrue%26sys\_target%3Dsys\_user\_role%26sysparm\_checked\_items%3D%26sysparm...

ServiceNow | All | Favorites | History | Workspaces | Admin | Role - New Record

Search

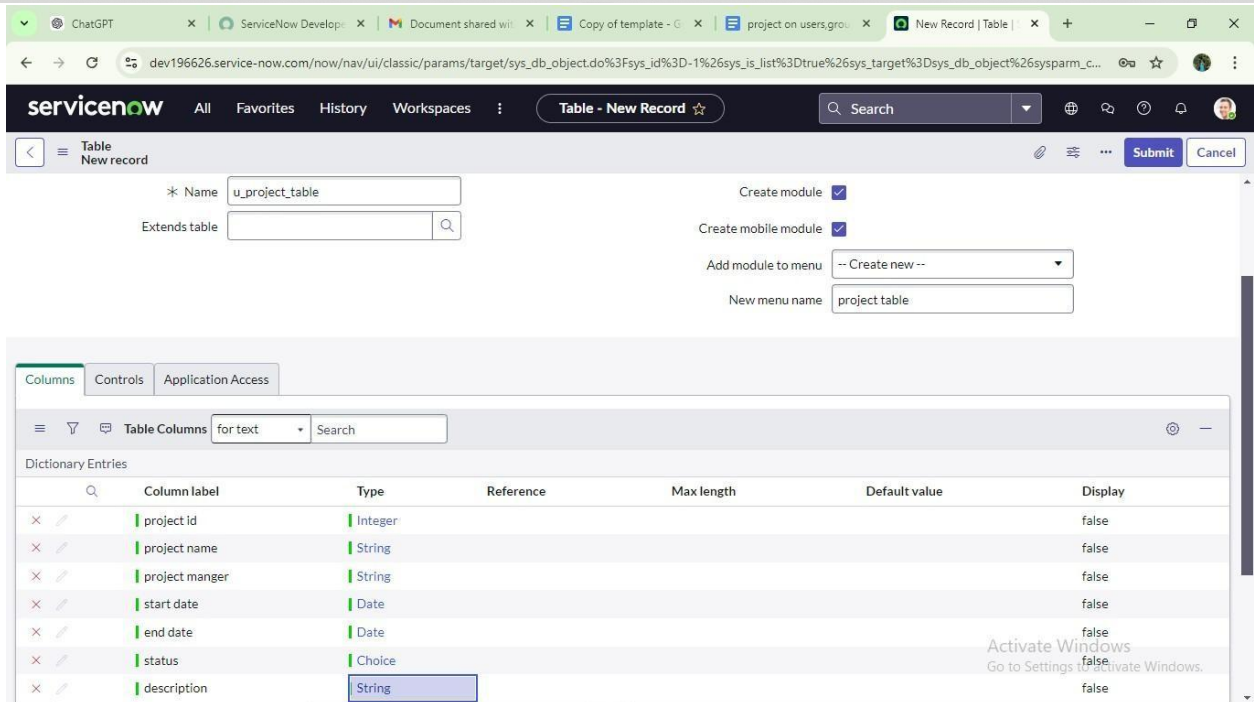
Application: Global

Elevated privilege: ☐

Submit

Activate Windows  
Go to Settings to activate Windows.

https://dev329252.service-now.com/sys\_db\_object\_list.do?sysparm\_userpref\_module=7e7ca89acd3a8000901594ba324054618&sysparm\_query=sys\_update\_name!\$NOTEMPTY%5EEQ&sysparm\_clear\_stack=true



ChatGPT | ServiceNow Develop... | Document shared with... | Copy of template - G... | project on users.grou... | New Record | Table |

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: u\_project\_table

Extends table:

Create module: ☒

Create mobile module: ☒

Add module to menu: -- Create new --

New menu name: project table

Columns | Controls | Application Access

Table Columns for text Search

Dictionary Entries

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

Copy of template - G x project on users.grou x ServiceNow Develop x ServiceNow x task table 2 | Table | S x ChatGPT x + -

dev196626.service-now.com/now/nav/ui/classic/params/target/sys\_db\_object.do%3Fsys\_id%3Df53ba8e3835992108663ffd6feaad365%26sysparm\_view%3D%26sysparm\_dom...

**servicenow** 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

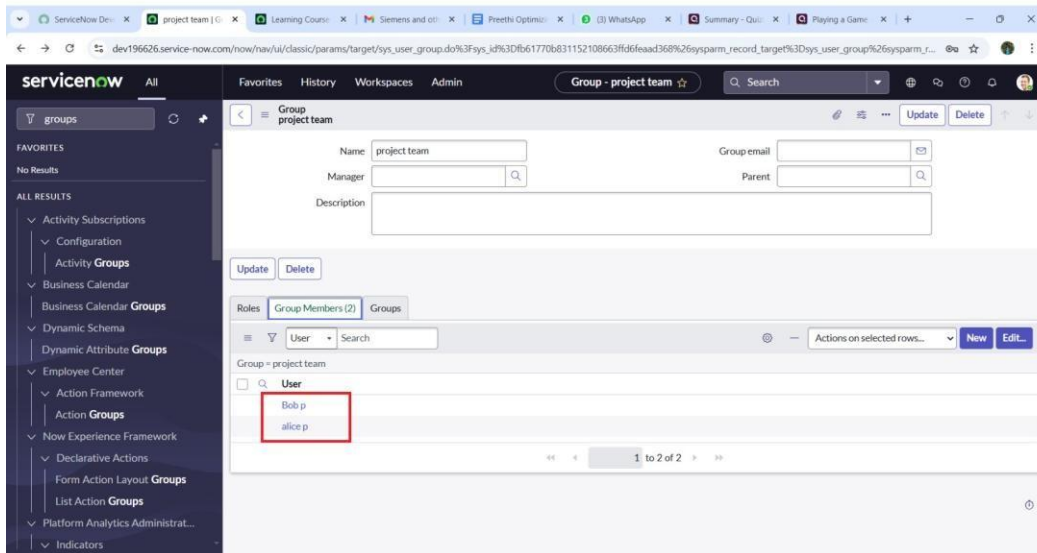
Delete Update Delete All Records

## 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

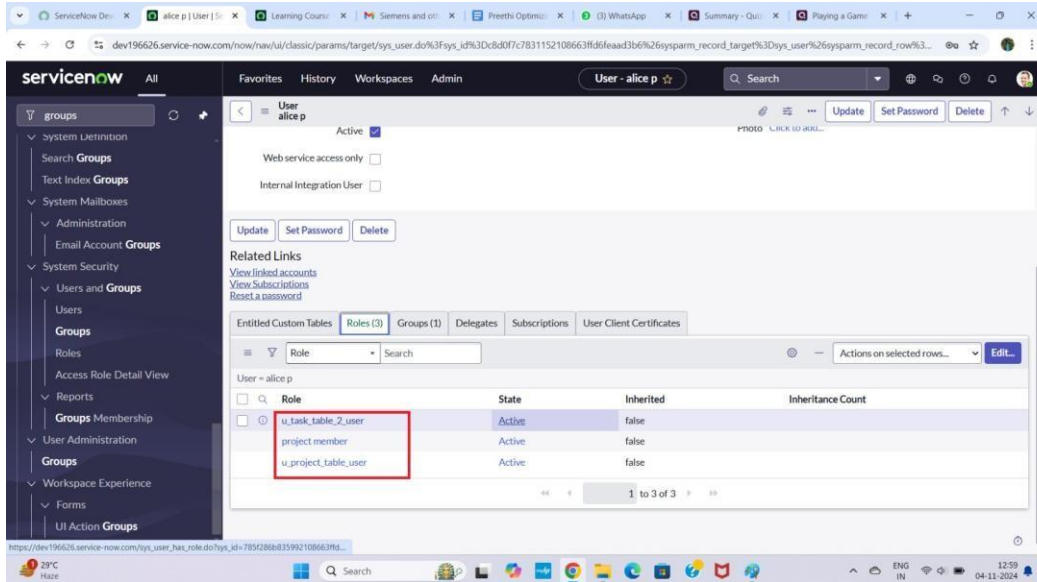




## Milestone 6 : Assign roles to users

### 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.

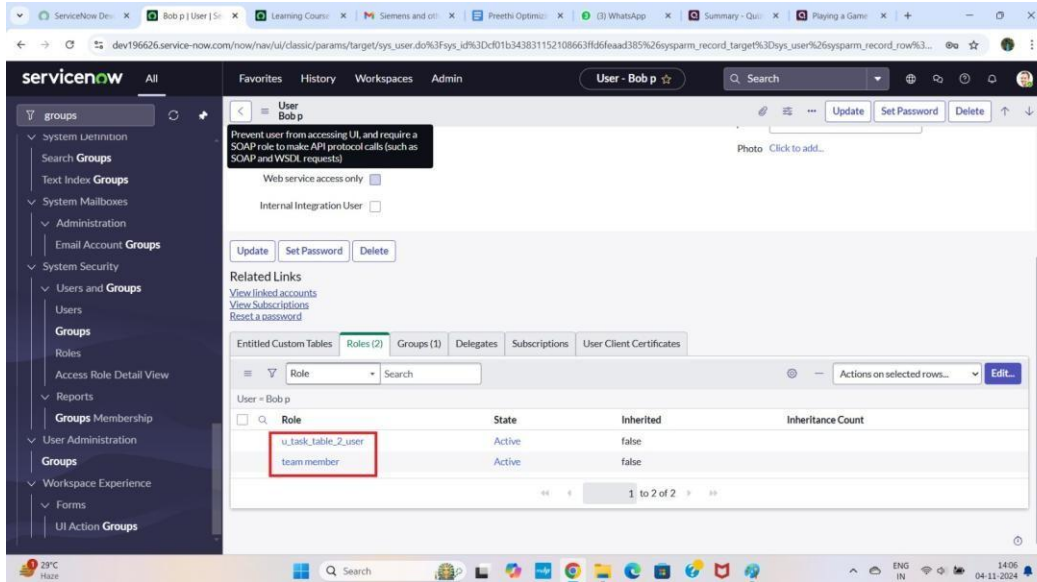


The screenshot shows the ServiceNow user profile page for 'User - alice p'. The page is divided into a left sidebar with navigation links and a main content area. The main content area shows the user's profile, including a photo, name, and various settings. A table of roles assigned to the user is visible, with the following data:

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.



ServiceNow User Profile for Bob p

Prevent user from accessing UI, and require a SOAP role to make API protocol calls (such as SOAP and WSDL requests)

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

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

1 to 2 of 2

## 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 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%3D114bece3835992108663ffd6feaad3dc

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

Application Menu task table 2 Update Delete

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

Admin overrides: ☒

Protection policy: -- None --

\* Name: task table 2 [u\_task\_table\_2]

Description:

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

Add Filter Condition Add "OR" Clause

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

Application: Global

Active: ☒

Advanced: ☐

fields

status

Conditions

Access Control Rules have two decision types, and these types will behave differently depending on conditions.

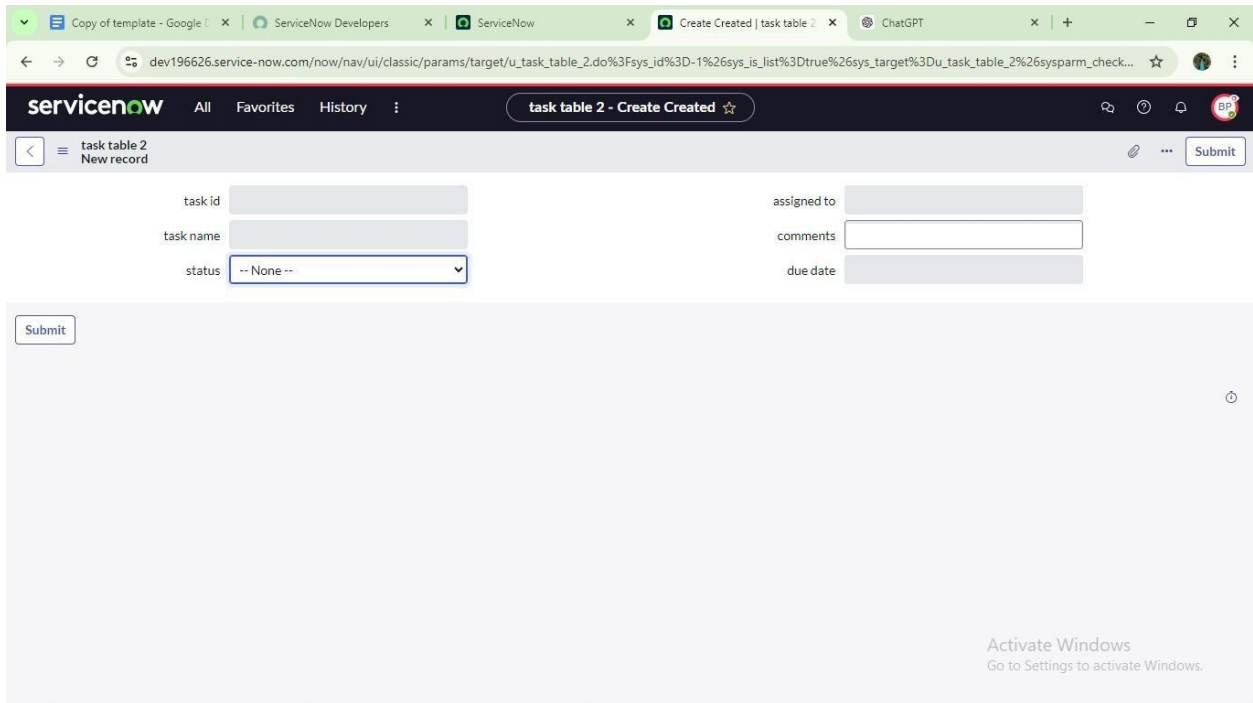
- Fill the following details to create a new ACL
- Scroll down under requires role
- Double click on insert a new row
- Give task table and team member role
- Click on submit
- Similarly create 4 acl for the following fields

Access Controls

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

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 have the edit access



The screenshot shows a web browser window with multiple tabs. The active tab is 'Create Created | task table 2'. The URL is 'dev196626.service-now.com/now/nav/ui/classic/params/target/u\_task\_table\_2.do%3Fsys\_id%3D-1%26sys\_is\_list%3Dtrue%26sys\_target%3Du\_task\_table\_2%26sysparm\_check...'. The ServiceNow header is visible with the 'task table 2 - Create Created' title. The form is titled 'task table 2 New record'. It 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 bottom left of the form area. An 'Activate Windows' watermark is visible in the bottom right corner of the browser window.

## 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 | Work... 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 Update Delete

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
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

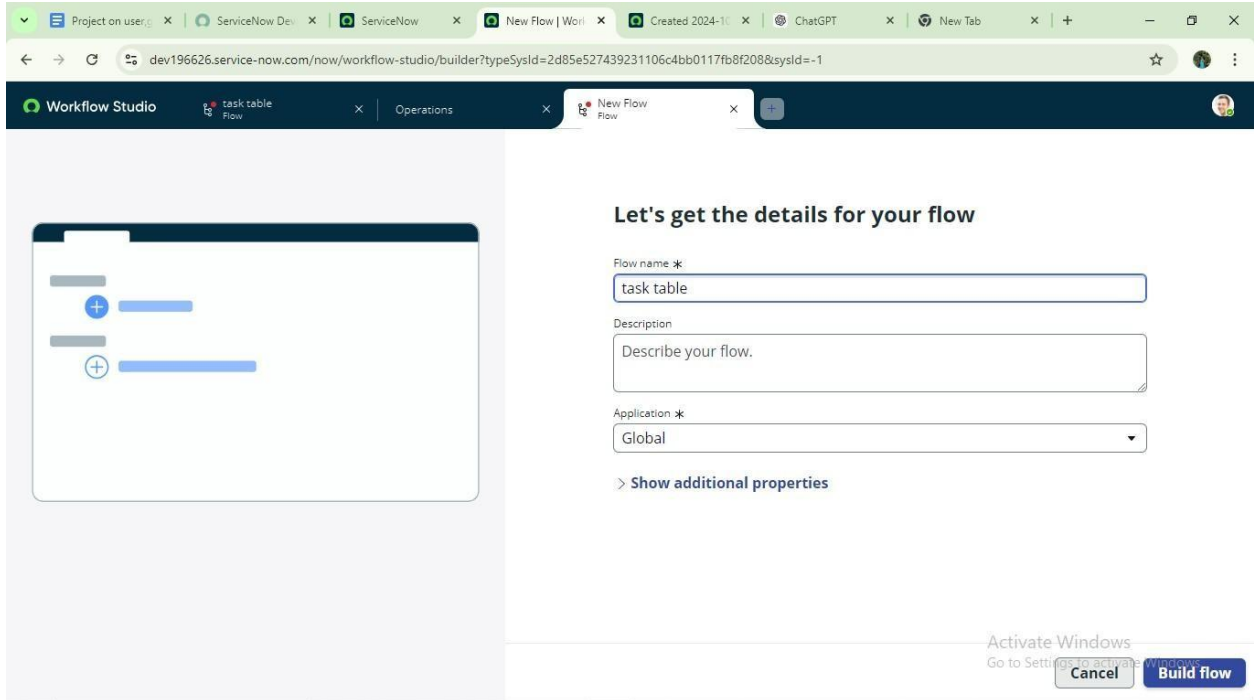
- Playbook
- Flow
- Subflow
- Action
- Decision table

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  
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

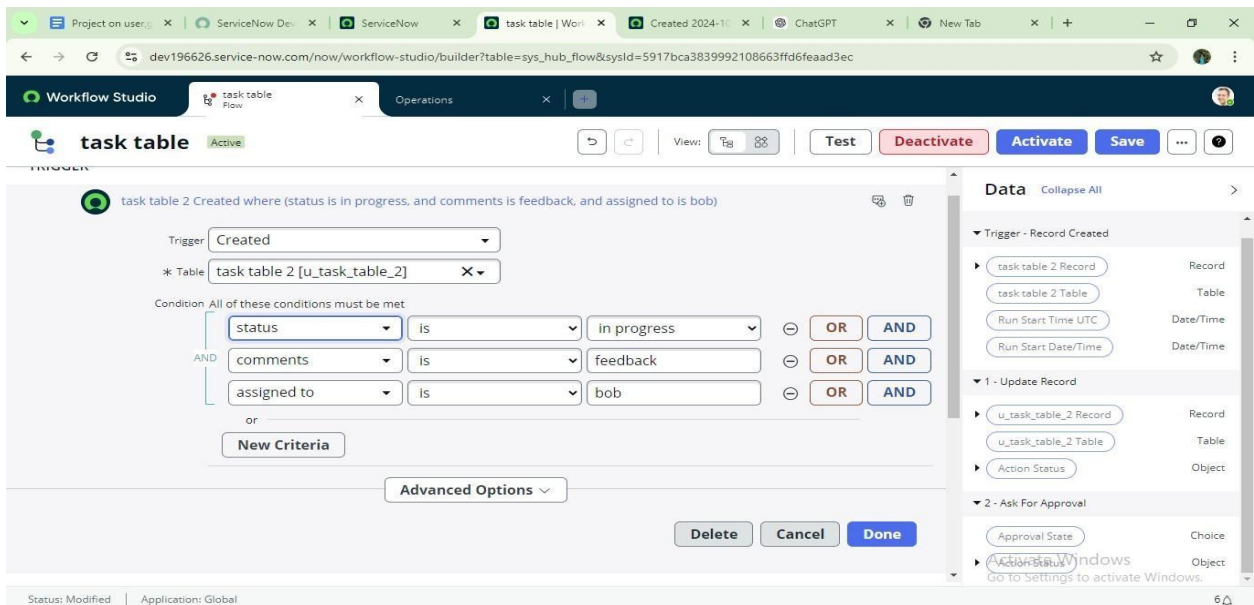
> Show additional properties

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.



Workflow Studio

task table Flow

Operations

task table

Active

Trigger Created

\* Table task table 2 [u\_task\_table\_2]

Condition All of these conditions must be met

status is in progress

AND

comments is feedback

OR

assigned to is bob

New Criteria

Advanced Options

Delete Cancel Done

Data Collapse All

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

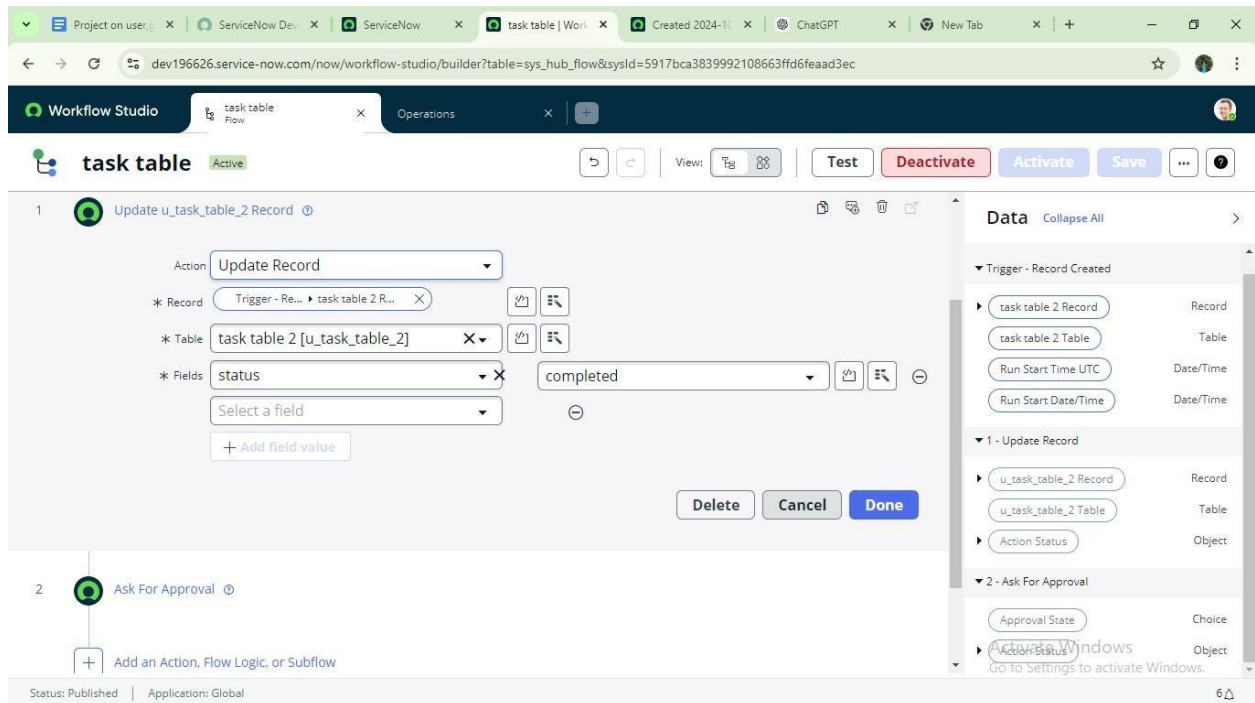
Status: Modified | Application: Global

6



### Next step:

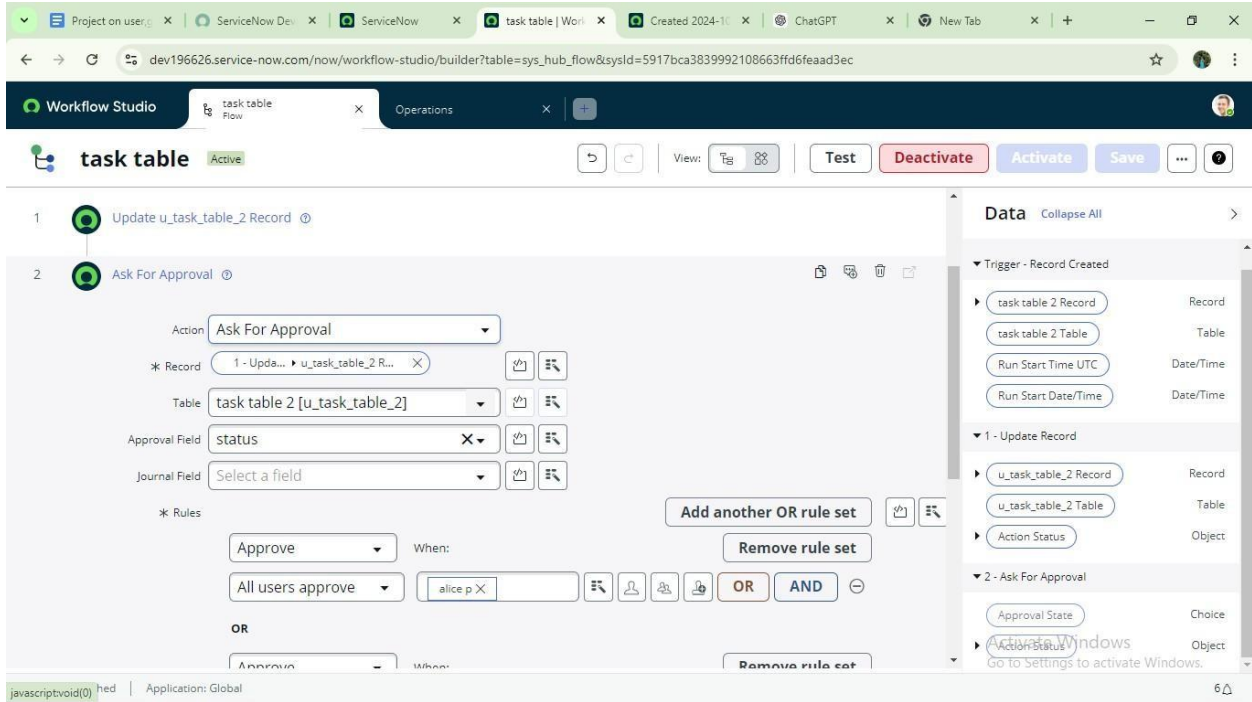
1. Click on Add an action.
2. Select action in that ,search for “ update records”.
3. In Record field drag the fields from the data navigation from Right Side(Data pill)
4. Table will be auto assigned after that
5. Add fields as “status” and value as “completed”
6. Click on Done.



The screenshot shows the ServiceNow Workflow Studio interface. The main workspace displays the configuration for an 'Update Record' action. The 'Record' field is set to 'Trigger - Record Created', the 'Table' is 'task table 2 [u\_task\_table\_2]', and the 'Fields' section shows 'status' being updated to 'completed'. A 'Data' panel on the right lists available data sources, 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: 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.



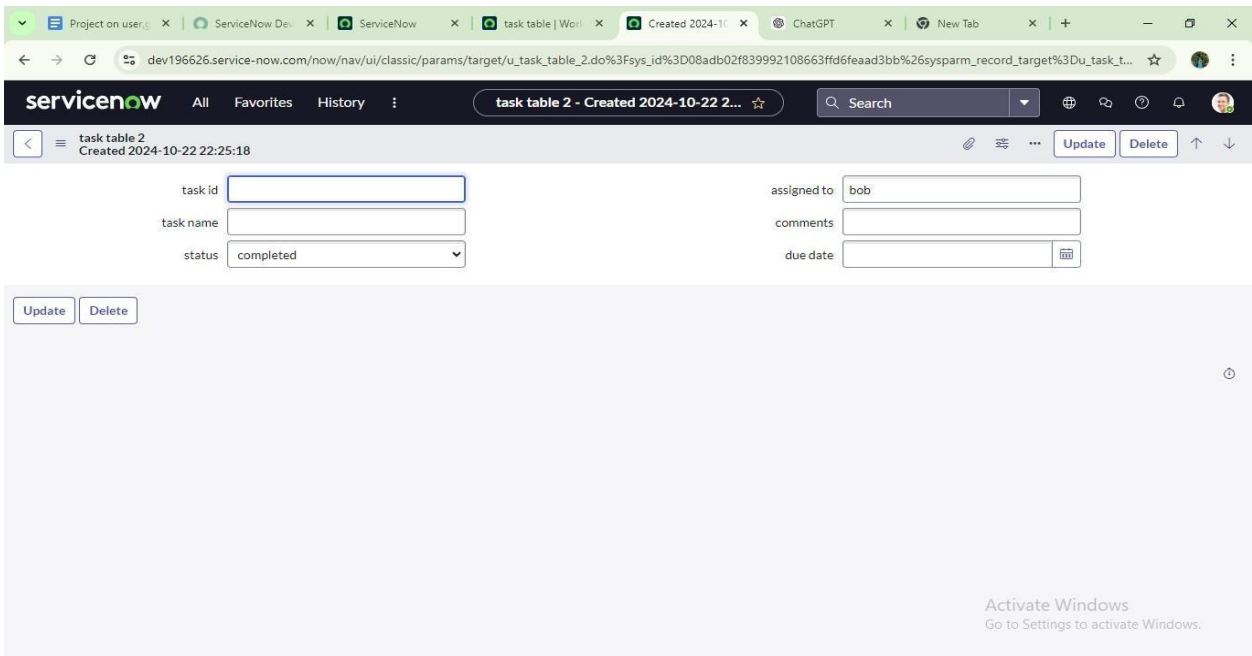
The screenshot shows the ServiceNow Workflow Studio interface for a workflow named 'task table 2'. The workflow consists of two steps:

- 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**: When: Approve. Action: All users approve.
    - Rule 2**: When: [alice p X]. Action: [blank].
- Ask For Approval**: This step is currently empty.

The right-hand pane shows the **Data** section, which lists the data available in the workflow, 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'.

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. The top navigation bar includes the 'servicenow' logo, 'All', 'Favorites', 'History', and a search bar. The search bar contains the text 'task table 2 - Created 2024-10-22 2...'. Below the navigation bar, the record details for 'task table 2' are displayed, including the following fields:

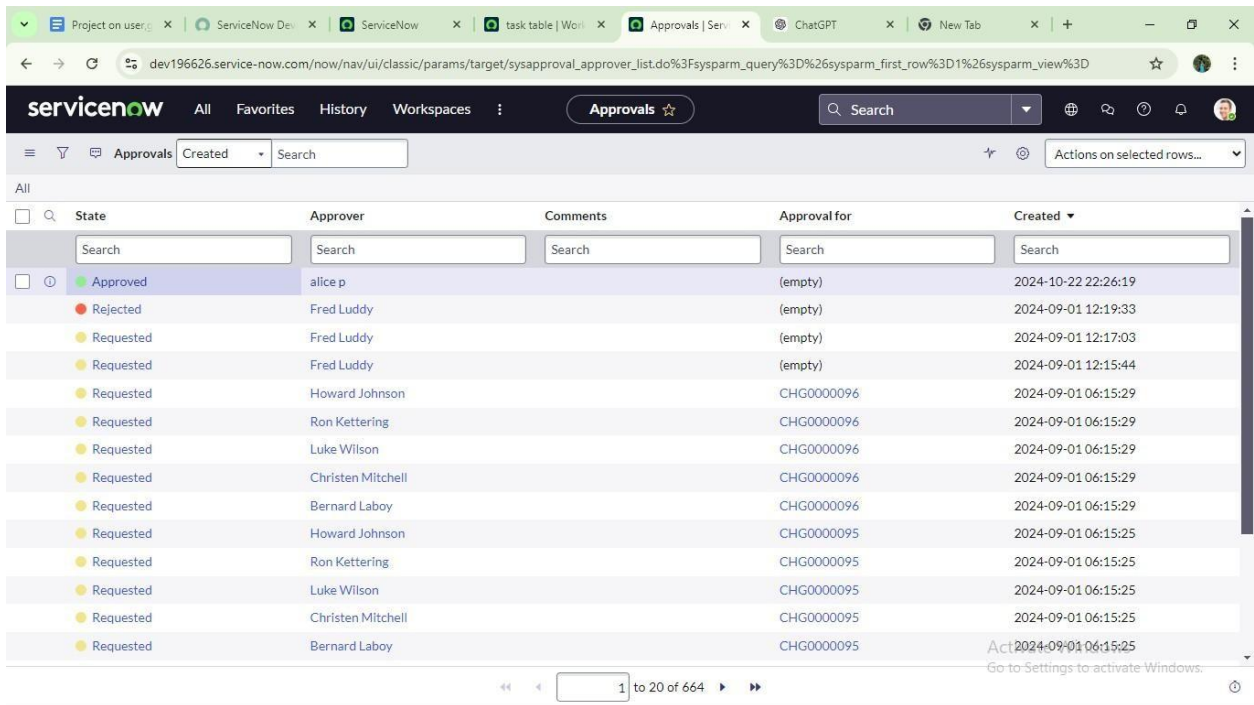
- task id**: [blank]
- task name**: [blank]
- status**: completed
- assigned to**: bob
- comments**: [blank]
- due date**: [blank]

At the bottom of the record details, there are 'Update' and 'Delete' buttons. 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 highlighted as 'Approved' by 'alice p' on '2024-10-22 22:26:19'. Subsequent rows show 'Rejected' and 'Requested' states with different approvers and creation times. The table is filtered by 'Created' and shows 20 of 664 records.

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 :

The implementation of the automated ticket routing system at ABC Corporation has been a significant success. By leveraging the capabilities of Service Now, integrated with Tensor Flow and Spring Boot, we have streamlined the process of assigning support tickets to the appropriate teams. This automation addressed the inefficiencies of manual routing, reduced delays in resolution, and ensured optimal utilization of resources. As a result, the organization achieved improved SLA compliance, enhanced customer satisfaction, and more efficient support operations.