Optimising Users, Group, Role Management

Team Id:NM2025TMID16265

Team Members:4

Team Leader:DEEPALAKSHMI R.M

Team Member 1 :ESWARI S.

Team Member2:JAGADEESHWARI J

Team Member 3 :ASHWINI V

Problem Statement :

Objective:

Skills:

Optimizing User, Group, and Role Management with Access Control and Workflows

- **Objective:**

To design and implement a system that simplifies user, group, and role management by integrating access control policies and workflow automation, ensuring secure, efficient, and scalable management of organizational resources

- **Problem Statement:**

a. In many organizations, managing user identities, roles, and group memberships is a manual, error-prone process. Lack of automation and well-defined access control leads to:
b. Unauthorized access or privilege escalation.
c. Administrative overhead in user provisioning and de-provisioning.
d. Security risks due to inactive or orphaned accounts.
e. Poor compliance with organizational policies and standards.

- Proposed Solution:

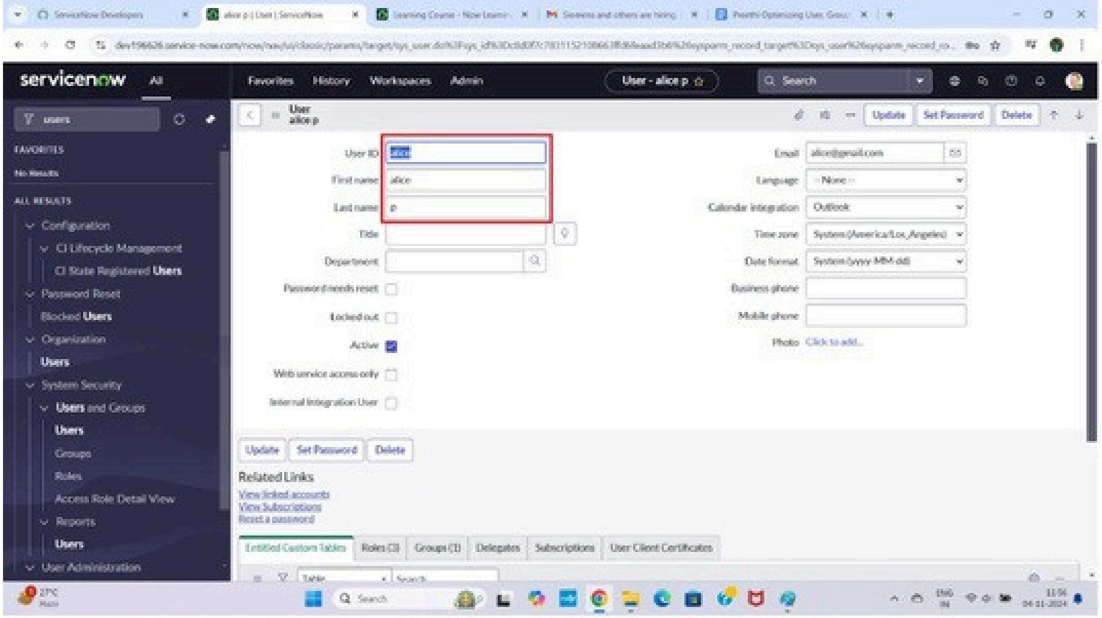
f. The project proposes an automated, role-based access control (RBAC) system integrated with workflow management to:
g. Manage users, groups, and roles efficiently.
h. Provide secure, policy-driven access to resources.
i. Automate approval workflows for role assignments and access requests.
j. Improve auditing, monitoring, and compliance reporting.

- **USERS**:
- Create Users:

Steps to Create Users in ServiceNow

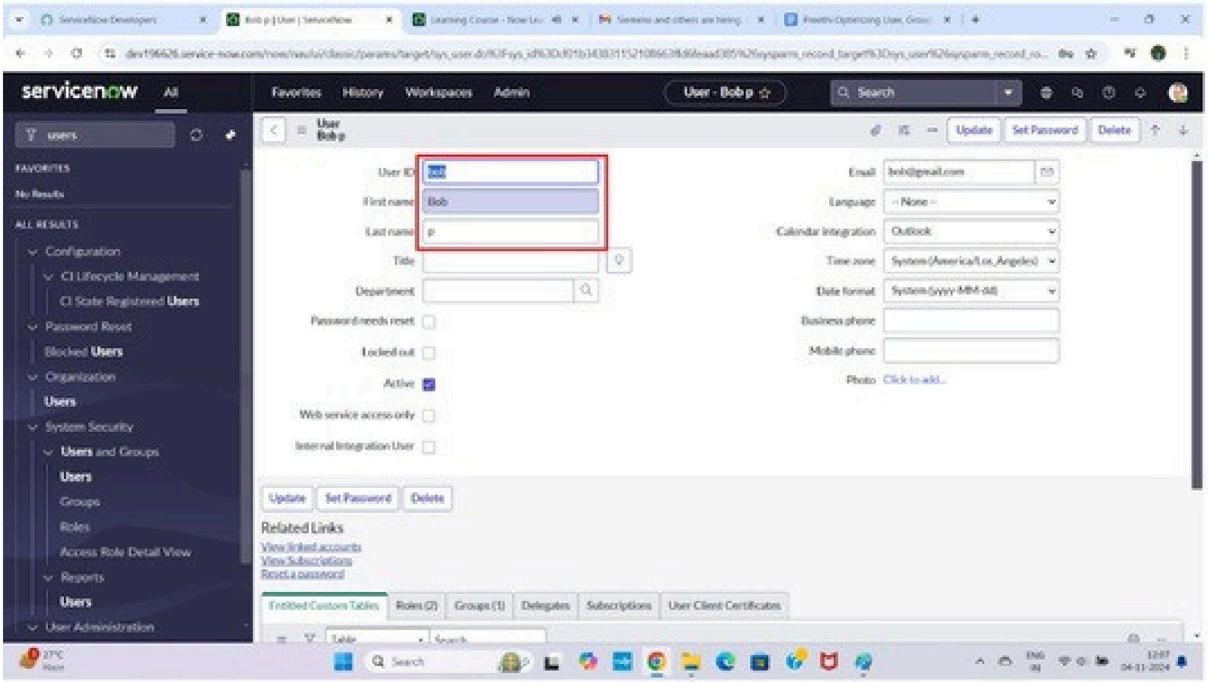
1. Open ServiceNow
   - Log in with your credentials.

1. Navigate to Users Module
   - Click on All in the left-hand navigation panel
   - In the search bar, type Users.
   - Under System Security, select Users.
2. Create a New User
   - Click on the New button.
   - Fill in the required details such as:
   - User ID
   - First Name Last Name Email
   - Password (if applicable) Any other
   - required fields.
3. Save User
   - After filling in the details, click Submit.
   - The new user is now created in the system.



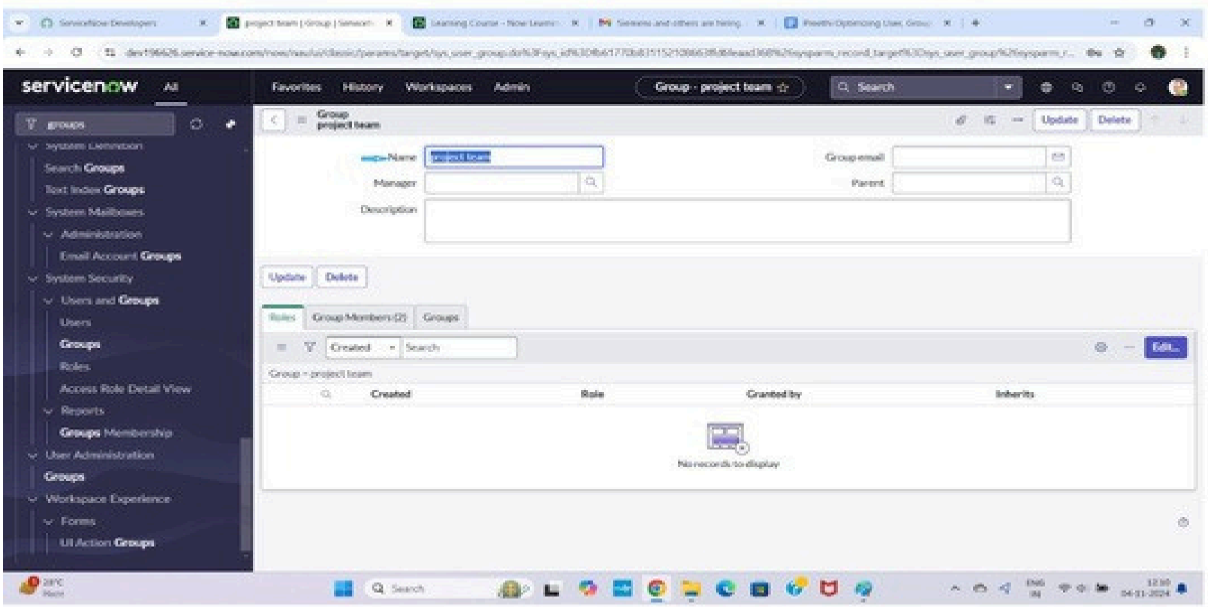
Steps to Create Another User:

1. Add Another User
   - Repeat steps 2–3 to open the Users form again.
   - Enter the details for the second user (different User ID and email).
2. Save User
   - Once the details are filled in, click Submit.
   - The second user is successfully created.



- **GROUPS:**
- Create Groups in ServiceNow:

1. Open ServiceNow
   - Log in to your ServiceNow instance with the required admin or security role.
2. Navigate to Groups
   - In the left navigation pane, click on All.
   - Use the search bar and type Groups.
   - Under System Security, sect Groups.
3. Create a New Group
   - Click on the New button at the top of the Groups list.
4. Fill in Group Details
   - Enter the required information for the group, such as:
     - Name – The unique name of the group (e.g., HR Support Team).
     - Description – A short explanation of the group's purpose.
     - Manager – Assign a user as the manager of the group.
     - Email – Provide a group email if available.
     - Roles – Add roles if the group should have specific access rights.
5. Submit the Group
   - After filling in all details, click on Submit to create the group.
6. Verify Creation
   - The new group will now appear in the Groups list.
   - You can open the group record to add members, assign roles, or update details later.



- **ROLES:**
- Create Roles in ServiceNow:

1. Open ServiceNow
   - Log in to your ServiceNow instance with your credentials.

2. Navigate to Roles

- In the left navigation pane, click on All.
- In the search bar, type Roles.
- From the results, under System Security, select Roles.

3. Create a New Role

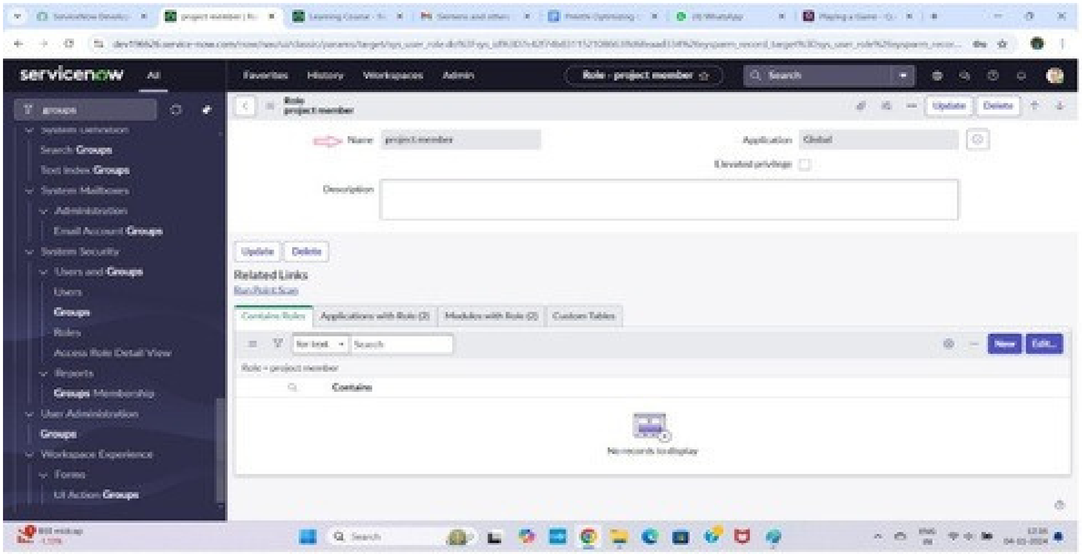
- On the Roles list page, click New (top-right corner).

4. Fill in Role Details

- In the New Role form, enter the required information:
- Name – Provide a unique name for the role (e.g., Admin Role, Change Approver).
- Description – Briefly explain the purpose of the role.
- Elevated Privileges – (Optional) enable if the role needs higher permissions.
- Contains Roles – (Optional) you can add existing roles that this new role will inherit.

5. Save the Role

- After filling in details, click Submit.
- The new role is now created and appears in the roles list.



6. Create Another Role (Example: Team Member)

- Repeat steps 3 to 5.
- In the Name field, enter: Team Member.
- Provide a short description (e.g., Basic access for project team members).
- Assign any required inherited roles if needed.
- Click Submit.

7. Verify and Manage Roles

- After submission, both roles will appear in the Roles list.

- You can reopen them later to:
- Modify role details.
- Add or remove inherited roles.
- Assign the role to specific users or groups.

- **TABLES:**
- Create table in ServiceNow:

1. Open ServiceNow

   - Log in to your ServiceNow instance with the required credentials.

2. Navigate to Tables

   - In the left navigation pane, click All.
   - In the search bar, type Tables.
   - Under System Definition, click on Tables.

3. Create a New Table

   - On the Tables list page, click New (top-right corner).

4. Fill in Table Details

   - In the New Table form, enter the required information:
   - Label: Enter Project Table.

5. Define Menu Name

   - Under New Menu Name, type Project Table.
   - This ensures your new table appears as a menu item in the application navigator.

6. Add Table Columns

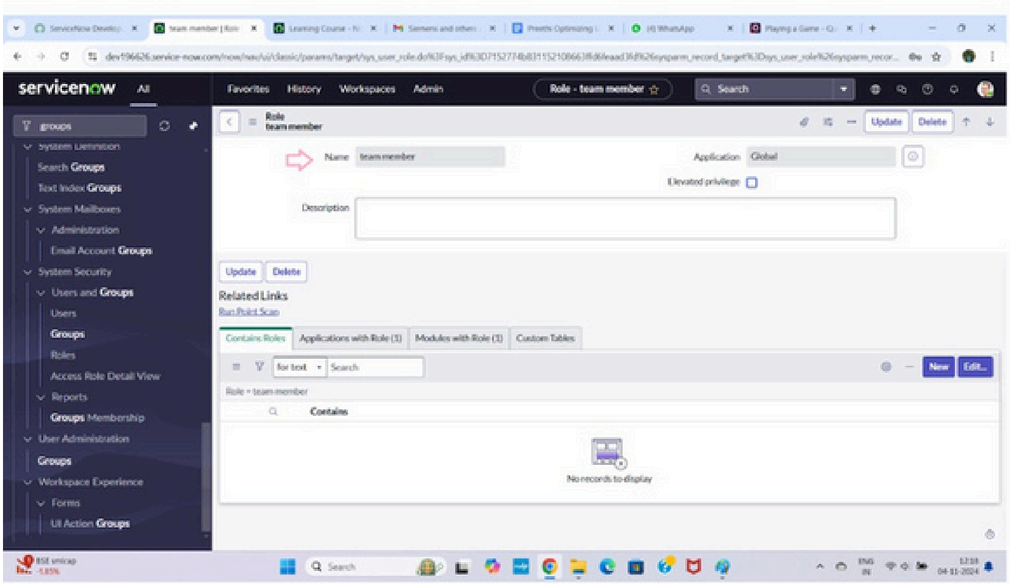
   - Scroll down to the Columns section.
   - Click New to add fields/columns.
   - Example columns for Project Table:
   - Project Name – String (Stores the project title)
   - Project ID – Integer or Auto Number (Unique identifier for each project)
   - Start Date – Date/Time (When the project begins)
   - End Date – Date/Time (When the project ends)
   - Status – Choice (Values like Planned, In Progress, Completed)
   - Assigned To – Reference (References the User table to assign a project owner)
   - Description – String or Journal Input (Project details/notes)

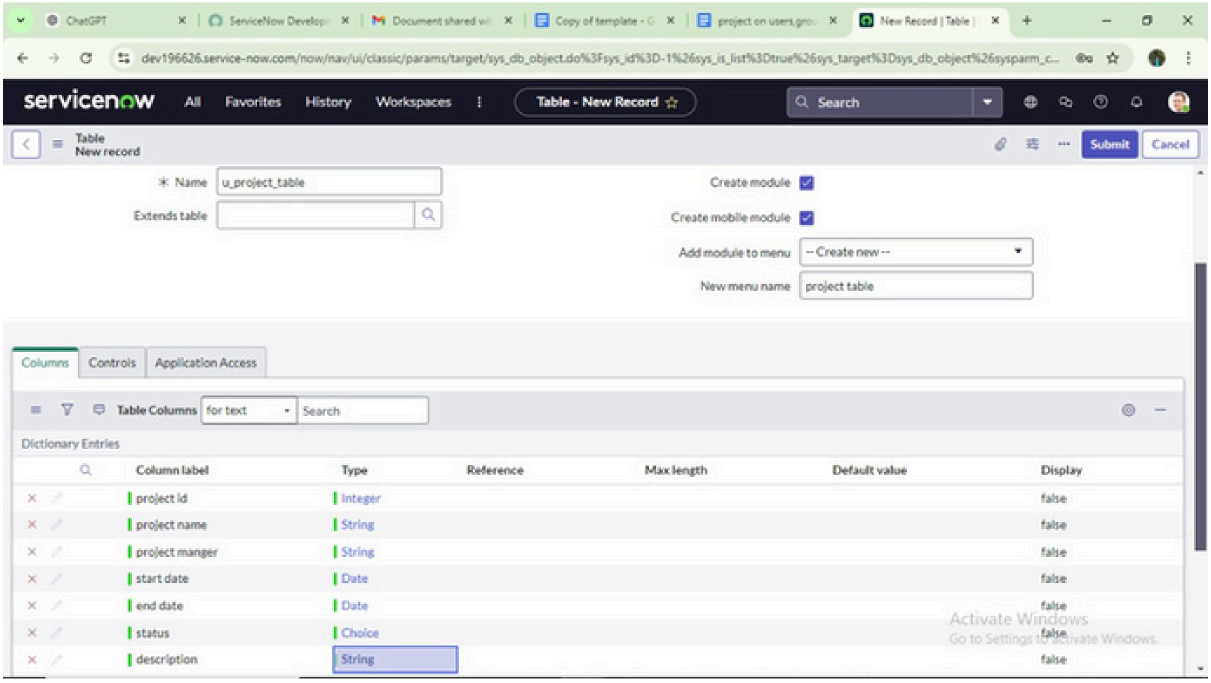
7. Submit the Table

   - Once all details and columns are added, click Submit.

8. Verify the New Table

   - After submission, go to Application Navigator.
   - Search for Project Table.
   - You should see the new menu and module created.
   - Open it to add, view, or edit project records.

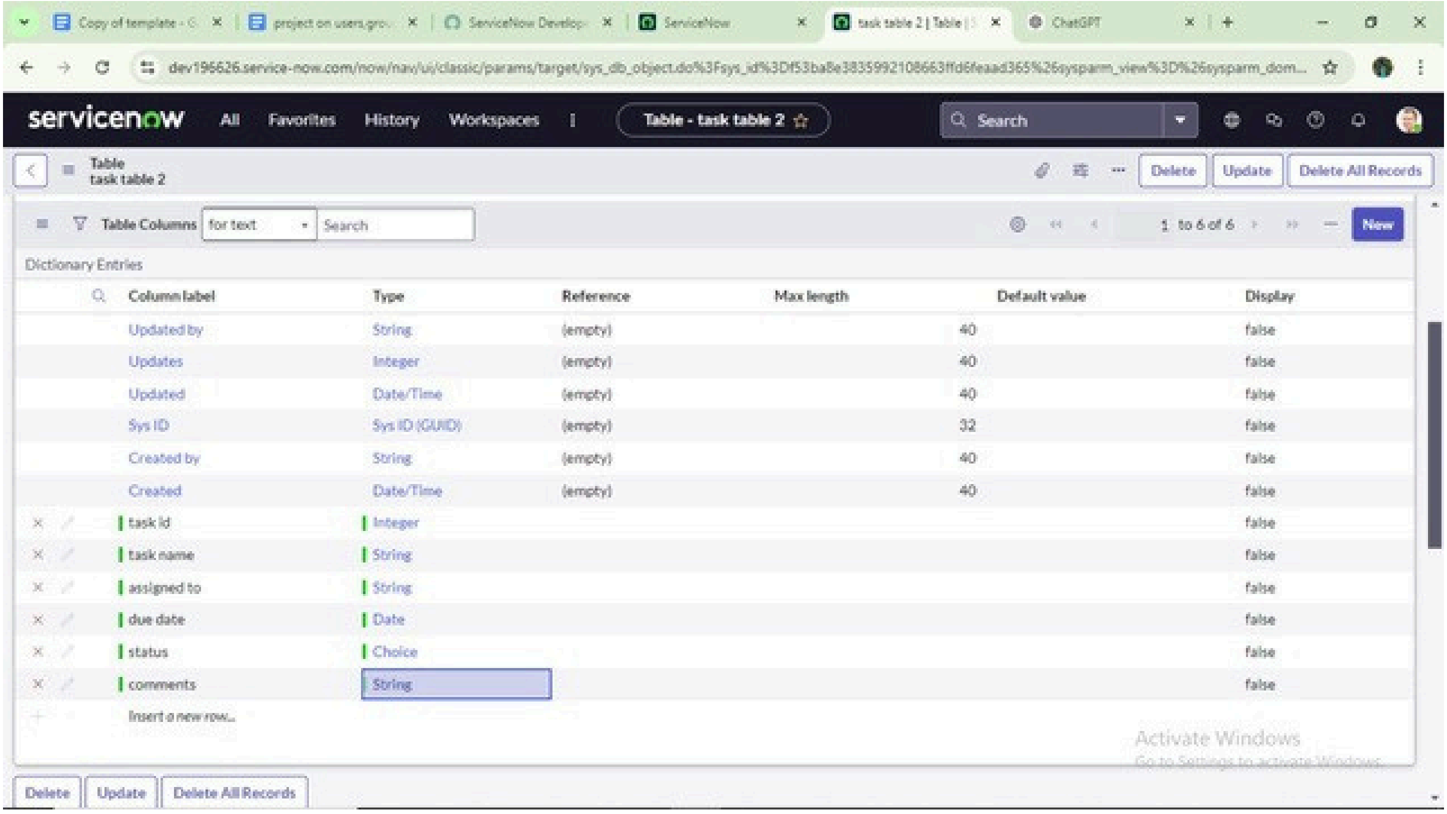




Create one more table:

9.Create another table as: task table 2 and fill with following details.

10. Click on submit.



- **ASSIGN USER TO GROUPS:**
- Assign users to project team group:

1. Open ServiceNow

- Log in to your ServiceNow instance with valid credentials.

2. Navigate to Groups

- In the left-hand navigation pane, click **All**.
- In the search bar, type **Groups**.
- Under **System Security**, select **Groups**.

3. Open the Project Team Group

- From the list of available groups, search for **Project Team Group**.
- Click on the group name to open its details page.

4. Manage Group Members

- On the group record form, scroll down to the **Group Members** related list.
- Click on the **Edit** button (top-right of the Group Members section).

5. Add Users to the Group

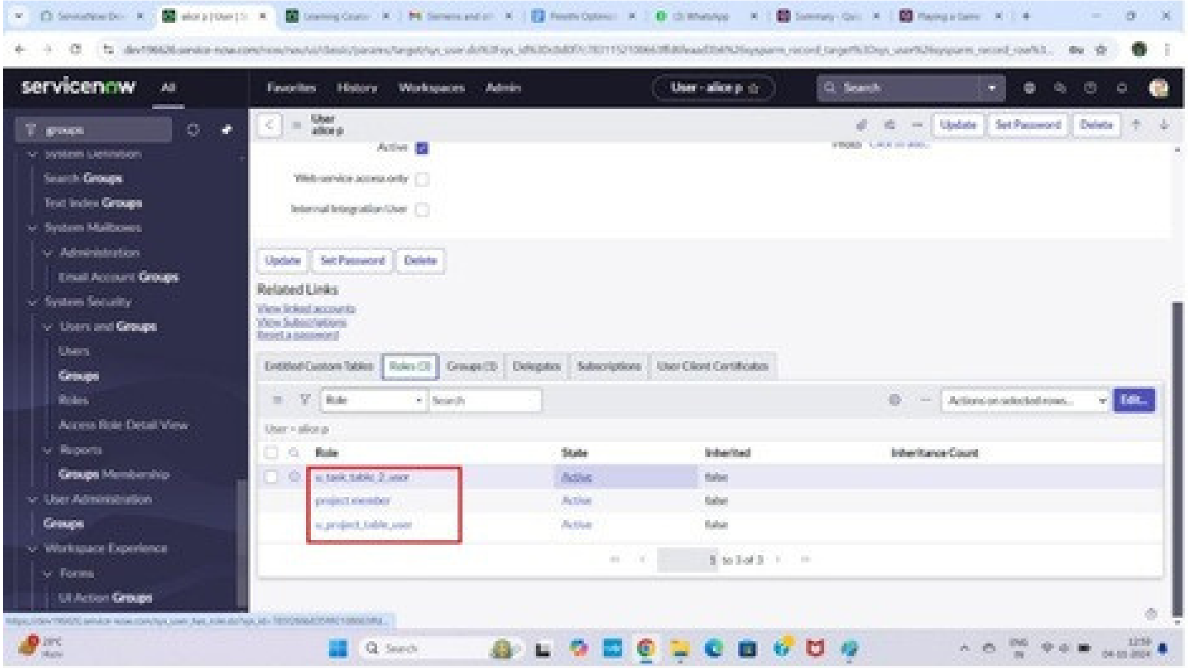
- A pop-up window will appear showing **Available Users** on the left and **Selected Users** on the right.
- From the **Available Users** list, search for and select:
  - **Alice P**
  - **Bob P**
- Use the → **(Add)** button to move them to the **Selected Users** list.

6. Save the Changes

- After selecting the users, click **Save** (or **Done**, depending on your instance version).

7. Verify Assignment

- Back on the **Project Team Group** record, under **Group Members**, confirm that **Alice P** and **Bob P** are listed.



- **ASSIGN ROLES TO USERS:**
- Assign users to project team group:

1. Open ServiceNow

- **Log in to your ServiceNow instance using your credentials.**

2. Navigate to Groups

- **In the left-hand Application Navigator, click All.**
- **In the search bar, type Groups.**
- **Under System Security, select Groups.**

3. Open the Project Team Group

- **From the list of groups, locate Project Team Group.**
- **Click on it to open the group record.**

4. Manage Group Members

- **Scroll down to the Group Members related list on the group form.**
- **Click Edit (top-right of the Group Members section).**

5. Add Users to the Group

- **A window will appear with two panels:**

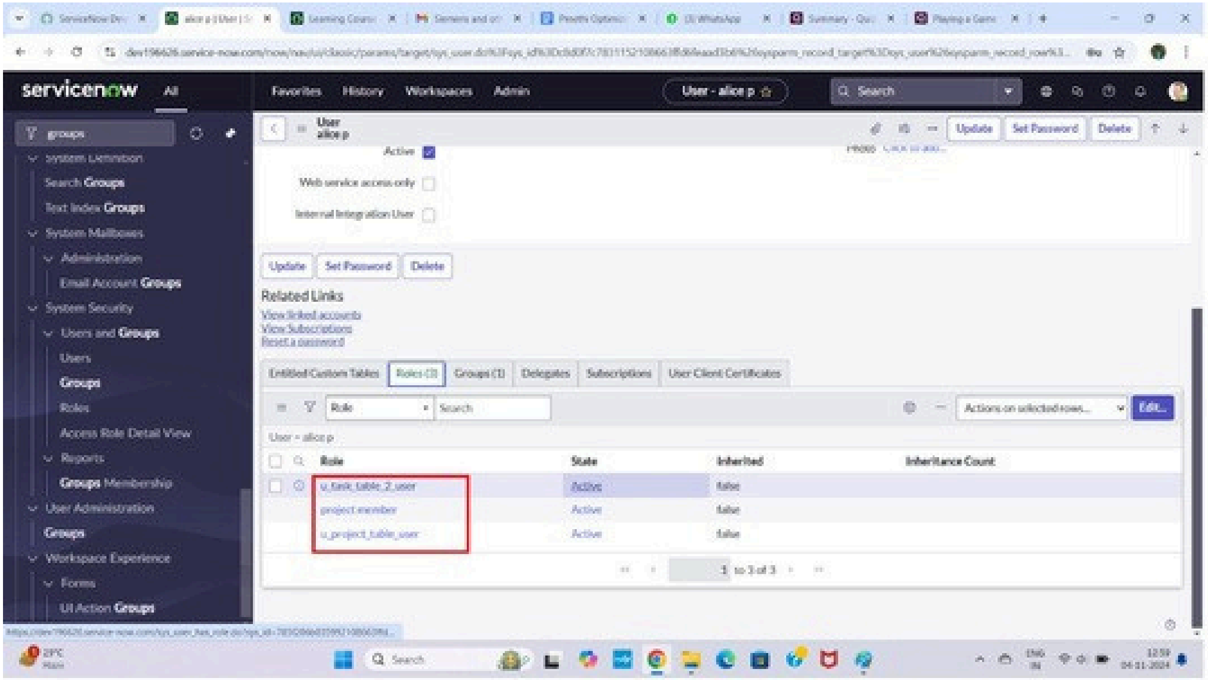
- **Available Users (left)**
- **Selected Users (right)**
- **From Available Users, search for and select:**
- **Alice P**
- **Bob P**
- **Move them to the Selected Users panel using the → (Add) button.**

6. Save the Changes

- **Once Alice P and Bob P are added to the Selected Users list, click Save (or Done depending on your version).**

7. Verify Membership

- **Return to the Project Team Group record.**
- **Under Group Members, confirm that Alice P and Bob P are now listed as members of the group.**



- Assign roles to bob user:

1. Open ServiceNow

- Log in to your ServiceNow instance with admin access.

2. Navigate to Users

- In the **Application Navigator**, click **All**.
- Type **Users** in the search box.
- Under **System Security**, select **Users**.

3. Select the User (Bob P)

- From the user list, search for **Bob P**.
- Click on **Bob P** to open the user record.

4. Assign a Role to the User

- Scroll down to the **Roles** related list on the user form.
- Click **Edit**.
- In the **Available Roles** list, search for:
  - **Team member** (or your created "Team Member" role).
  - Any additional table-specific role if required (e.g., access to *Project Table*).
- Move them to the **Selected Roles** panel.

5. Save the Changes

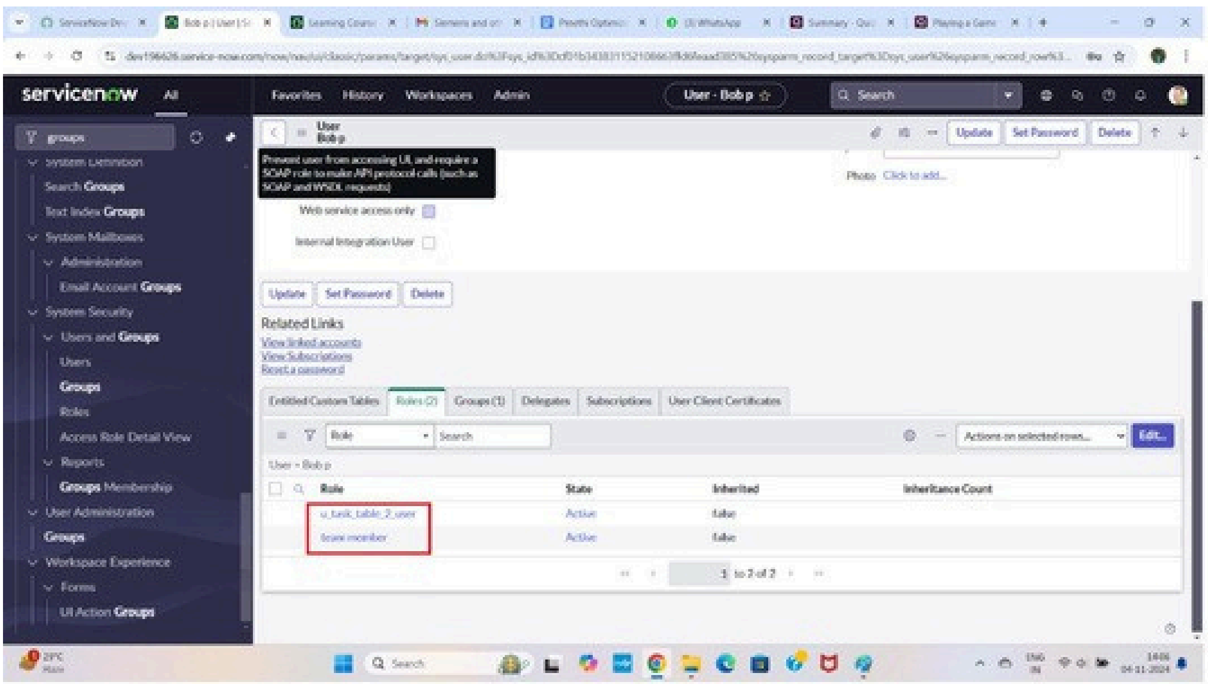
- Click **Save** (or **Done**, depending on your version).
- Now Bob P has the assigned **Team Member** role and table permissions.

6. Impersonate the User

- In the top-right corner of the screen, click the **Profile icon**.
- Select **Impersonate User**.
- Search for and choose **Bob P**.
- ServiceNow will switch your session to Bob P's view.

7. Verify Access

- In the **Application Navigator**, search for **Project Table** (or Task Table if you named it that way).
- Confirm that Bob P can see and access the table and its records.



- **APPLICATION ACCESS:**
- Assign table access to application :

1. Table Creation and Automatic Application Generation

- When you create a new table in ServiceNow (e.g., Project Table), ServiceNow automatically generates:
- A corresponding Application in the Application Navigator.
- A Module that links to the table.

2. Locate the Project Table Application

- Open ServiceNow.
- In the Application Navigator, search for Project Table.
- You will see the newly created Project Table application.

3. Edit the Module for Project Table

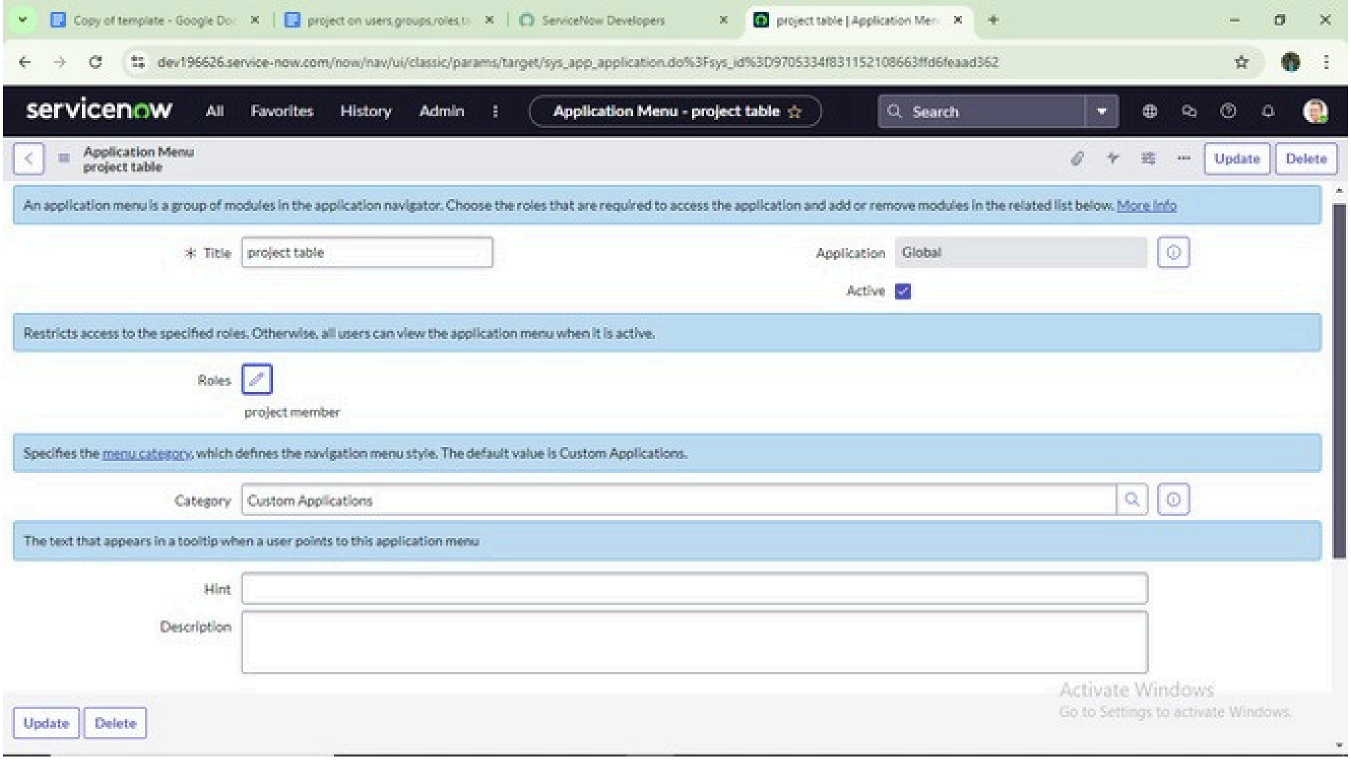
- Right-click the Project Table module (under the Project Table application).
- Select Edit Module.
- In the module form, scroll to the Roles field.
- Assign the role Project Member to this module.
- This ensures only users with the Project Member role can access the Project Table.
- Click Save or Update.

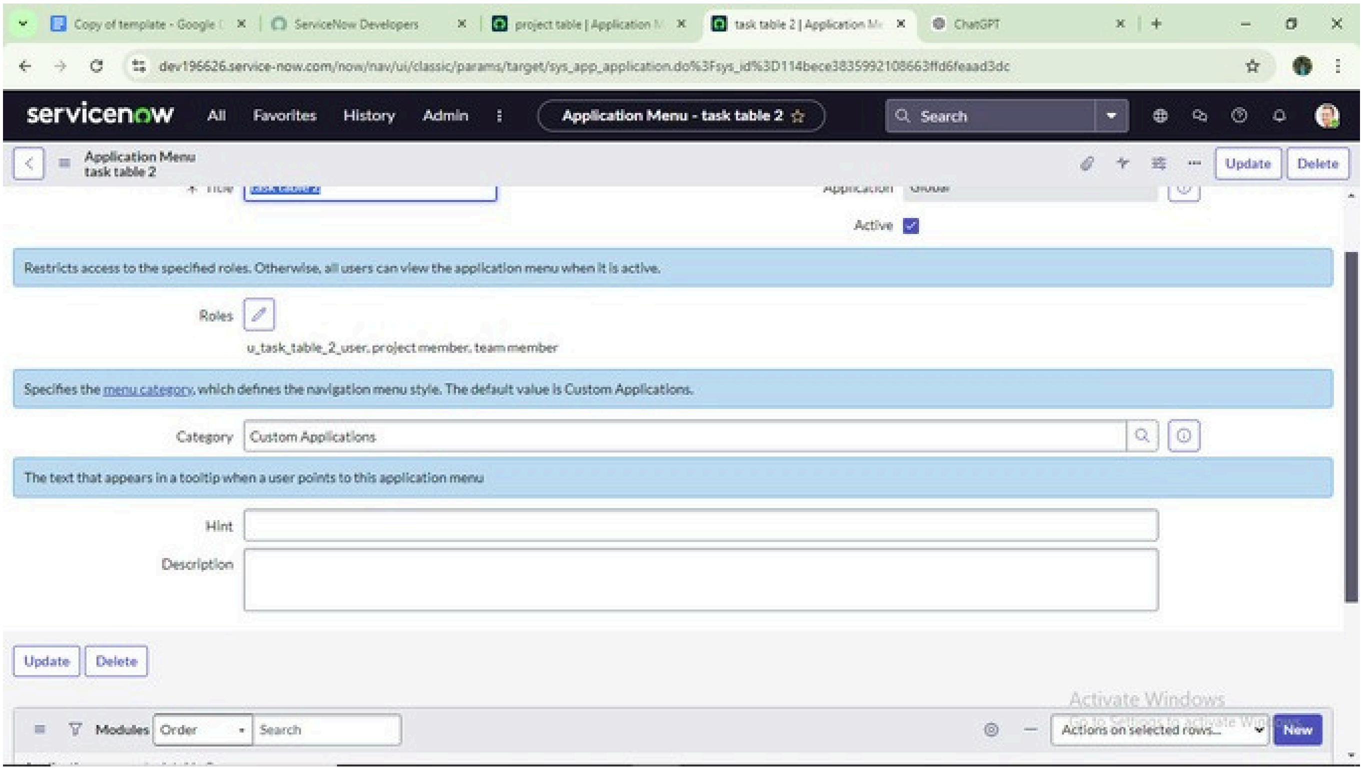
4. Edit the Task Table 2 Application

- In the Application Navigator, search for Task Table 2.
- Right-click on the Task Table 2 application and choose Edit Application.
- In the application form, go to the Roles section.
- Assign both:
- Project Member role
- Team Member role
- (This allows users with either role to access Task Table 2.)
- Click Save or Update.

5. Verify Access

- Impersonate a user with the Project Member role → confirm they can access Project Table.
- Impersonate a user with the Team Member role → confirm they can access Task Table 2.
- Users without these roles should not see these applications in the navigator.





- **ACCESS CONTROL LIST:**
- Create ACL:

1. **Open ServiceNow**

- Log in to your ServiceNow instance with administrator credentials.

2. Navigate to Access Controls

- In the **Application Navigator**, click **All**.

- In the search bar, type **ACL**.
- Under **System Security**, select **Access Control (ACL)**.

3. Elevate Role (if required)

- Some ACL operations require **security admin** privileges.
- Click on the **Profile icon** (top right corner).
- Select **Elevate Roles**.
- Check the box for **security admin**.
- Click **OK**.
- Now you have elevated privileges to create or modify ACLs.

4. Create a New ACL

- In the **Access Control (ACL)** list, click **New**.

5. Fill in ACL Details

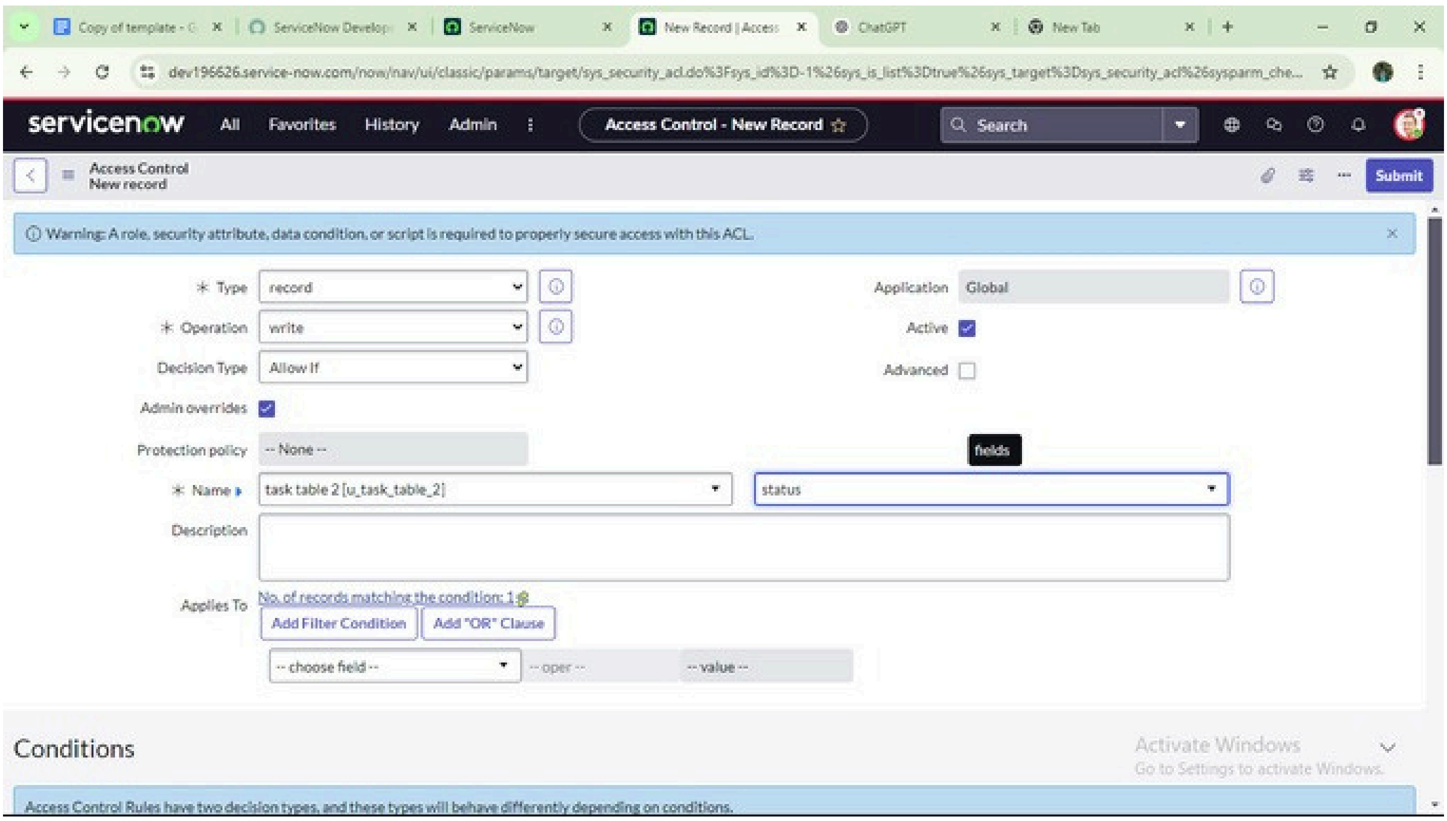
In the **New Access Control** form, provide the following details:

6. Save the ACL

- Click **Submit** to save the new ACL.

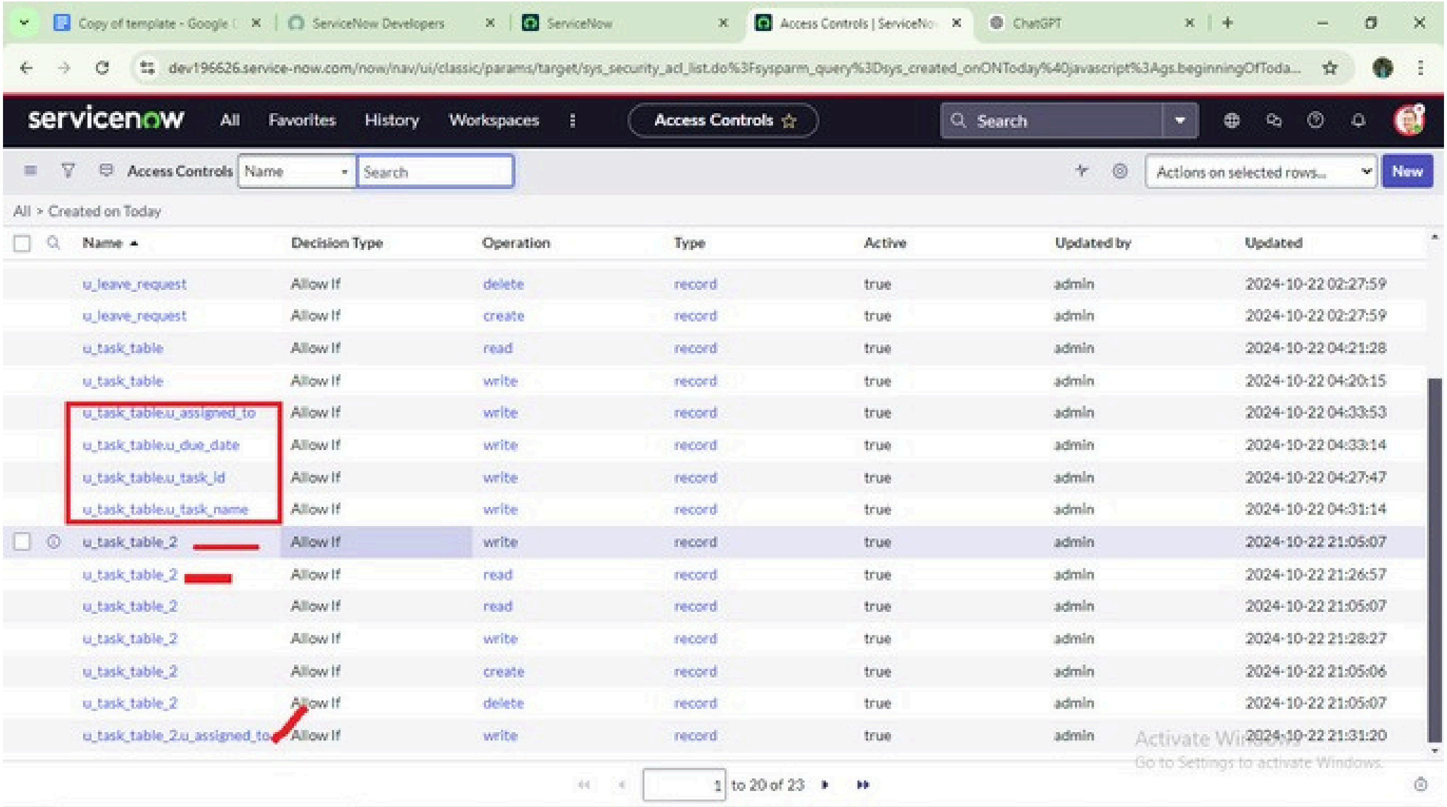
7. Verify ACL Functionality

- Impersonate a user with the assigned role → confirm they have access.
- Impersonate a user without the role → confirm access is denied.



1. **Open ServiceNow → Go to All > ACL under System Security.**
2. **Elevate Role → Select security admin.**
3. **New ACL → Choose Record, pick Task Table, and set operation (Read/Write/Create/Delete).**

4. **Requires Role → Add Team Member role.**
5. **Submit.**
6. **Repeat → Create 4 ACLs for Task Table: Read, Write, Create, Delete (all require Team Member role).**
7. **Verify → Impersonate a user with/without the role to test access.**



All > Created on Today

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

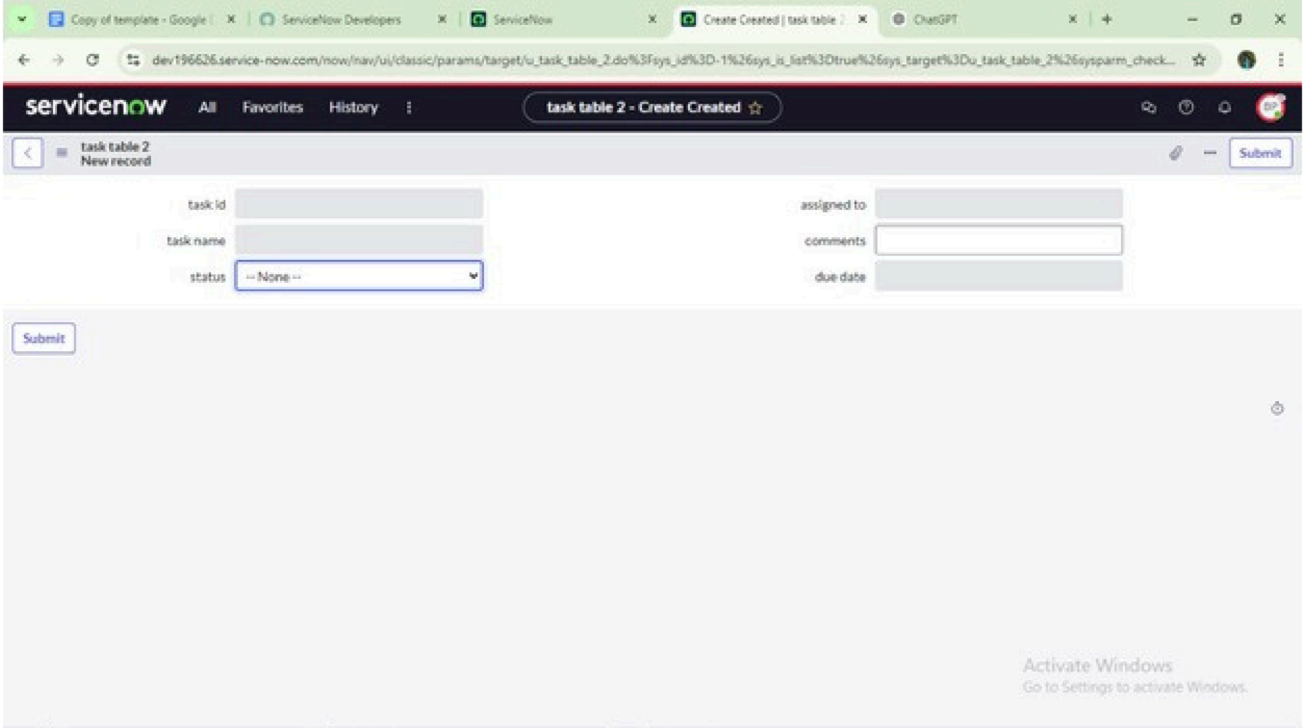
15. Click on profile on top right side

1.Click on impersonate user

2.Select bob user

3.Go to all and select task table 2 in the application menu bar

4. Comment and status fields are have the edit access



- **FLOW:**
- Create a flow to assign operations ticket to group:

1. Open ServiceNow

- **Log in to your ServiceNow instance with valid credentials.**

2. Navigate to Flow Designer

- **In the Application Navigator, click All.**
- **In the search bar, type Flow Designer.**
- **Under Process Automation, select Flow Designer.**

3. Create a New Flow

- **Once Flow Designer opens, click New.**
- **From the options, select Flow.**

4. Define Flow Properties

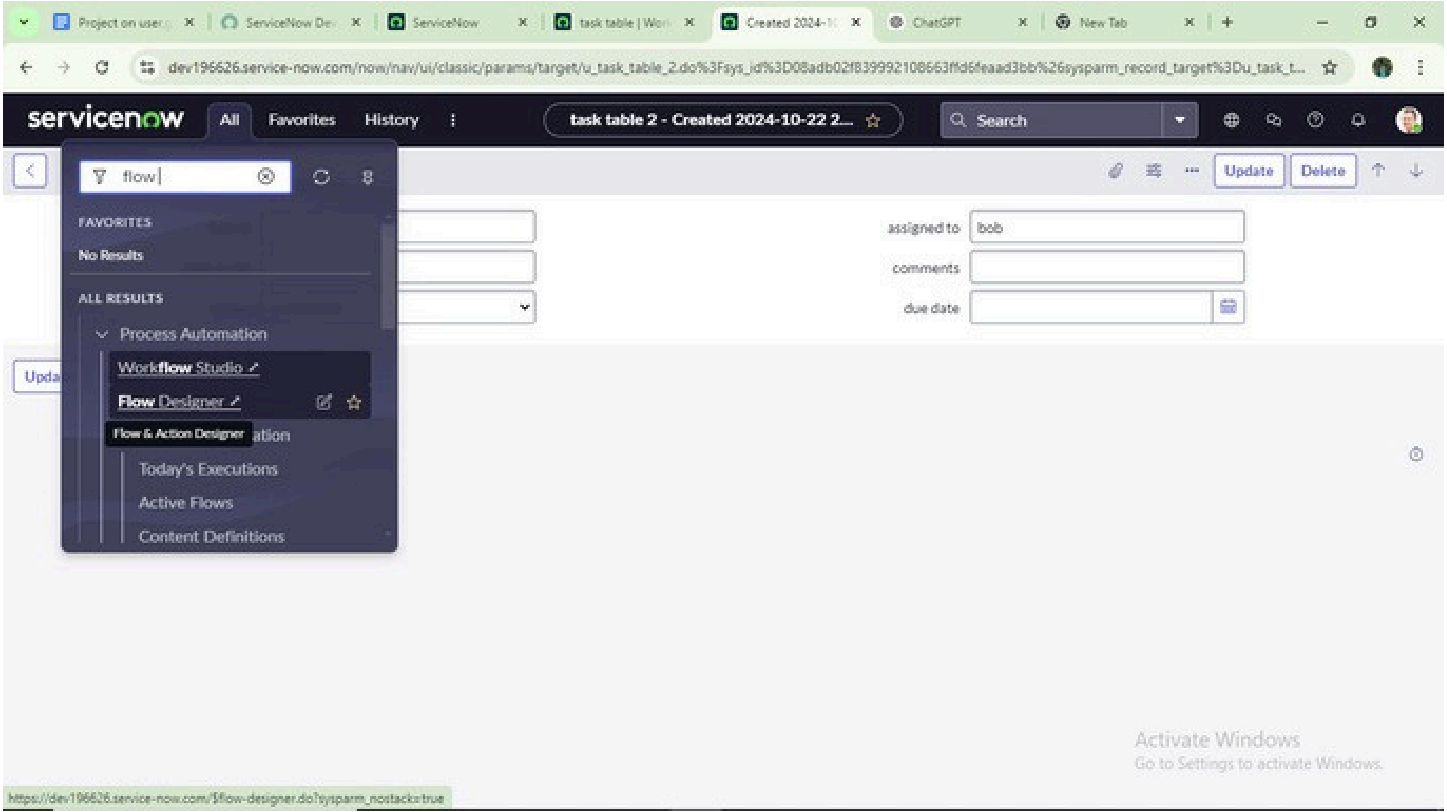
- **In the Flow Properties window, fill in the details:**
  - **Flow Name → Enter Task Table.**
  - **Application → Set to Global.**
  - **(Optional) Add a Description if needed.**
- **Click Submit.**

5. Build the Flow

- **After saving, click Build Flow to open the Flow Designer editor.**
- **Here you can add:**
  - **Trigger → Define when the flow should run (e.g., *When a record is created in Task Table*).**
  - **Actions → Define what happens next (e.g., *Send email, update record, create task*).**

6. Save and Activate

- **Click Save and then Activate the flow so it's ready for use.**



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servicenow
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task table 2 - Created 2024-10-22 2...
Search
flow|
FAVORITES
No Results
ALL RESULTS
Process Automation
Workflow Studio
Flow Designer
Flow & Action Designer
Today's Executions
Active Flows
Content Definitions
Update
Delete
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comments
due date
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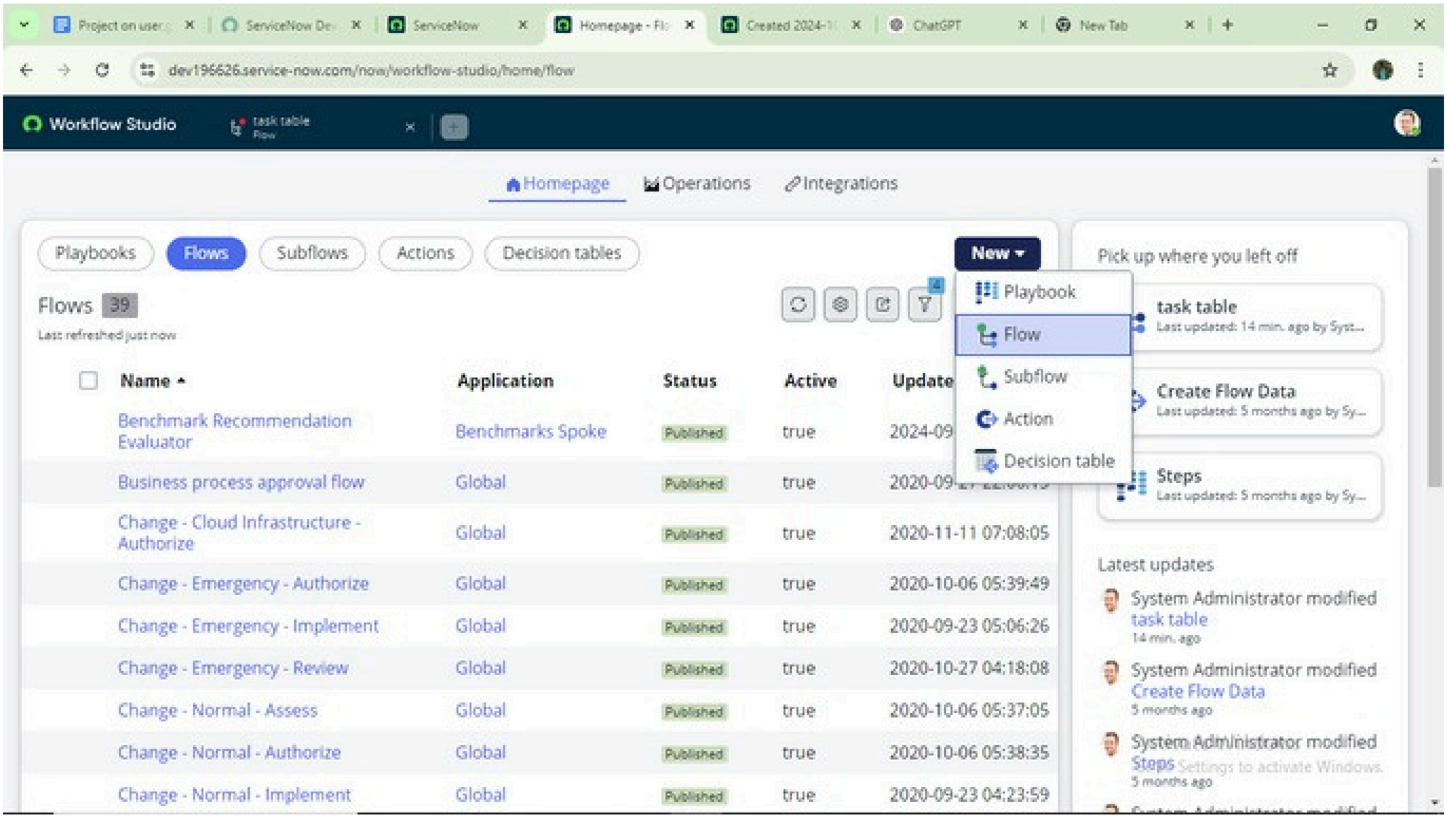

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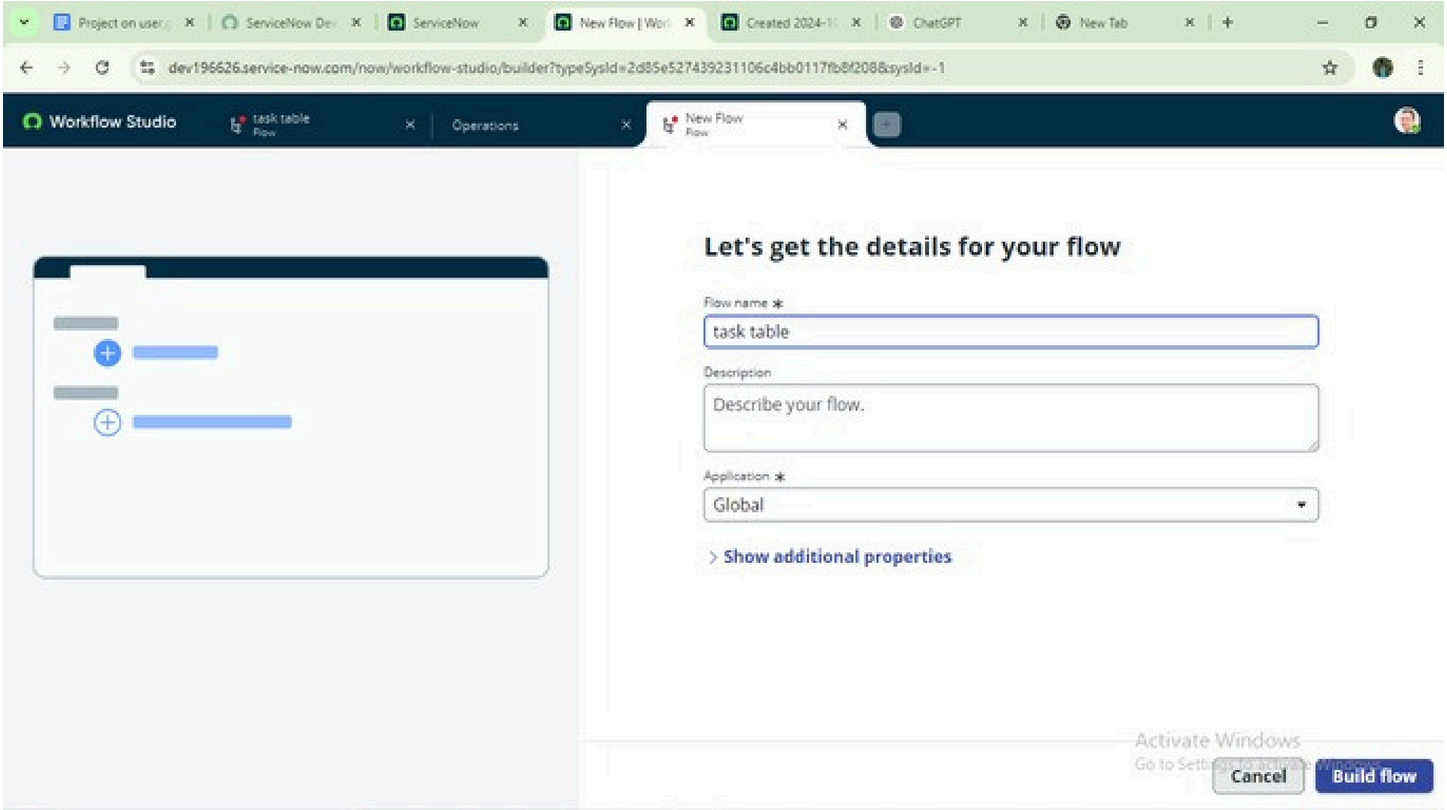
Workflow Studio
task table
Flow
Homepage
Operations
Integrations
Playbooks
Flows
Subflows
Actions
Decision tables
New
Playbook
Flow
Subflow
Action
Decision table
Flows 39
Last refreshed just now
Name
Application
Status
Active
Benchmark Recommendation Evaluator
Benchmarks Spoke
Published
true
Business process approval flow
Global
Change - Cloud Infrastructure - Authorize
2020-11-11 07:08:05
Change - Emergency - Authorize
2020-10-06 05:39:49
Change - Emergency - Implement
2020-09-23 05:06:26
Change - Emergency - Review
2020-10-27 04:18:08
Change - Normal - Assess
2020-10-06 05:37:05
Change - Normal - Authorize
2020-10-06 05:38:35
Change - Normal - Implement
2020-09-23 04:23:59
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



1. Open the Flow

- **In Flow Designer, open the flow you created earlier (Task Table).**

2. Add a Trigger

- **Click on Add a trigger.**
- **In the trigger options, search for Create Record.**
- **Select Created Record → this will make the flow run whenever a new record is created.**

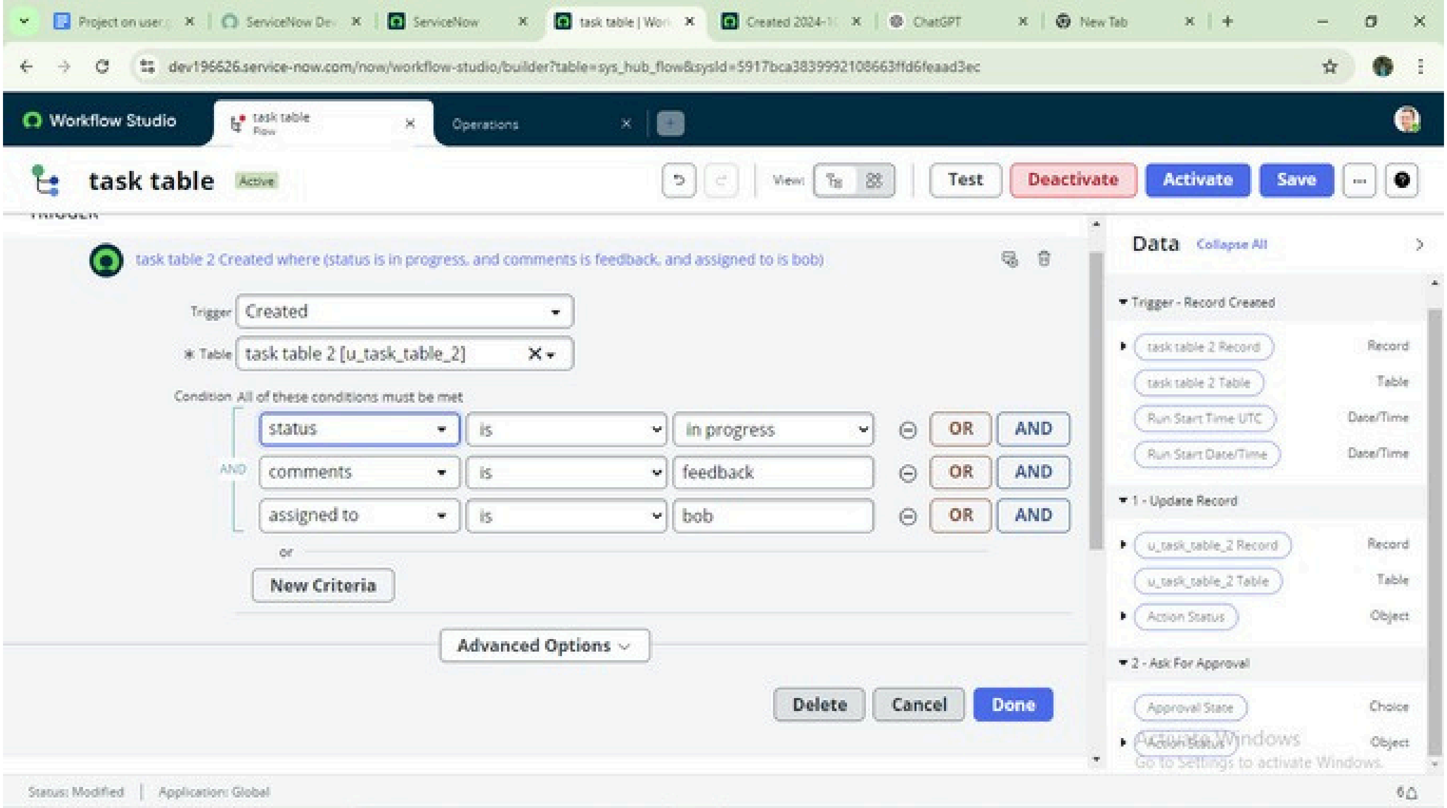
3. Configure the Trigger

- **In the Table field, select Task Table.**
- **Add the following conditions so the flow only runs when these criteria are met:**

1. **Field: Status → Operator: is → Value: In Progress**
2. **Field: Comments → Operator: is → Value: Feedback**
3. **Field: Assigned To → Operator: is → Value: Bob**

4. Save the Trigger

- **After entering the conditions, click Done.**



1. Open Your Flow

- **In Flow Designer, open the Task Table flow you created.**
- **Ensure you've already added the Trigger (Create Record with conditions).**

2. Add an Action

1. **After the trigger, click Add an Action.**
2. **In the action options, search for Update Record(s).**
3. **Select Update Record(s).**

3. Configure the Action

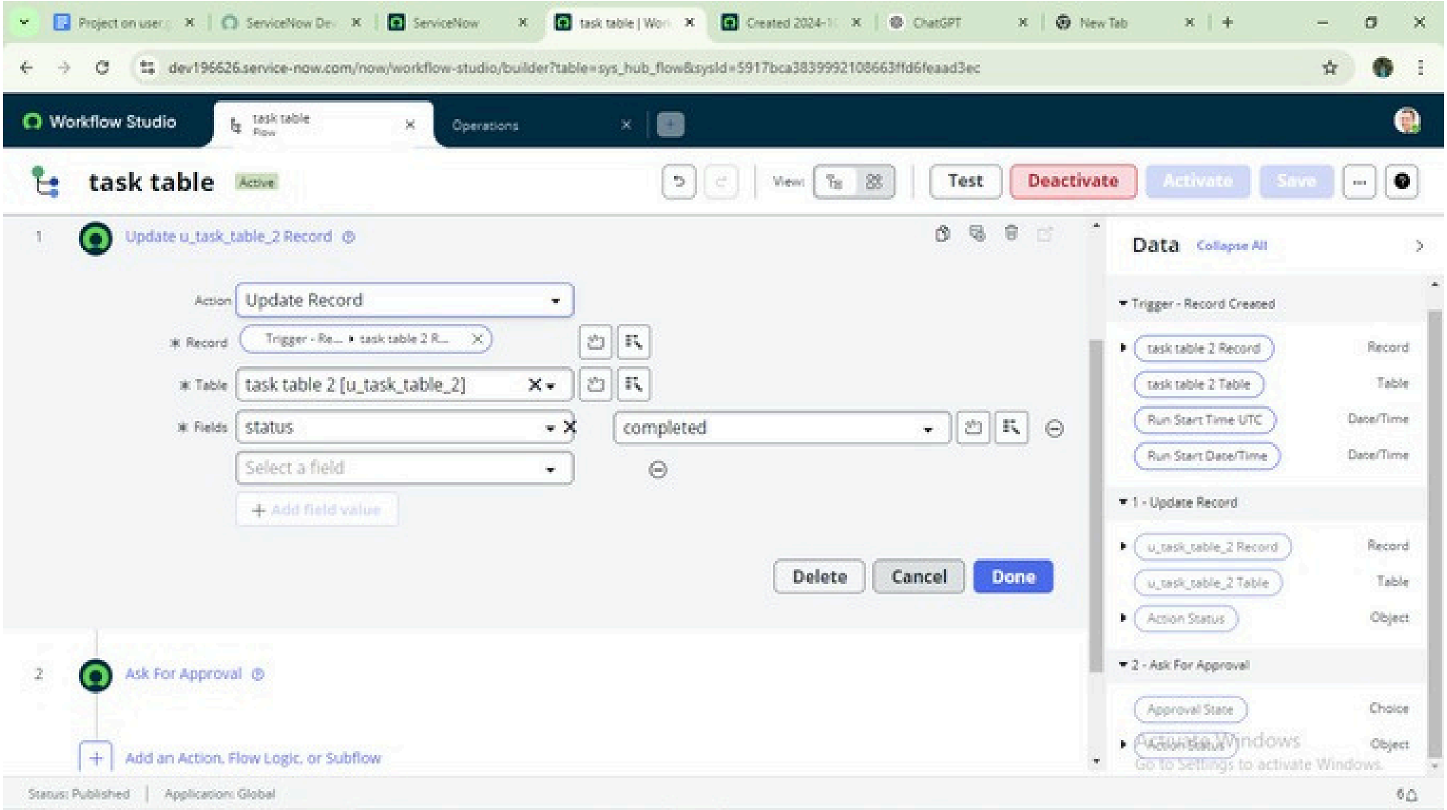
1. **In the Record field:**
   - **Drag the Record object from the Data Panel (right side, under Data Pills) into the Record field.**
   - **This ensures the action updates the same record that triggered the flow.**
   - **The Table will auto-populate as Task Table.**
2. **Under Fields to Update, set:**
   - **Field: Status → Value: Completed.**

4. Save the Action

- **Click Done once the configuration is complete.**

5. Finalize and Activate Flow

1. **Click Save at the top of Flow Designer.**
2. **Then click Activate so the flow starts running.**



1. Open the Flow

- **In Flow Designer, open your existing Task Table flow.**
- **Ensure the Trigger and first Action (Update Records) are already in place.**

2. Add a New Action

1. **Under Actions, click Add an Action.**
2. **In the action search bar, type Ask for Approval.**
3. **Select Ask for Approval.**

3. Configure the Approval Action

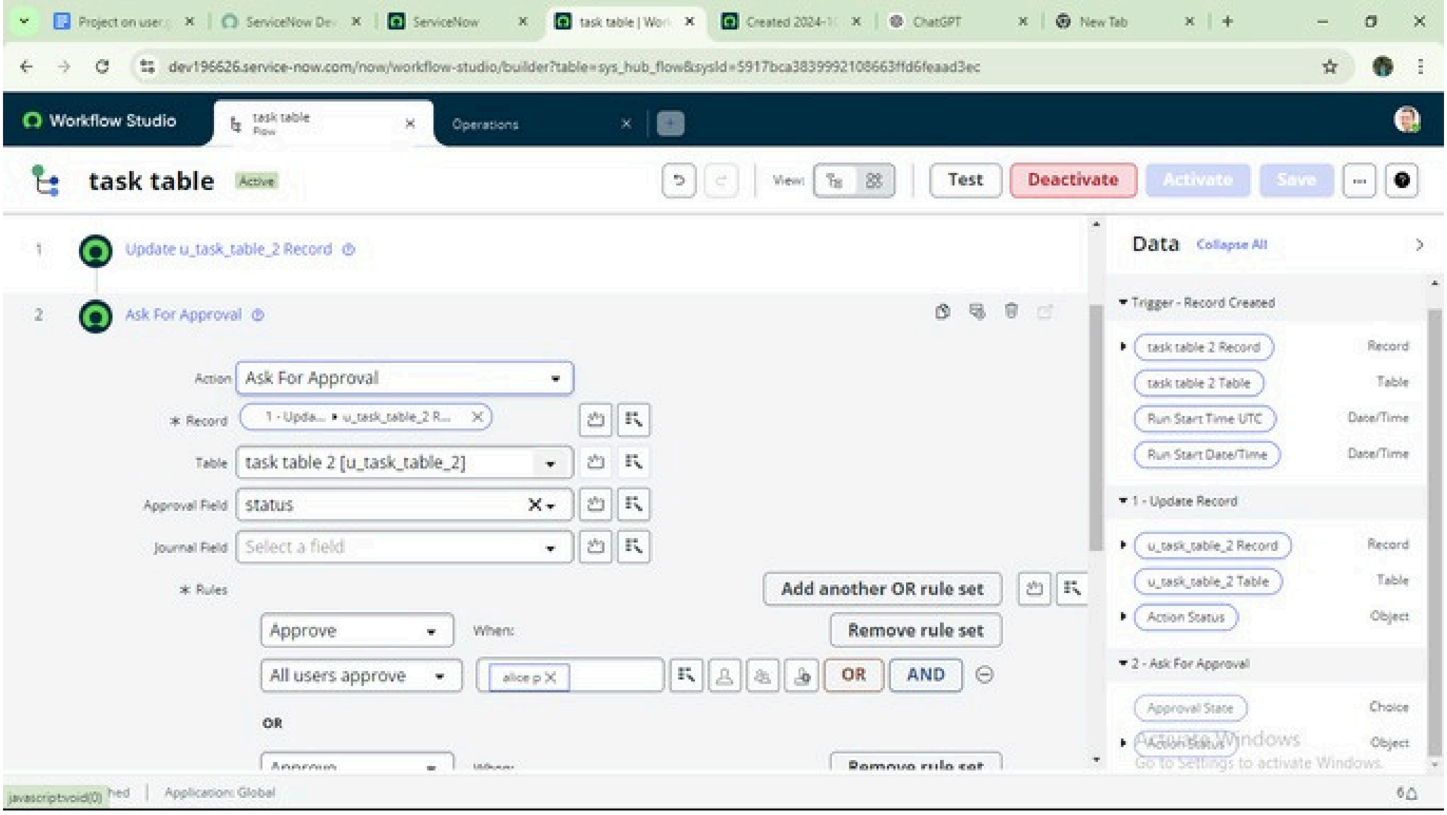
1. **Record field:**
    - **From the Data Panel on the right (Data Pills), drag the Record object into the Record field.**
    - **The Table will automatically be set to Task Table.**
2. **Approval field:**
    - **Set to Status → this is the field that reflects the approval decision.**
3. **Approver(s):**
    - **Select or type Alice P as the approver.**
    - **(You can also add multiple approvers if needed).**

4. Save the Action

- **Click Done to add the approval step into your flow.**

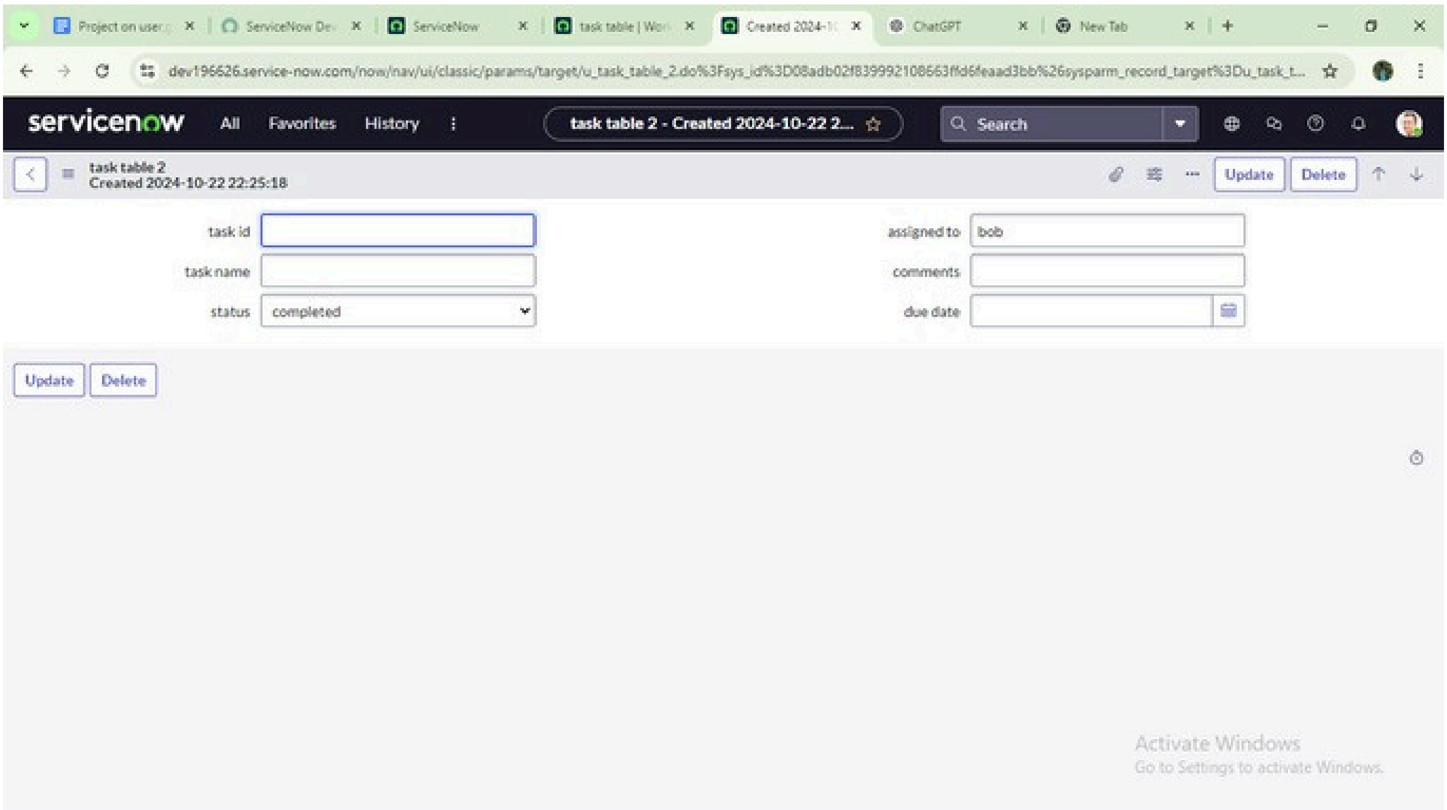
5. Save and Activate Flow

- **Click Save (top-right of Flow Designer).**
- **Then click Activate to enable the updated flow.**



9.Go to application navigator search for task table.

10.It status field is updated to completed



1. Open ServiceNow

- Log in to your ServiceNow instance.
- Make sure you are logged in (or impersonating) as Alice P (the approver assigned in the Flow).

2. Navigate to My Approvals

1. In the Application Navigator, search for My Approvals.
2. Under the Service Desk section, click My Approvals.

3. Review Approval Request

1. In the My Approvals list, locate the approval request that was generated by the Task Table flow.
2. Right-click on the request record.

4. Take Action (Approve or Reject)

1. From the right-click options, select Approve.
   This will update the request as approved.
   Since the approval field is mapped to Status, the record will reflect this change.
2. (Optional) If the approver wanted to reject instead, they could choose Reject.

5. Verify

- Once approved, go back to the Task Table record.
- Confirm that the Status has been updated according to the approval action.