

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

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Team Size : 4

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☐ **Project Documentation**

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

Platform: ServiceNow

Methodology: Project-Based Experiential Learning

Category: ServiceNow System Administrator

Skills **Required:**
Tensorflow, Oracle DB

☐ **Problem Statement**

In a compact project team comprising:

- ☐ ☐ Alice – Project Manager
- ☐ ☐ Bob – Team Member

...there exists a critical need to streamline task management and ensure accountability. The current system lacks:

- ☐ Defined roles and access controls
- ☐☐☐ Structured group management
- ☐ Automated workflows for task tracking

This leads to confusion, inefficiencies, and poor visibility across the project lifecycle.

☐ **Project Objectives**

- ✓ Establish clear user roles and permissions
- ✓ Implement group-based access control
- ✓ Design structured workflows for task lifecycle
- ✓ Enhance transparency and accountability

☐ **Stakeholder Matrix**

Role	Name	Responsibilities
<input type="checkbox"/> <input type="checkbox"/> Project Manager	Alice	Assign tasks, review progress, approve completions
<input type="checkbox"/> <input type="checkbox"/> Team Member	Bob	Execute tasks, update status, report blockers

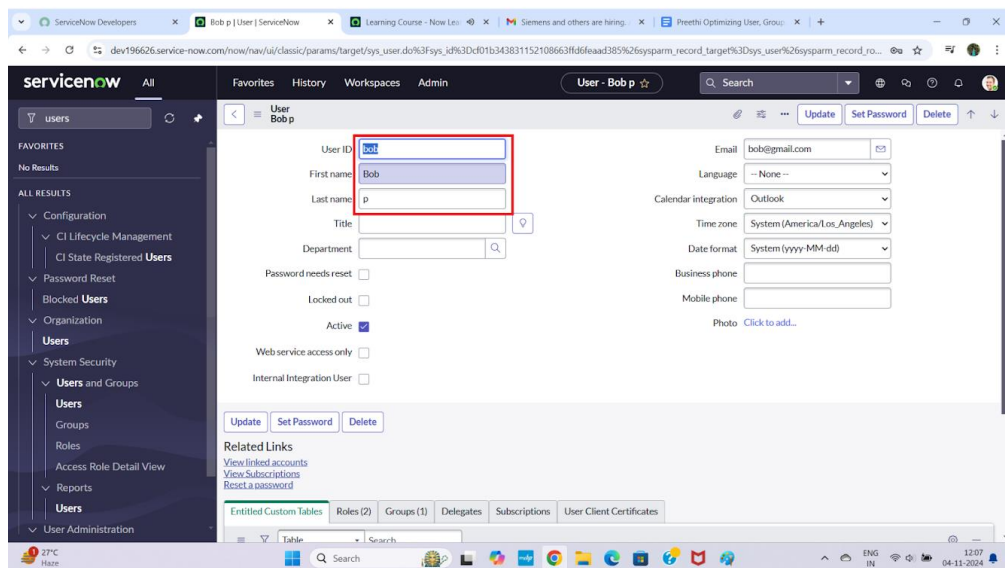
☐ **Key Components & Steps**

1. ☐ **Users**

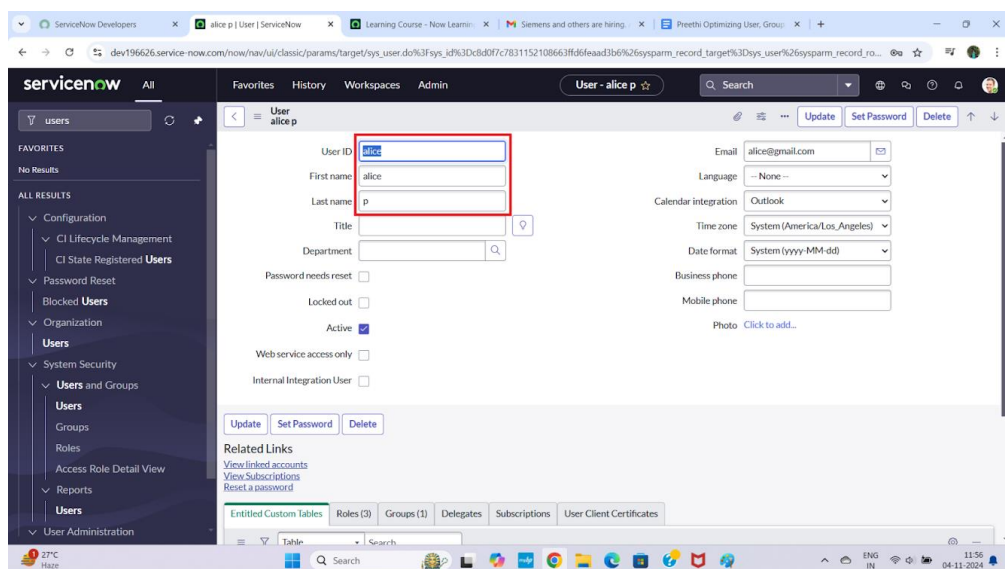
Purpose: Represent individuals in the system.

Steps:

- Create user profiles with unique identifiers (e.g., username, email)
- Assign basic attributes (name, role, department)
- Link users to groups and roles



This screenshot shows the ServiceNow user profile page for a user named 'Bob p'. The page is titled 'User - Bob p' and includes a search bar and navigation tabs for Favorites, History, Workspaces, and Admin. The left sidebar shows the 'users' section under 'User Administration'. The main form contains fields for User ID (301), First name (Bob), Last name (p), Title, Department, Email (bob@gmail.com), Language, Calendar integration (Outlook), Time zone (System (America/Los Angeles)), Date format (System (yyyy-MM-dd)), Business phone, Mobile phone, Photo (Click to add...), Password needs reset, Locked out, Active (checked), Web service access only, and Internal Integration User. Below the form are buttons for Update, Set Password, and Delete. The bottom section shows 'Related Links' and 'Entitled Custom Tables'.



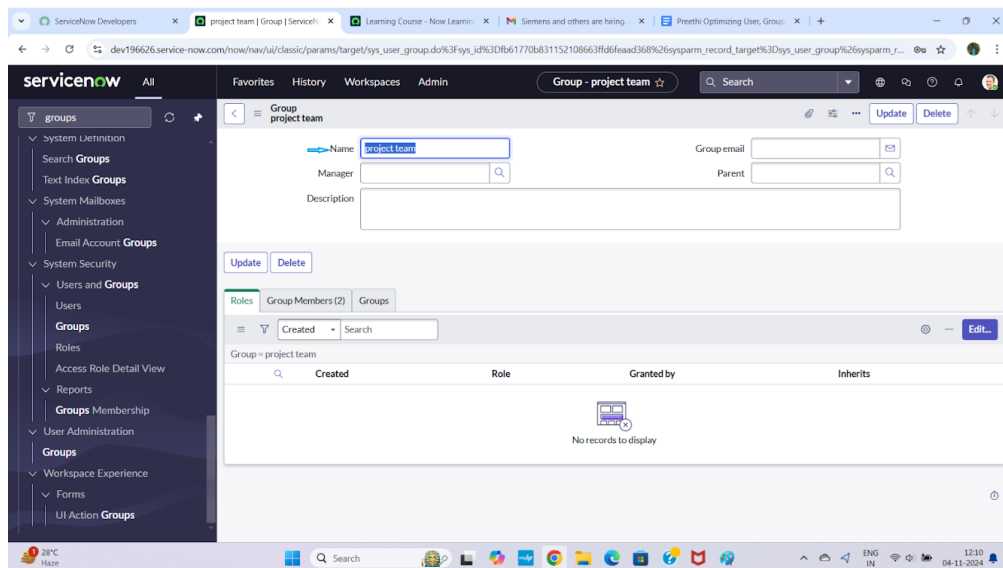
This screenshot shows the ServiceNow user profile page for a user named 'alice p'. The page is titled 'User - alice p' and includes a search bar and navigation tabs for Favorites, History, Workspaces, and Admin. The left sidebar shows the 'users' section under 'User Administration'. The main form contains fields for User ID (alice), First name (alice), Last name (p), Title, Department, Email (alice@gmail.com), Language, Calendar integration (Outlook), Time zone (System (America/Los Angeles)), Date format (System (yyyy-MM-dd)), Business phone, Mobile phone, Photo (Click to add...), Password needs reset, Locked out, Active (checked), Web service access only, and Internal Integration User. Below the form are buttons for Update, Set Password, and Delete. The bottom section shows 'Related Links' and 'Entitled Custom Tables'.

2. ☐ Groups

Purpose: Logical collections of users for simplified permission management.

Steps:

- Define group categories (e.g., Development, QA, Management)
- Add users to appropriate groups based on responsibilities
- Ensure groups reflect organizational structure

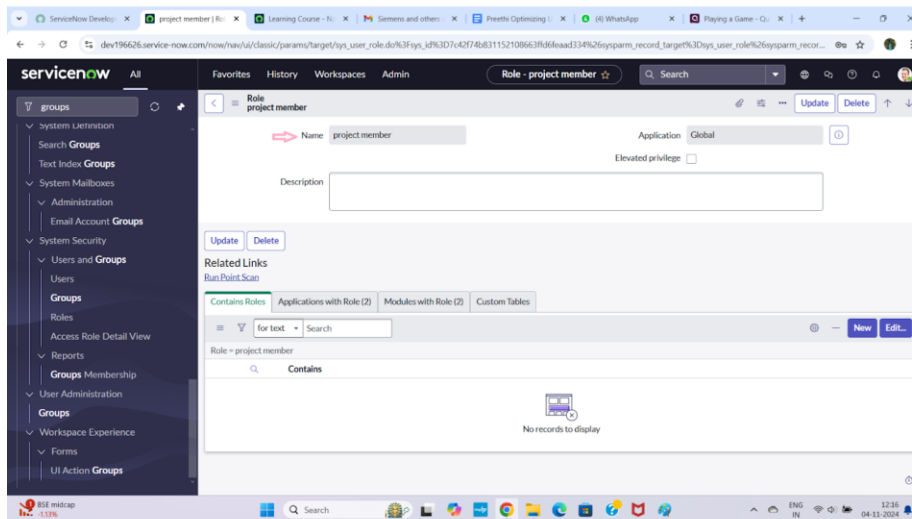


3. ☐ ☐ Roles

Purpose: Define access levels and responsibilities.

Steps:

- Identify key roles (e.g., Project Manager, Developer, QA Tester)
- Assign permissions to each role (read, write, execute)
- Map roles to users or groups

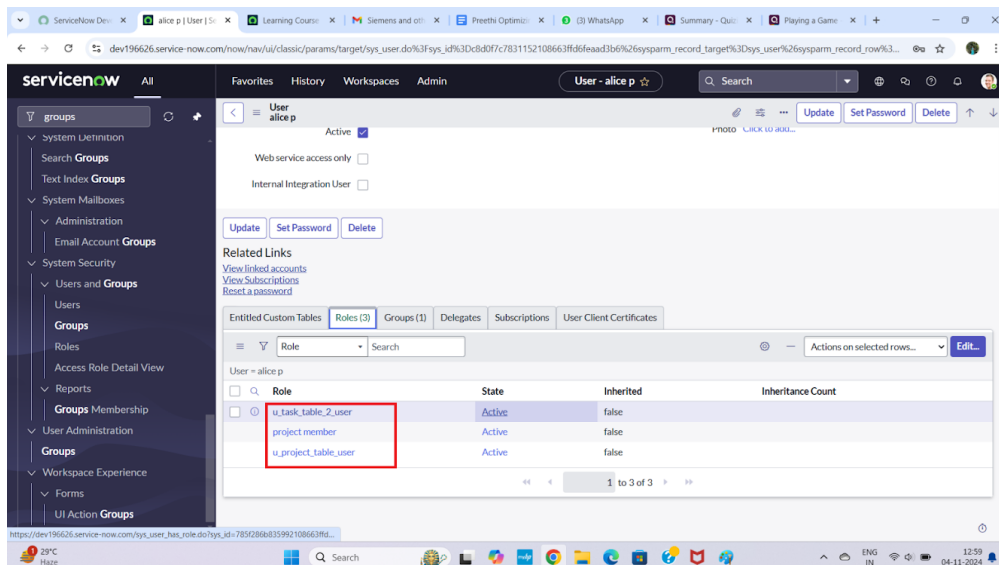
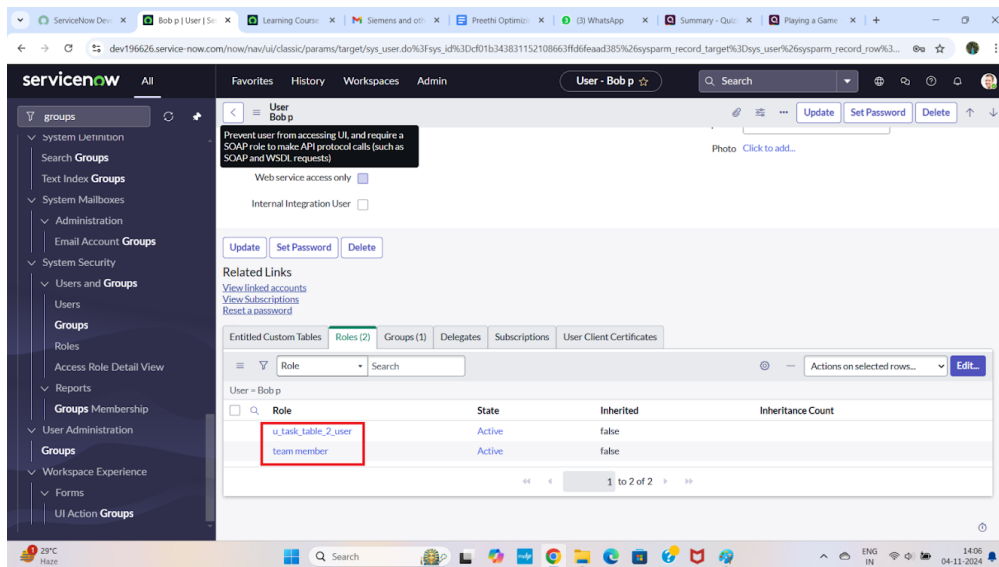


4. ☐ Assign Users to Groups

Purpose: Enable scalable and manageable access control.

Steps:

- Match users to relevant groups based on their job function
- Review group membership periodically
- Automate group assignment if possible (e.g., via onboarding workflow)



5. Application Access

Purpose: Control access to specific applications or modules.

Steps:

- Define access rules per application
- Link applications to roles/groups
- Monitor and audit access logs

The screenshot shows the 'Application Menu - project table' configuration page in ServiceNow. The page includes a title field set to 'project table', an 'Application' dropdown set to 'Global', and an 'Active' checkbox that is checked. A description box contains the text: 'Restricts access to the specified roles. Otherwise, all users can view the application menu when it is active.' Below this, the 'Roles' field is set to 'project member'. The 'Category' dropdown is set to 'Custom Applications'. There are also fields for 'Hint' and 'Description'. At the bottom, there are 'Update' and 'Delete' buttons. An 'Activate Windows' watermark is visible in the bottom right corner.

The screenshot shows the 'Application Menu - task table 2' configuration page in ServiceNow. The page includes a title field set to 'task table 2', an 'Application' dropdown set to 'Global', and an 'Active' checkbox that is checked. A description box contains the text: 'Restricts access to the specified roles. Otherwise, all users can view the application menu when it is active.' Below this, the 'Roles' field is set to 'u_task_table_2_user, project member, team member'. The 'Category' dropdown is set to 'Custom Applications'. There are also fields for 'Hint' and 'Description'. At the bottom, there are 'Update' and 'Delete' buttons. An 'Activate Windows' watermark is visible in the bottom right corner.

6. Access Control List (ACL)

Purpose: Specify permissions for users and groups.

Steps:

- Create ACL entries for each resource (e.g., files, modules)
- Assign read/write/execute permissions
- Enforce ACLs during user actions
- Log access attempts for auditing

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: ☐

Conditions

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

	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.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

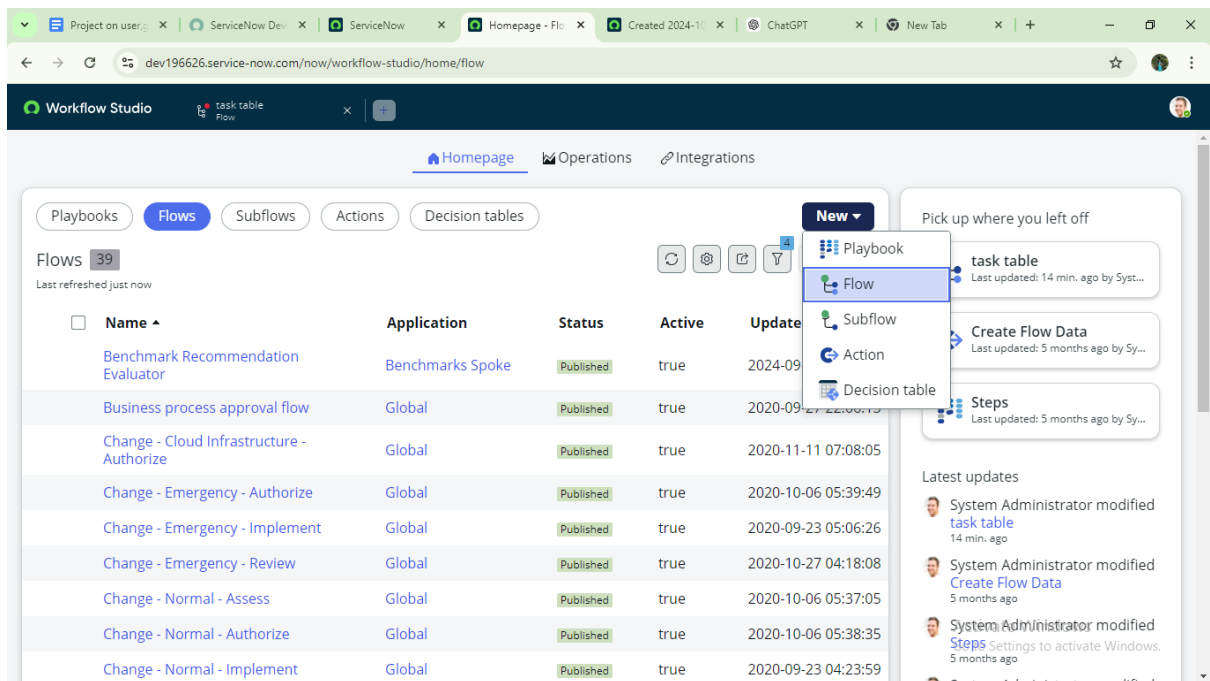
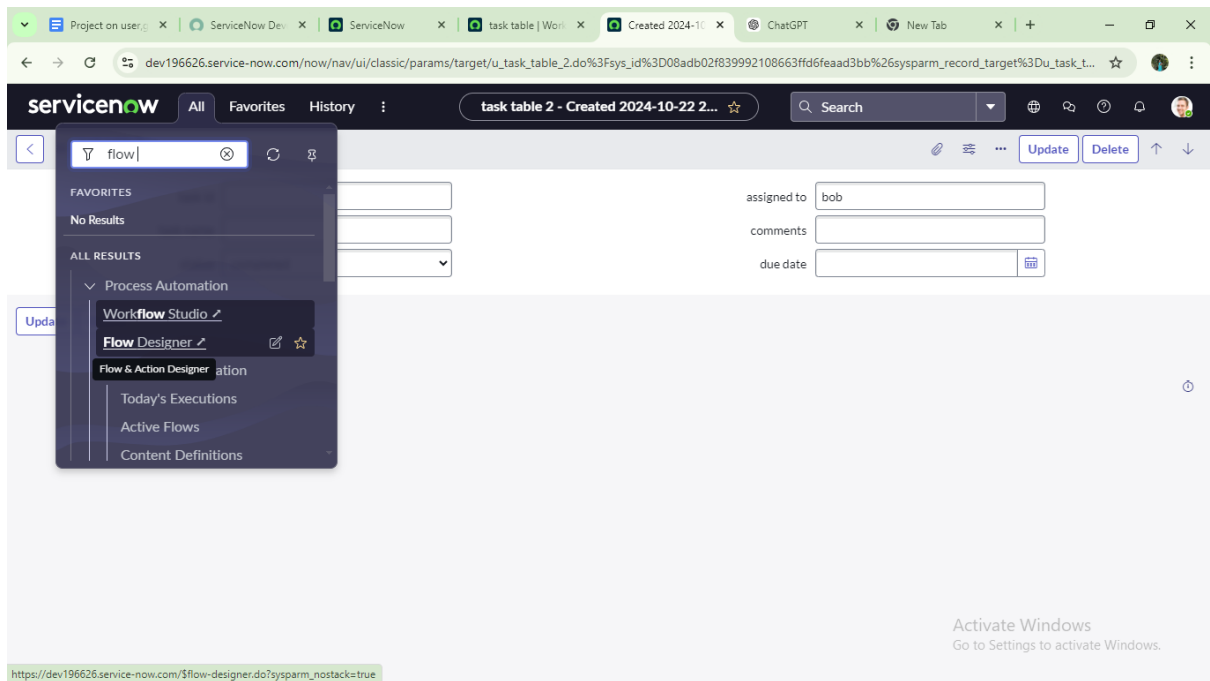
The screenshot shows a web browser window with the ServiceNow interface. The browser tabs include 'Copy of template - Google', 'ServiceNow Developers', 'ServiceNow', 'Create Created | task table 2', and 'ChatGPT'. The address bar shows the URL: 'dev196626.service-now.com/now/nav/ui/classic/params/target/u_task_table_2.do%3Fsys_id%3D-1%26sys_is_list%3Dtrue%26sys_target%3Du_task_table_2%26sysparm_check...'. The ServiceNow header displays the logo and navigation links: 'All', 'Favorites', 'History'. The main title is 'task table 2 - Create Created'. Below the title, there is a breadcrumb 'task table 2' and a 'New record' link. The form contains the following fields: 'task id' (text input), 'task name' (text input), 'status' (dropdown menu with '-- None --' selected), 'assigned to' (text input), 'comments' (text input), and 'due date' (text input). 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.

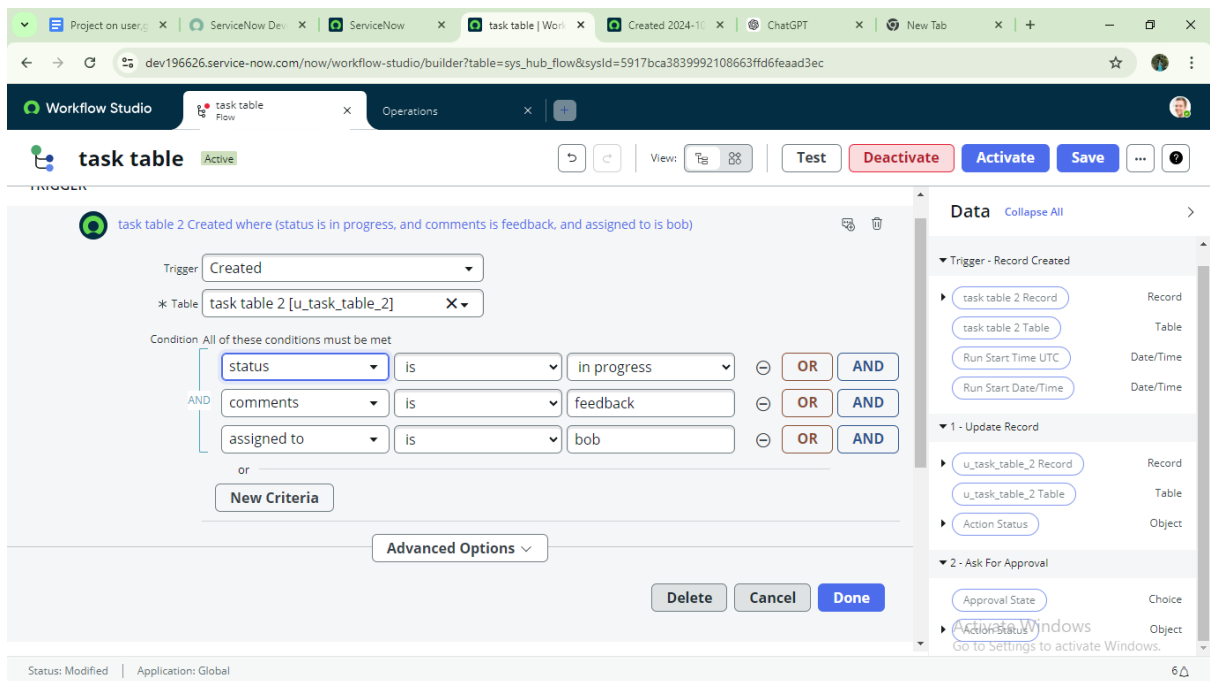
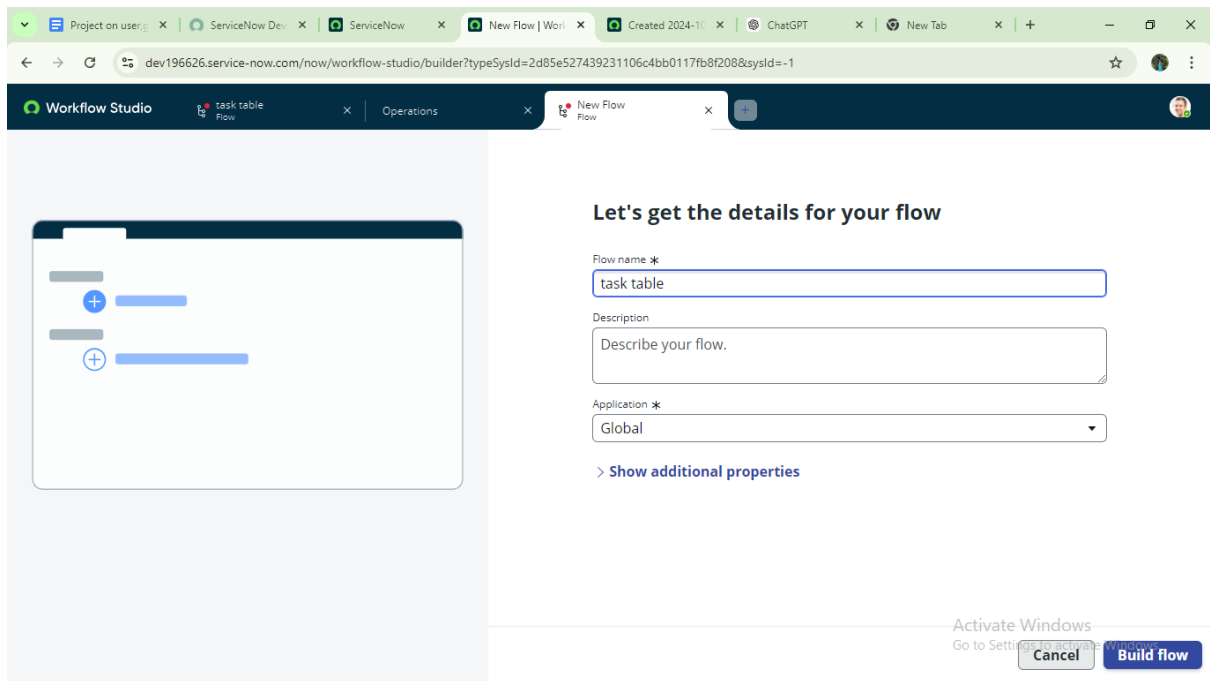
7. Workflow

Purpose: Structure task assignment and tracking.

Steps:

- Define workflow stages (e.g., To Do → In Progress → Review → Done)
- Assign tasks to users based on roles
- Track progress and update status
- Notify stakeholders of changes or delays





Workflow Studio interface showing the configuration of a workflow step named "Update u_task_table_2 Record".

Step 1: Update u_task_table_2 Record

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

Buttons: Delete, Cancel, Done

Data Panel:

- 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: Published | Application: Global

Workflow Studio interface showing the configuration of a workflow step named "Ask For Approval".

Step 2: Ask For Approval

- Action: Ask For Approval
- * Record: 1 - Upda... > u_task_table_2 R...
- Table: task table 2 [u_task_table_2]
- Approval Field: status
- Journal Field: Select a field

Rules:

- Rule 1: Approve When: All users approve (alice p X) [OR AND]
- Rule 2: Approve When: [OR AND]

Buttons: Add another OR rule set, Remove rule set

Data Panel:

- 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)

Application: Global

Project on user...ServiceNow Dev...ServiceNow...task table | Worl...Created 2024-10-22...ChatGPT...New Tab...+...-...x

dev196626.service-now.com/now/nav/ui/classic/params/target/u_task_table_2.do%3Fsys_id%3D08adb02f839992108663ffd6fead3bb%26sysparm_record_target%3Du_task_t...

servicenowAllFavoritesHistorytask table 2 - Created 2024-10-22 2...Search

task table 2
Created 2024-10-22 22:25:18UpdateDelete

task id

task name

statuscompleted

assigned to

comments

due date

UpdateDelete

Activate Windows
Go to Settings to activate Windows.

Project on user...ServiceNow Dev...ServiceNow...task table | Worl...Approvals | Servi...ChatGPT...New Tab...+...-...x

dev196626.service-now.com/now/nav/ui/classic/params/target/sysapproval_approver_list.do%3Fsysparm_query%3D%26sysparm_first_row%3D1%26sysparm_view%3D...

servicenowAllFavoritesHistoryWorkspacesApprovalsSearch

ApprovalsCreatedSearchActions on selected rows...

	State	Approver	Comments	Approval for	Created
<input type="checkbox"/>	<input type="text" value="Search"/>	<input type="text" value="Search"/>	<input type="text" value="Search"/>	<input type="text" value="Search"/>	<input type="text" value="Search"/>
<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

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Go to Settings to activate Windows.

Benefits

- Role-based access improves data security
- Group management simplifies administration
- Automated workflows reduce manual effort
- Audit trails boost accountability

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.