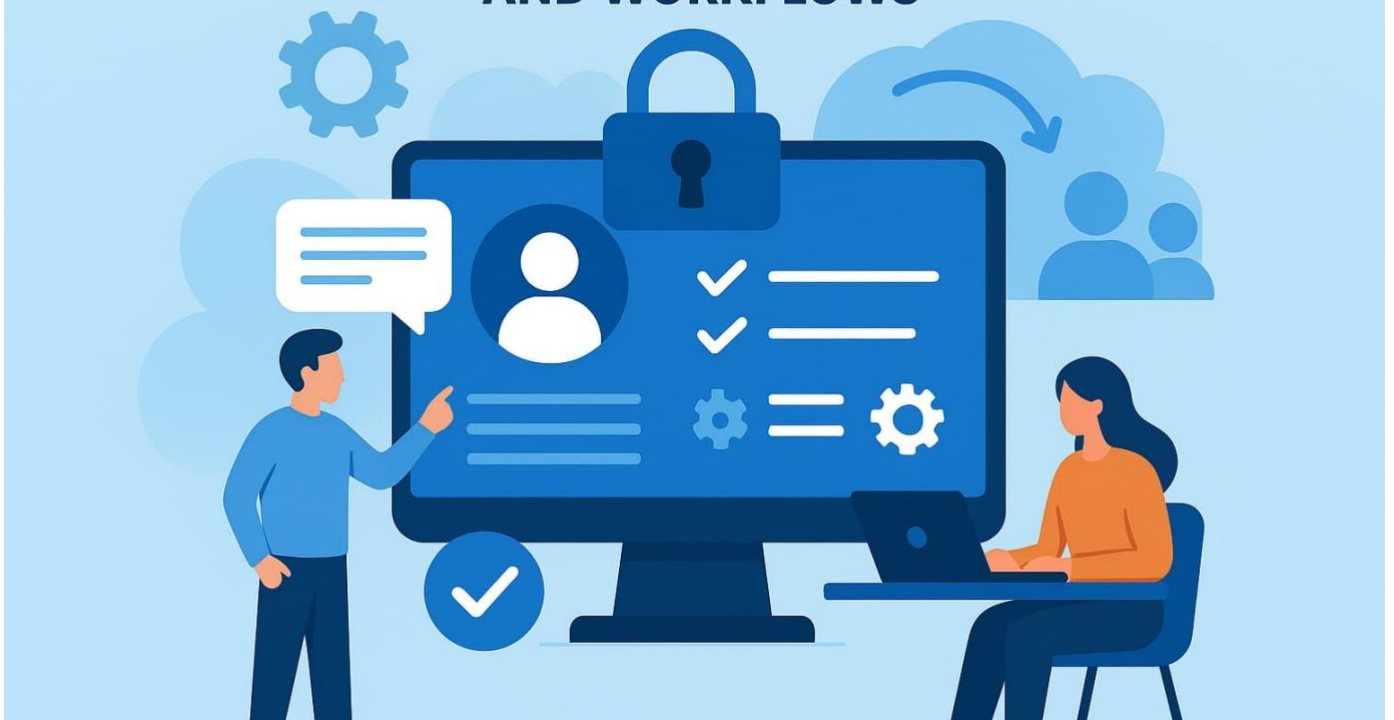


OPTIMIZING USER, GROUP, AND ROLE MANAGEMENT WITH ACCESS CONTROL AND WORKFLOWS



Project Title

Team ID : NM2025TMID19138

Team Size : 5

Team Leader : SIDDARTH V

Team member 1 : VIJAYAKUMAR M

Team member 2 : THAMIZHAZHAGAN K

Team member 3 : SURESH V

Team member 4 :

SURYA M

Project Statement:

This project focuses on creating a structured project and task management system within the ServiceNow platform. It involves setting up users, groups, roles, custom tables, access controls, and automated workflows. The system allows seamless collaboration between different roles, such as a project manager (Alice) and a team member (Bob), enabling proper task assignments, approvals, and status tracking in a secure and organized manner.

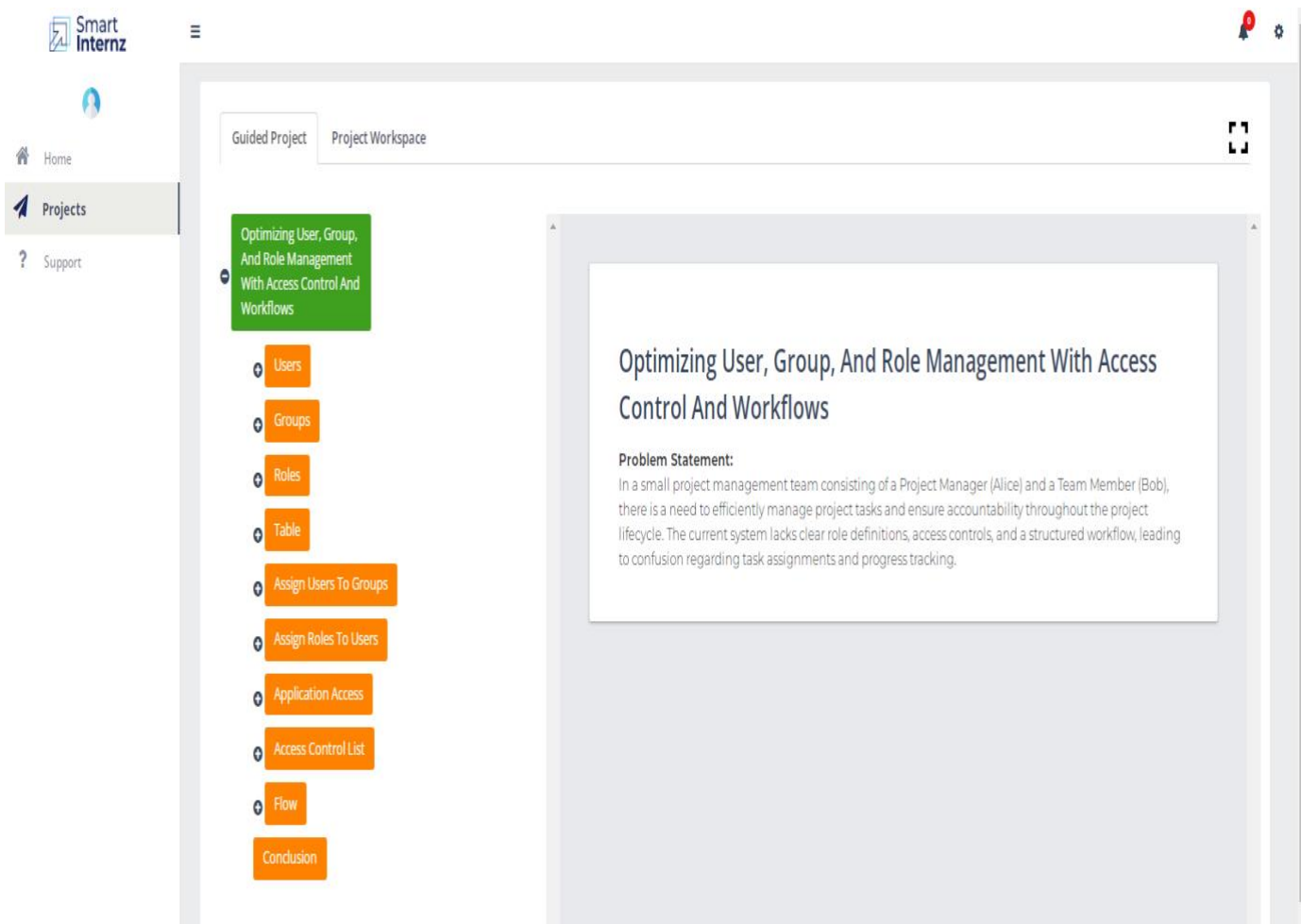
Objective:

The objective is to build a role-based access control system that manages how users interact with project and task data. It includes designing custom tables, configuring modules, assigning users to groups and roles, and setting up workflows that automate actions like updating task status and requesting approvals. The goal is to simulate a real-world team structure that enhances communication, accountability, and workflow efficiency.

Skills:

This project requires hands-on knowledge of the ServiceNow platform, particularly in creating users, groups, roles, and tables. It also requires understanding how to configure Access Control Lists (ACLs) to secure data, and how to use Flow Designer to automate task updates and approvals. In addition to technical skills, basic workflow design, logical thinking, and testing using user impersonation are essential to ensure the system works as intended.

TASK INITIATION:



Step 1 → USER

Milestone 1 : Users

Create Users:

1. Open service now
2. Click on All >> search for users
3. Select Users under system security
4. Click on new
5. Fill the following details to create a new user
6. Click on submit

The screenshot displays the ServiceNow 'User' form. The left sidebar shows the navigation menu with 'Users' selected under 'System Security'. The main form area contains the following fields and options:

- User ID:** A text field with a red box around it, containing the value 'alice p'.
- First name:** A text field containing 'alice'.
- Last name:** A text field containing 'p'.
- Title:** A text field with a dropdown arrow.
- Department:** A text field with a search icon.
- Email:** A text field containing 'alice@gmail.com'.
- Language:** A dropdown menu set to 'None'.
- Calendar integration:** A dropdown menu set to 'Outlook'.
- Time zone:** A dropdown menu set to 'System (America/Los Angeles)'.
- Date format:** A dropdown menu set to 'System (yyyy-MM-dd)'.
- Business phone:** A text field.
- Mobile phone:** A text field.
- Photo:** A link labeled 'Click to add...'.
- Active:** A checkbox that is checked.
- Web service access only:** An unchecked checkbox.
- Internal Integration User:** An unchecked checkbox.
- Buttons:** 'Update', 'Set Password', and 'Delete' buttons are located at the top right and bottom of the form.
- Related Links:** 'View linked accounts', 'View Subscriptions', and 'Reset a password'.
- Entitled Custom Tables:** A section with tabs for 'Roles (3)', 'Groups (1)', 'Delegates', 'Subscriptions', and 'User Client Certificates'.

Create one more user:

7. Create another user with the following details
8. Click on submit

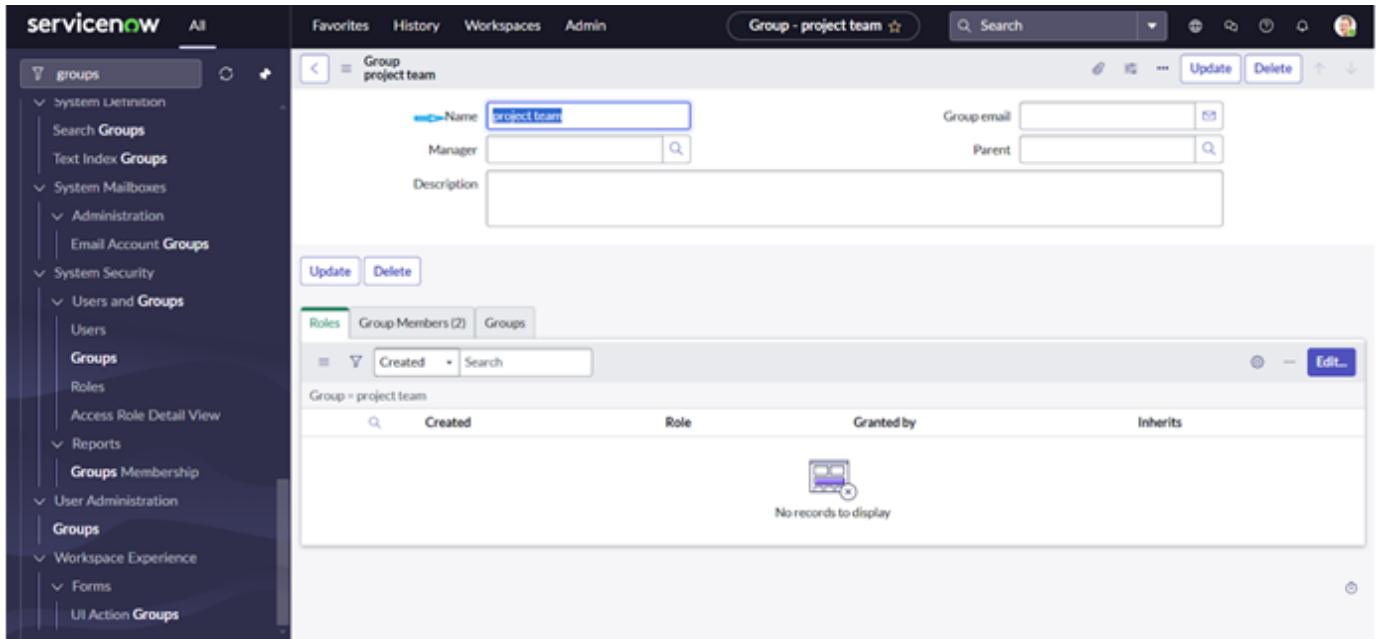
The screenshot shows the ServiceNow user management interface. The 'User - Bob p' form is displayed. The 'User ID' field is highlighted with a red box. The 'First name' field contains 'Bob' and the 'Last name' field contains 'p'. The 'Active' checkbox is checked. The 'Email' field contains 'bob@gmail.com'. The 'Calendar integration' is set to 'Outlook'. The 'Time zone' is set to 'System (America/Los Angeles)'. The 'Date format' is set to 'System (yyyy-MM-dd)'. The 'Business phone' and 'Mobile phone' fields are empty. The 'Update', 'Set Password', and 'Delete' buttons are visible at the bottom of the form.

Step 2 → Groups

Milestone 2 : Groups

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

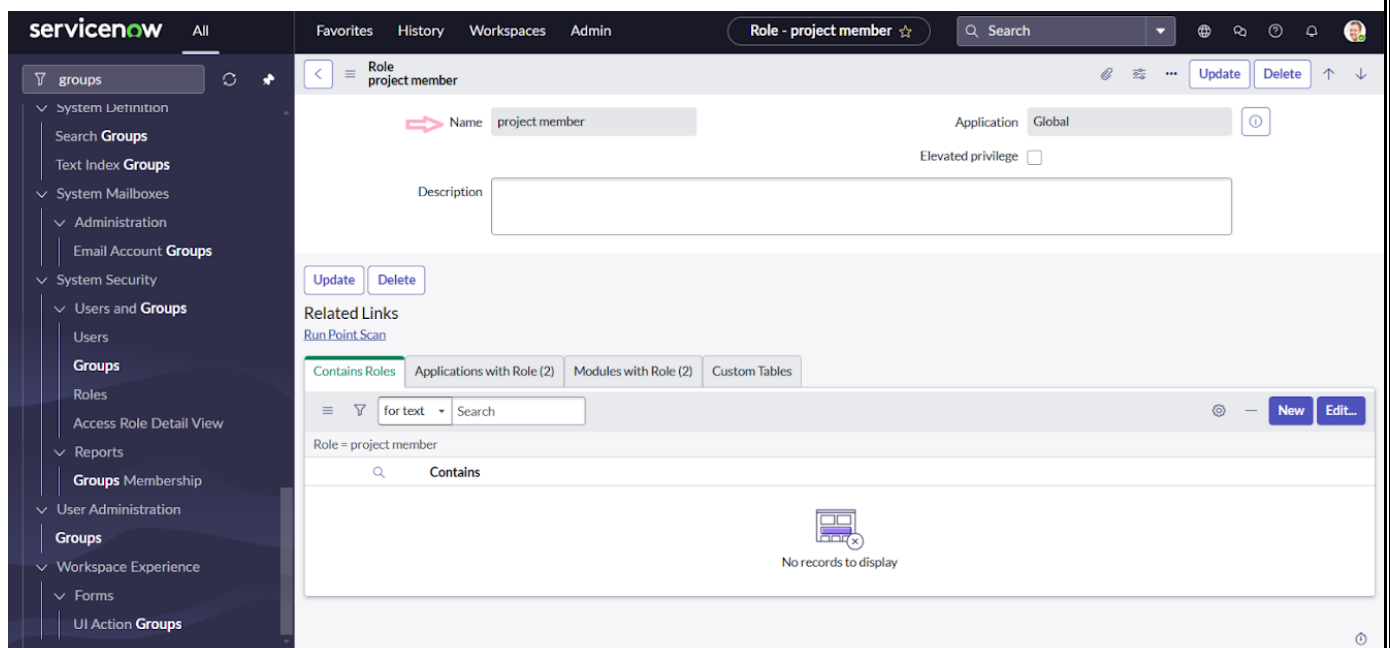


Step 3 → Rolse

Milestone 3 : Roles

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



Create one more role:

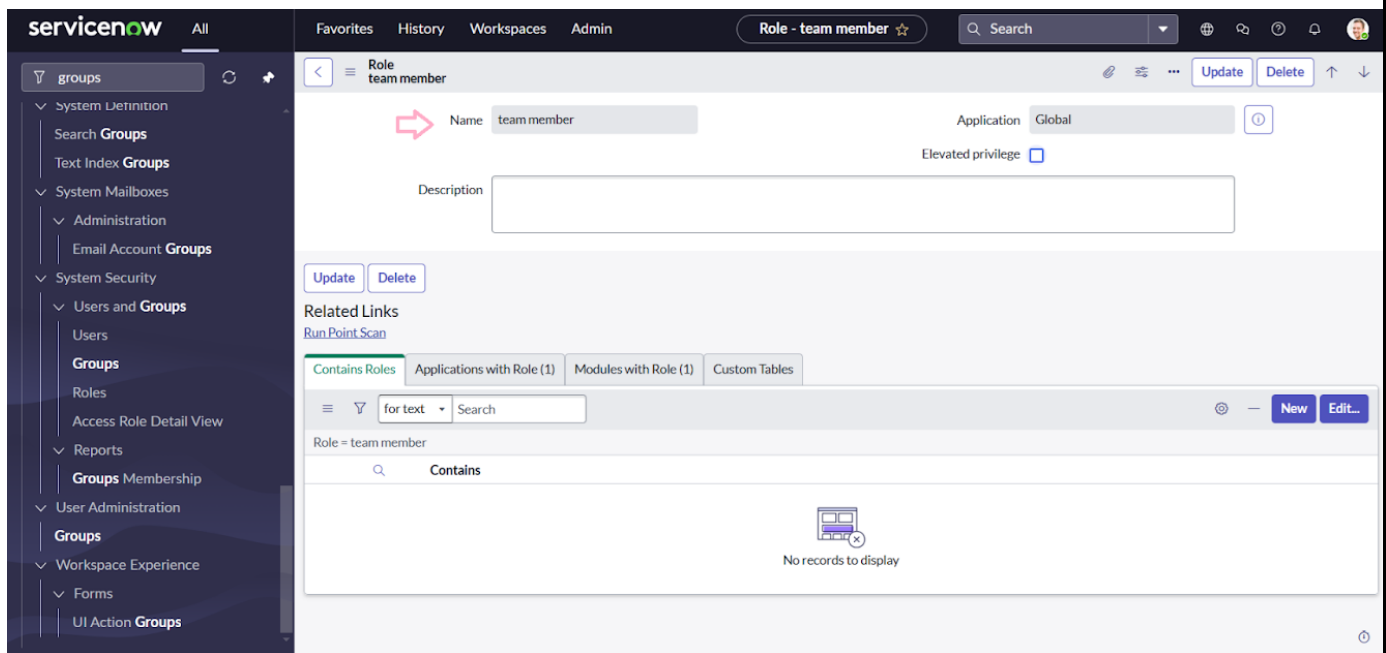
7. Create another role with the following details : Team member
8. Click on submit

Step 4→ Table

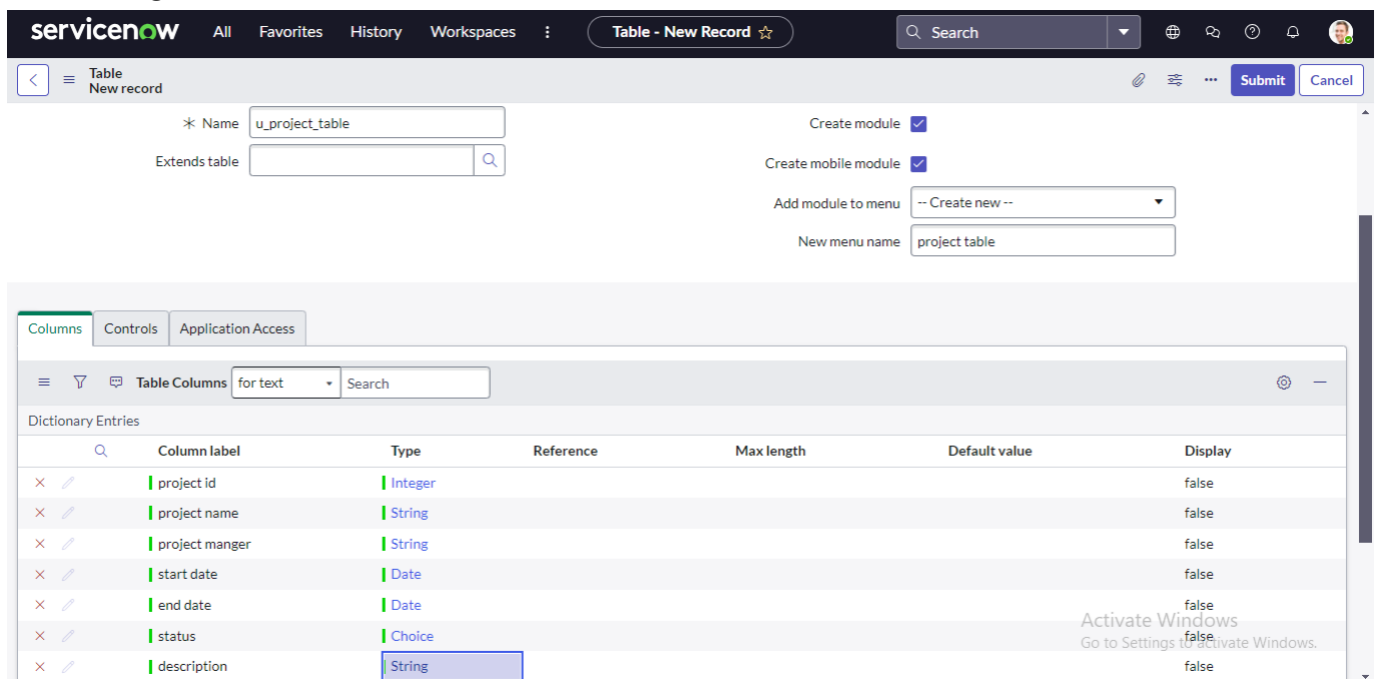
Milestone 4 :

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



Create one more table:

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

10. Click on submit.

servicenow All Favorites History Workspaces Table - task table 2

Search

Table Columns for text Search

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.

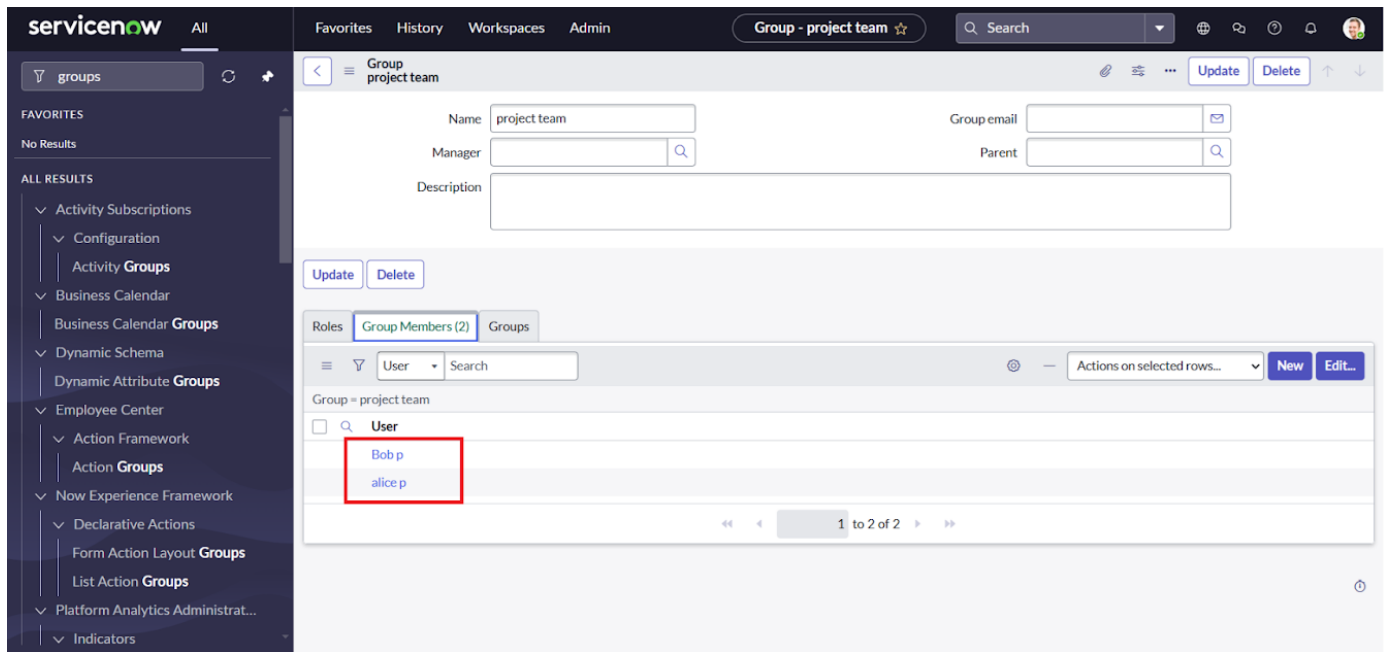
Delete Update Delete All Records

Step 5 → Assign Users To Groups

Milestone 5:

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



Step 6 → Assign Roles to Users

Milestone 6 :

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 for 'User - 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', all with a state of 'Active'. A red box highlights the 'u_task_table_2_user' role.

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

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.

The screenshot shows the ServiceNow user interface for a user named 'Bob p'. The left sidebar contains a navigation menu with categories like 'groups', 'System Definition', 'System Mailboxes', 'Administration', 'System Security', 'Users and Groups', 'Reports', 'User Administration', 'Workspace Experience', and 'Forms'. The main content area shows the user's profile with options to 'Update', 'Set Password', and 'Delete'. Below this, there are 'Related Links' and a tabbed interface for 'Entitled Custom Tables'. The 'Roles (2)' tab is active, showing a table of roles assigned to the user. The role 'u_task_table_2_user' is highlighted with a red box.

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

Step 7 → Application Access

Milestone 7:

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

servicenow All Favorites History Admin : Application Menu - project table

Application Menu project table

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 project member

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

Activate Windows
Go to Settings to activate Windows.

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

Application Menu task table 2

* Title Application

Active ☒

Restricts access to the specified roles. Otherwise, all users can view the application menu when it is active.

Roles u_task_table_2_user, project member, team member

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

Activate Windows
Go to Settings to activate Windows.

Modules Order Search

Step 8 → Access Control List

Milestone 8 :

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
6. Fill the following details to create a new ACL

servicenow All Favorites History Admin : Access Control - New Record

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: ☒

Decision Type: Allow If Advanced: ☐

Admin overrides: ☒

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 --

Conditions

Activate Windows Go to Settings to activate Windows.

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

7.Scroll down under requires role

Double

8.click on insert a new row

9. Give task table and team member role

10. Click on submit

11.Similarly create 4 acl for the following fields

servicenow All Favorites History Workspaces : Access Controls

Access Controls Name Search

All > Created on Today

	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	Allow If	write	record	true	admin	2024-10-22 04:20:15
<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 21:05:57
<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

1 to 20 of 23

Activate Windows Go to Settings to activate Windows.

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 are have the edit access

Step 9 → Flow

Milestone 9:

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.

servicenow

AllFavoritesHistory

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

assigned to

bob

comments

due date

update

delete

activate windows

go to settings to activate windows.

https://dev196626.service-now.com/\$flow-designer.do?sysparm_nostack=true

Workflow Studio

task table

Flow

HomepageOperationsIntegrations

playbooks

flows

subflows

actions

decision tables

flows

39

last refreshed just now

new

playbook

flow

subflow

action

decision table

pick up where you left off

task table

create flow data

steps

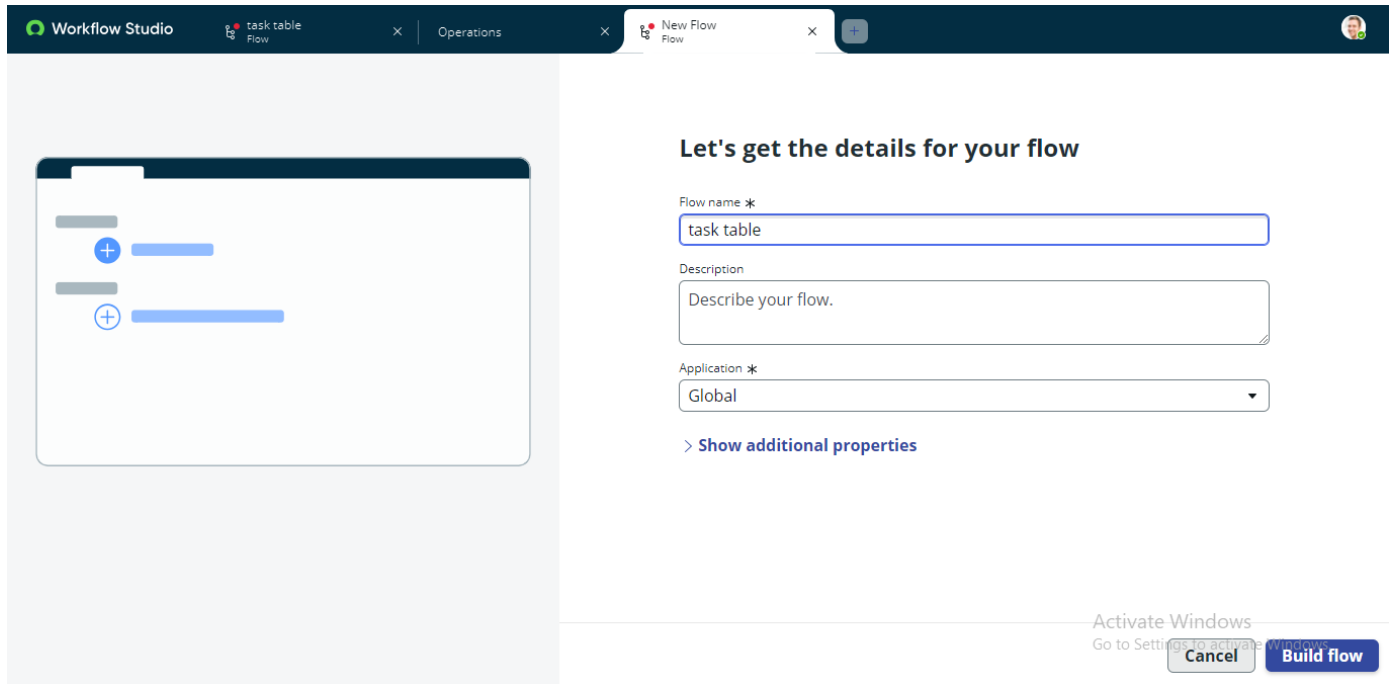
latest updates

system administrator modified task table

system administrator modified create flow data

system administrator modified steps

<input type="checkbox"/>	name	application	status	active	update
<input type="checkbox"/>	Benchmark Recommendation Evaluator	Benchmarks Spoke	Published	true	2024-09-27 22:00:15
<input type="checkbox"/>	Business process approval flow	Global	Published	true	2020-09-27 22:00:15
<input type="checkbox"/>	Change - Cloud Infrastructure - Authorize	Global	Published	true	2020-11-11 07:08:05
<input type="checkbox"/>	Change - Emergency - Authorize	Global	Published	true	2020-10-06 05:39:49
<input type="checkbox"/>	Change - Emergency - Implement	Global	Published	true	2020-09-23 05:06:26
<input type="checkbox"/>	Change - Emergency - Review	Global	Published	true	2020-10-27 04:18:08
<input type="checkbox"/>	Change - Normal - Assess	Global	Published	true	2020-10-06 05:37:05
<input type="checkbox"/>	Change - Normal - Authorize	Global	Published	true	2020-10-06 05:38:35
<input type="checkbox"/>	Change - Normal - Implement	Global	Published	true	2020-09-23 04:23:59



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

View: [Icons]

Test Deactivate Activate Save

task table 2 Created where (status is in progress, and comments is feedback, and assigned to is bob)

Trigger: Created

* Table: task table 2 [u_task_table_2]

Condition: All of these conditions must be met

AND

status is in progress

OR AND

comments is feedback

OR AND

assigned to is bob

OR AND

or

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

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.

Workflow Studio interface showing the configuration for the 'Update u_task_table_2 Record' action. The action is set to 'Update Record' with record source 'task table 2 [u_task_table_2]' and field 'status' set to 'completed'. The right sidebar shows the data navigation pane with fields like 'task table 2 Record', 'task table 2 Table', 'Run Start Time UTC', and 'Run Start Date/Time'.

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.

Workflow Studio interface showing the configuration for the 'Ask For Approval' action. The action is set to 'Ask For Approval' with record source '1 - Upda... u_task_table_2 R...' and field 'status' set to 'status'. The right sidebar shows the data navigation pane with fields like 'task table 2 Record', 'task table 2 Table', 'Run Start Time UTC', and 'Run Start Date/Time'.

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

The screenshot shows the ServiceNow task form for 'task table 2', created on 2024-10-22 22:25:18. The form includes fields for task id, task name, status (set to 'completed'), assigned to (set to 'bob'), comments, and due date. There are 'Update' and 'Delete' buttons at the top right and bottom left. A watermark 'Activate Windows' 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' list. The table has columns for State, Approver, Comments, Approval for, and Created. The first row is highlighted with a green dot and labeled 'Approved', with the approver 'alice p' and a creation time of 2024-10-22 22:26:19. Other rows are labeled 'Rejected' or 'Requested' with various approvers and creation times. A watermark 'Activate Windows' is visible in the bottom right corner.

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

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.