**PROJECT DESIGN**

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|---|---|
| **DATE** | |
| **Team id** | LTVIP2025TMID30602 |
| **Project name** | Optimising user, group and role management with access control list and Workflows |

## Praposed solutions :

| S.no | Parameters | Description |
|---|---|---|
| 1 | Problem statement (problem to be solved) | Current user, group, and role management systems are often inefficient, leading to security vulnerabilities and administrative overhead |
| 2 | Idea/solution Description | This project aims to optimize and streamline the management of user groups and roles within an organization by implementing a robust Access Control List (ACL) system integrated with automated workflows. The goal is to improve security, efficiency, and compliance in how access rights are assigned, reviewed, and updated across systems. |
| 3 | Novelty/Uniqueness | The novelty of the “Optimising User Group and Role Management with Access Control List and Workflows” lies in its integrated and intelligent approach to access management, which goes beyond traditional static role assignments. |
| 4 | Social impact/customer satisfaction | The “Optimising User Group and Role Management with Access Control List and Workflows” has a significant social impact by enhancing organizational security, promoting accountability, and reducing administrative burden, ultimately contributing to safer digital environments. |
| 5 | Business model (Revenue Model) | The business model for the "Optimising User Group and Role Management with Access Control List and Workflows" project is primarily based on a Software-as-a-Service (SaaS) subscription model, offering tiered pricing plans based on the number of users, integrations, and feature sets required by organizations. |
| 6 | Scalability of the solution | The scalability of the "Optimising User Group and Role Management with Access Control List and |

| | | |
|---|---|---|
| | | Workflows" solution is a core strength, designed to support organizations of varying sizes and complexities. |

## Optimizing User, Group, And Role Management With Access Control And Workflows

### MILESTONE 1: USERS

**PURPOSE**: The purpose of creating users in the Optimizing User, Group, and Role Management with Access Control and Workflows project is to establish a structured and secure Digital identity for each individual within the system. This Identity serves as the foundation for assigning appropriate Access rights, roles, and group memberships based on jobFunctions and organizational hierarchy.

**USE** : By creating individual user profiles, the system can Accurately assign roles, associate users with relevant Groups, and control access to resources based on Predefined permissions.

### ACTIVITY 1 : Create users

**Steps**: 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

A .user id:alice p, first name: alice,last name : p

Email: alicep@ gmail.com 6 .Click on submit

7 . Create one more user bob p

### MILESTONE 2: GROUP

**PURPOSE:** The purpose of creating groups in the Optimizing User, Group, and Role Management with Access Control and Workflows is to streamline access management by Organizing users with

similar roles. Groups simplify the Process of assigning permissions, roles, and workflow Responsibilities by enabling bulk management rather than Handling users individually.

**USE :** Groups play a vital role in workflow automation, as

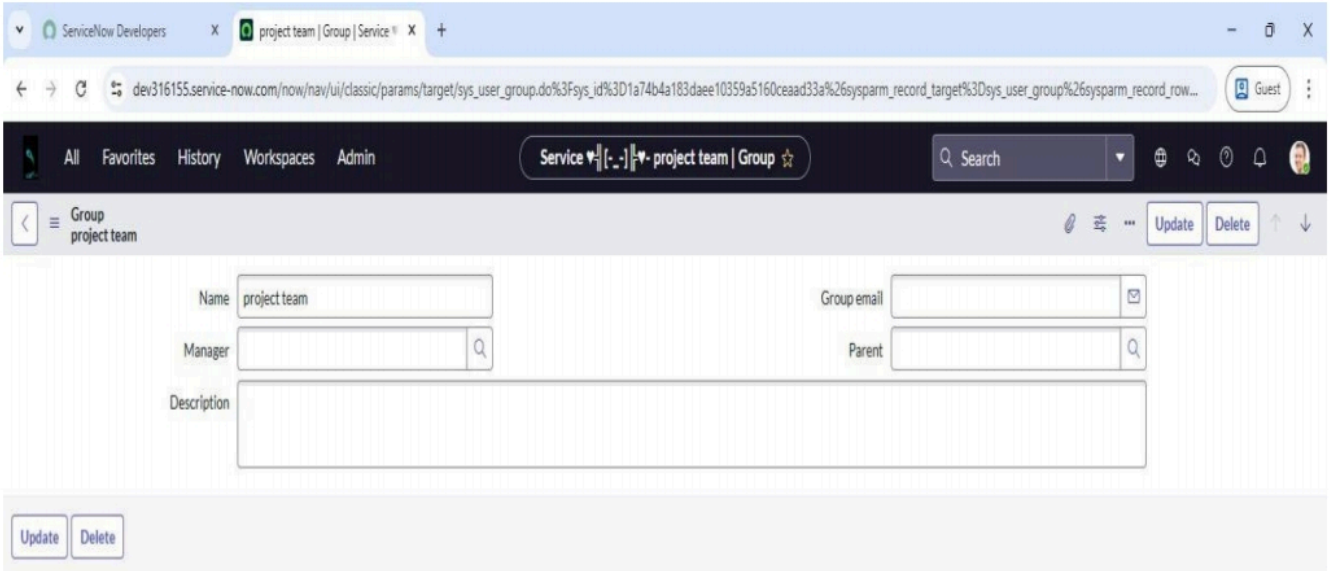
Tasks like approvals, notifications, or escalations can be

Routed based on group membership.

## ACTIVITY 1: Create group

**STEPS :** Open service now.

1. Click on All >> search for groups
2. Select groups under system security
3. Click on new
4. Fill the following details to create a new group
5. Click on submit




## MILESTONE 3 : ROLES

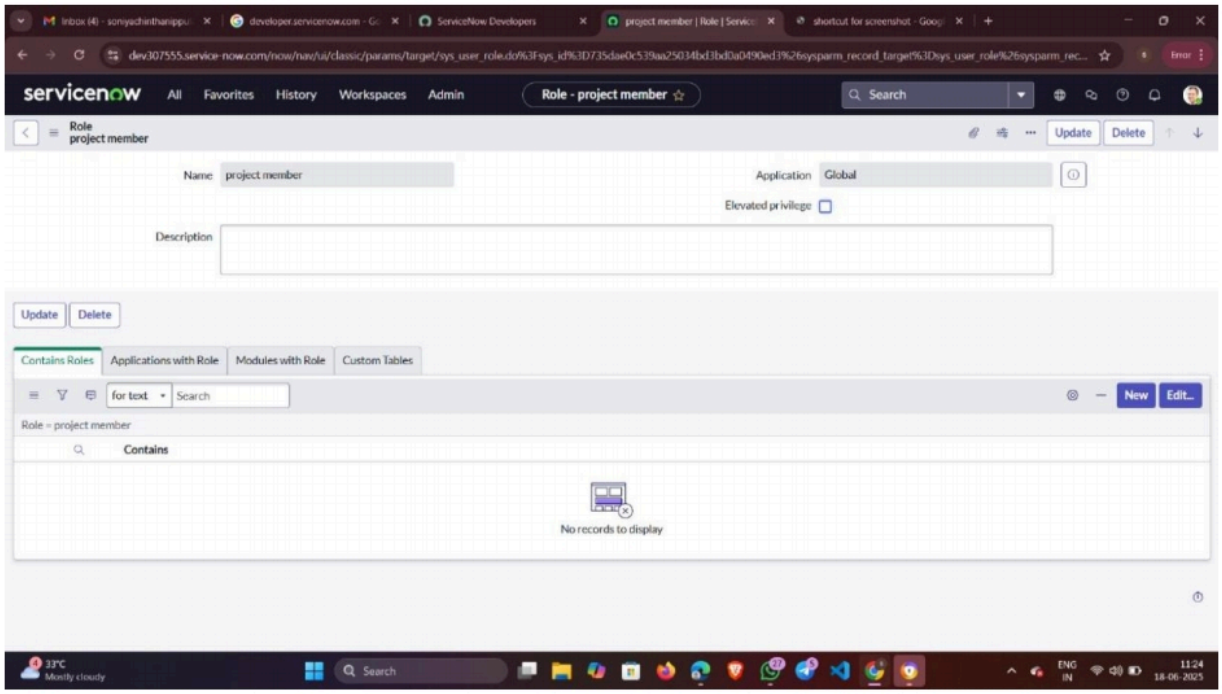
**PURPOSE** : The purpose of creating roles in the Optimizing User, Group, and Role Management with Access Control and Workflows is to define and manage specific sets of Permissions that align with users' job functions and Responsibilities. Roles serve as a foundational component of Role-based access control (RBAC).

**USE** : Roles act as permission bundles that can be assigned To users or groups, ensuring they receive the exact level of

Access needed to perform their duties—nothing more,
Nothing less.

## ACTIVITY 1 : Create Roles

**STEPS**: 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




And create one more role with project member 2.

## MILESTONE 4 : TABLE

**PURPOSE**: The purpose of creating tables in the Optimizing User, Group, and Role Management with Access Control and Workflows project is to structure and store data in an Organized, scalable, and secure manner. Tables serve as the Foundation for managing various entities such as users,

Groups, roles, permissions, and workflow records.

**USE** : Tables serve as containers for different types of Records, such as user profiles, group definitions, role Assignments, and workflow tasks.

## ACTIVITY 1 : Create Table

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

6.Check the boxes Create module & Create mobile module

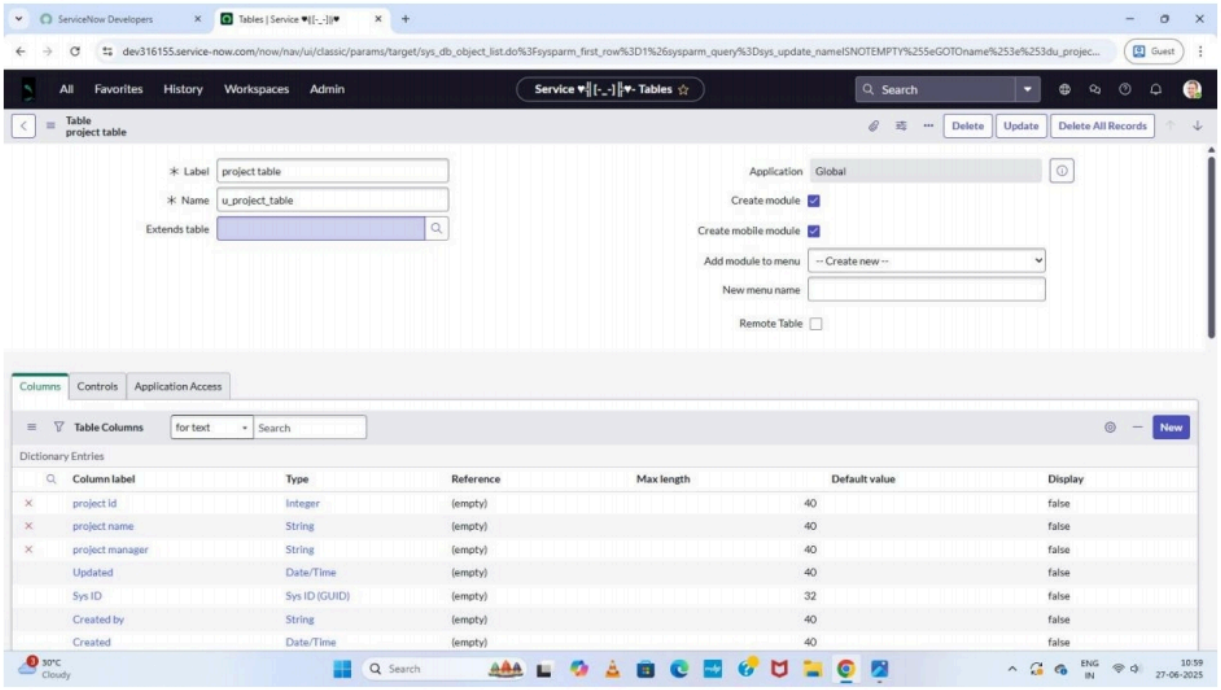
7.Under new menu name : project table

8.Under table columns give the columns

Create one more table:

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

10. Click on submit



## MILESTONE 5 : ASSIGN USERS TO GROUP

**PURPOSE** : The purpose of assigning users to groups in the Optimizing User, Group, and Role Management with Access participation. Assigning users to groups also enables more efficient workflow automation, as approvals and task assignments .

**USE** : The use of assigning users to groups in the Optimizing User, Group, and Role Management with Access Control and Workflows is to enable efficient and consistent management of access rights, roles, and workflow responsibilities.

### ACTIVITY 1: ASSIGN USERS TO PROJECT TEAM GROUP

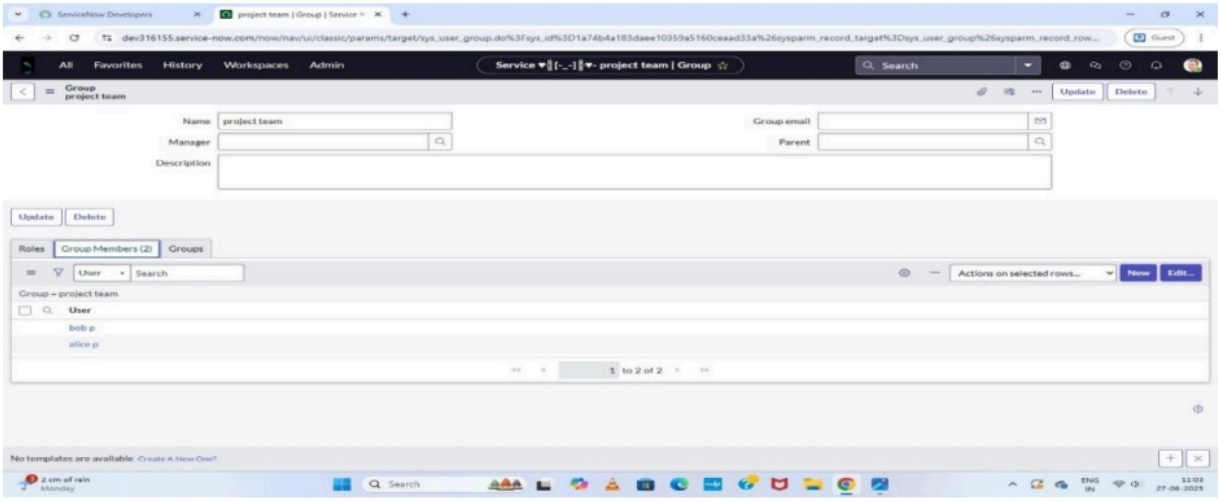
**STEPS** : Open service now. 1.Click on All >> search for groups

2.Select tables under system definition

3.Select the project team group

4.Under group members

5.Click on edit 6.Select alice p and bob p and save




## MILESTONE 6 : ASSIGN ROLES TO USERS

**PURPOSE :** The purpose of assigning roles to users in the Optimizing

User, Group, and Role Management with Access Control and

Workflows project is to ensure that each user has the appropriate

Level of access needed to perform their job responsibilities

Efficiently and securely.

**USE** : The use of assigning roles to users is to efficiently manage

User access by linking individuals to predefined sets of permissions

Based on their job functions

## ACTIVITY 1 : ASSIGN ROLES TO ALICE P

**STEPS** : Open service now Click on All >> search for user 1 .Select

Tables under system definition

2 .Select the project manager user

3 .Under project manager

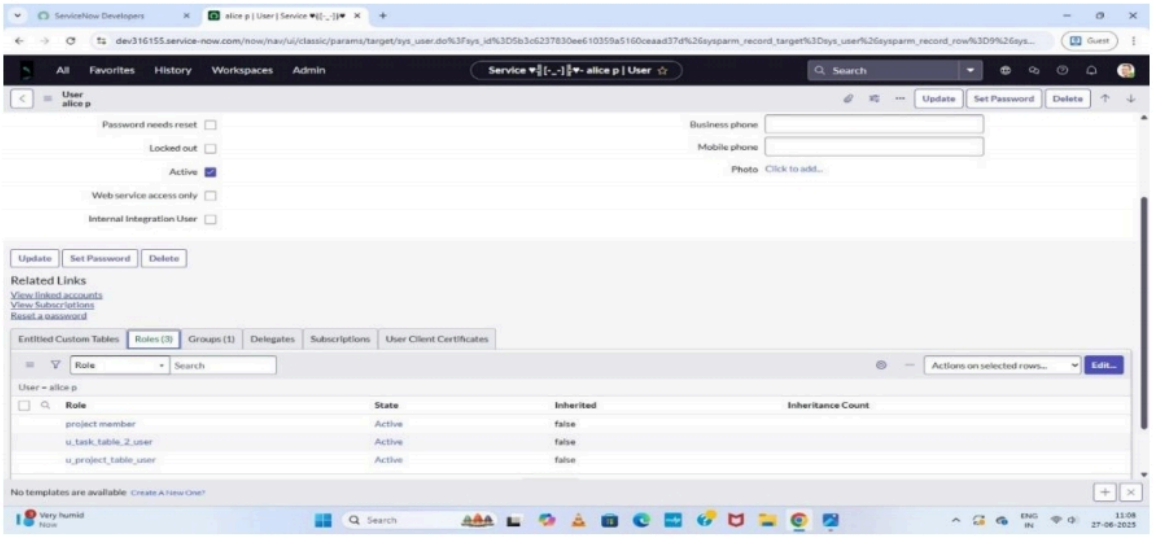
4 . Click on edit

5 . Select project membe  And save

6 . click on edit add u_project_table role and u_task_table

Role

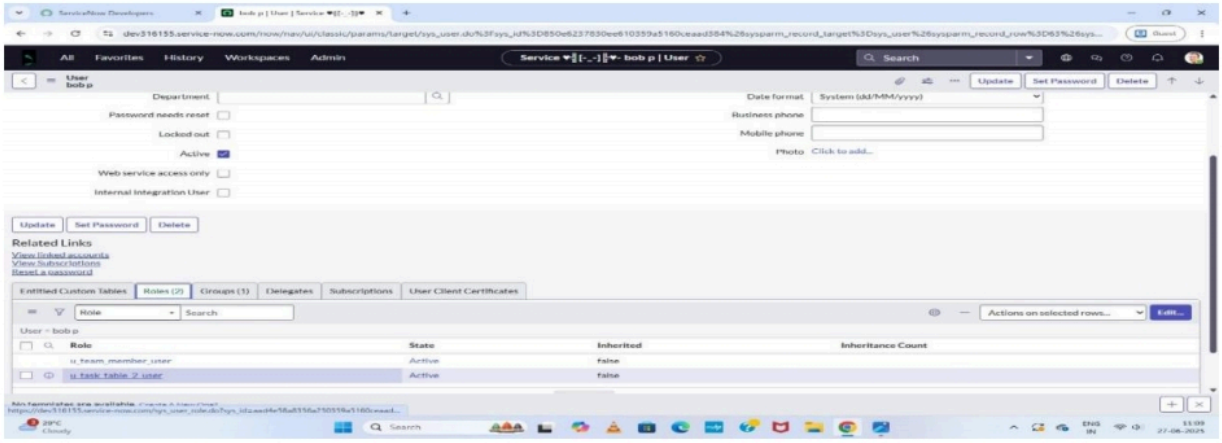
7 . click on save and update the form.




## ACTIVITY 2 : ASSIGN ROLES TO BOB USER

**STEPS** :Open servicenow.Click on All >> search for user

1 .Select tables under system definition
2 .Select the bob p user
3 .Under team member
4 .Click on edit
5 .Select team member and give table role and save
6 .Click on profile icon Impersonate user to bob
7 . We can see the task table2.




## MILESTONE 7 : APPLICATION ACCESS

**PURPOSE** : The purpose of creating application access in the Optimizing User, Group, and Role Management with Access Control and Workflows is to ensure that users can securely and efficiently interact with the specific applications they need to perform their functions.

**USE** : By managing application access through roles and groups, organizations can ensure that only authorized users can view or Modify application data and perform critical actions.

## ACTIVITY 1: ASSIGN TABLE ACCESS TO APPLICATION

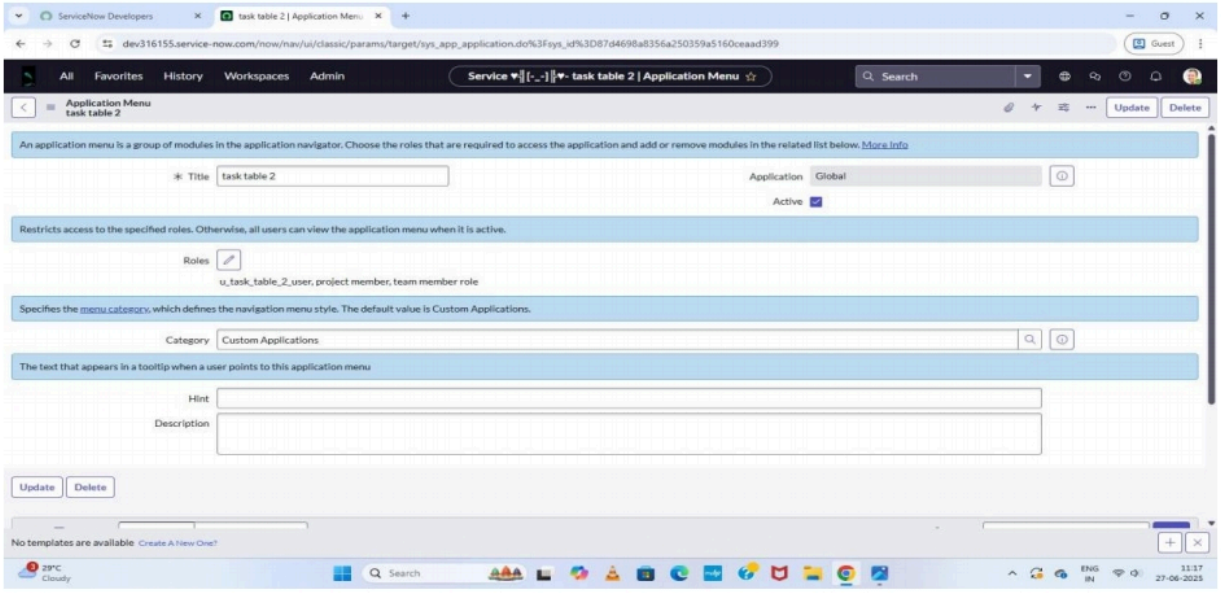
**STEPS:** 1 .while creating a table it automatically create a application and module for that table

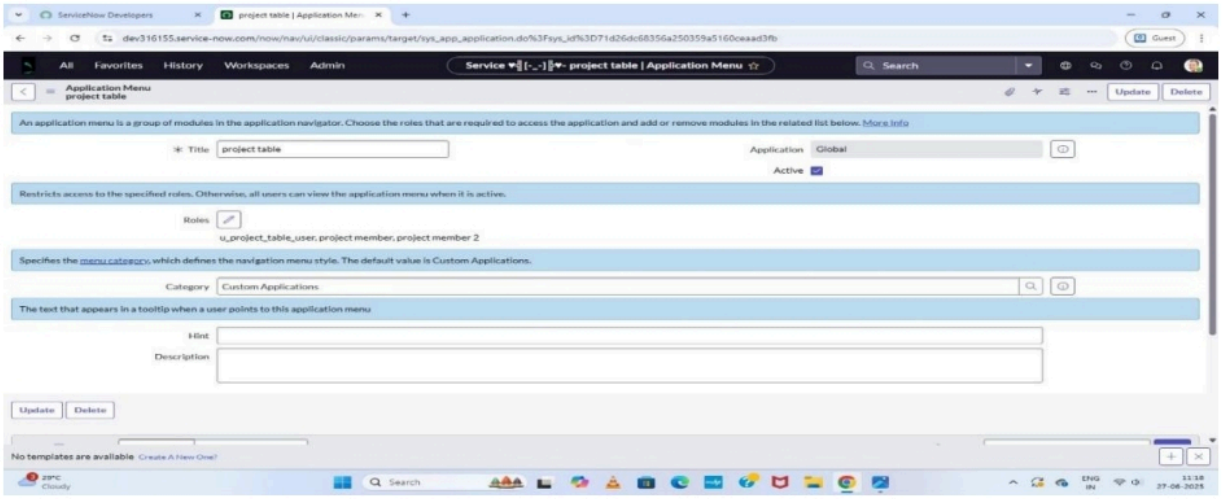
2 . Go to application navigator search for search project table Application

3 .Click on edit module Give project member roles to that Application

4 .Search for task table2 and click on edit application

5 .give the project member and team member role for task table 2 application




## MILESTONE 8 : ACCESS CONTROL LIST

**PURPOSE**: The purpose of creating an Access Control List (ACL) in The Optimizing User Group and Role Management with Access

Control and Workflows is to establish a structured and secure

Method for managing user permissions and resource accessibility. By defining specific rules that determine which users or user groups Have access to particular resources or actions within the system, The ACL ensures that sensitive data and functionalities are only Accessibility to authorized individuals.

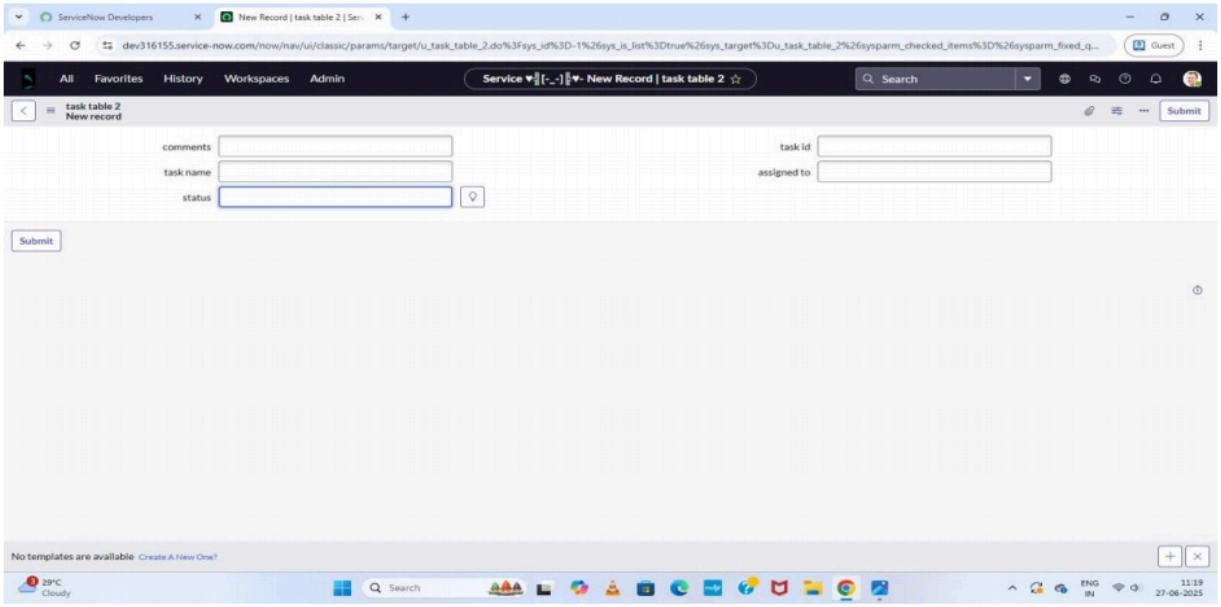
**USE** : the use of an Access Control List (ACL) plays a crucial role in Enforcing security policies and managing user permissions
Effectively. ACLs are used to specify and control which users
Groups can access certain system resources, perform specific
Actions, or interact with particular workflows.

## ACTIVITY 1: Create ACLs

**STEPS** : Open service now.

1 .Click on All >> search for ACL
2.Select Access Control(ACL) under system security Click on elevate role
3 .Click on new
4 .Fill the following details to create a new ACL
5 .Scroll down under requires role
6 .Double click on insert a new row
7 .Give task table and team member role
8 .Click on submit
9 .Similarly create 4 acl for the following fields( Assigned to, task id ,
task name, due date)
10 .Click on profile on top right side
11 .Click on impersonate user
12 .Select bob user

13 .Go to all and select task table2 in the application menu bar




Comment and status fields are have the edit access

## MILESTONE 9 : FLOW

**PURPOSE**: The purpose of creating a flow in the Optimizing User

Group and Role Management with Access Control and Workflows

Project is to automate and streamline the sequence of actions

Involved in managing user roles, permissions, and access rights. A

Well-defined flow ensures that tasks such as role assignments,

Permission approvals, user onboarding, and access revocation

Follow a consistent and logical process

**USE** : Flows are used to define the step-by-step progression of

Actions, such as user role assignment, approval of access requests,

Periodic access reviews, and role revocation processes.

## ACTIVITY 1: CREATE A FLOW TO ASSIGN OPERATIONS TICKET TO GROUP

**STEPS**: Open service now. 1 .Click on All >> search for Flow

Designer 2 .Click on Flow Designer under Process Automation. 3

.After opening Flow Designer Click on new and select Flow. 4 .Under

Flow properties Give Flow Name as " task table". 5 .Application

should be Global. 6 .Click build flow.

7 .Click on Add a trigger

8 .Select the trigger in that Search for "create record" and select

that.

9 .Give the table name as " task table ".

10 .Give the Condition as Field : status Operator :is Value : in

progress

Field : comments Operator :is Value : feedback

Field : assigned to Operator :is Value : bob

11 .After that click on Done. 12 . Click on Add an action.

13 .Select action in that ,search for " update records".

14 . In Record field drag the fields from the data navigation from Right

Side(Data pill)

15 .Table will be auto assigned after that

16 .Add fields as "status" and value as "completed"

17 .Click on Done.

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

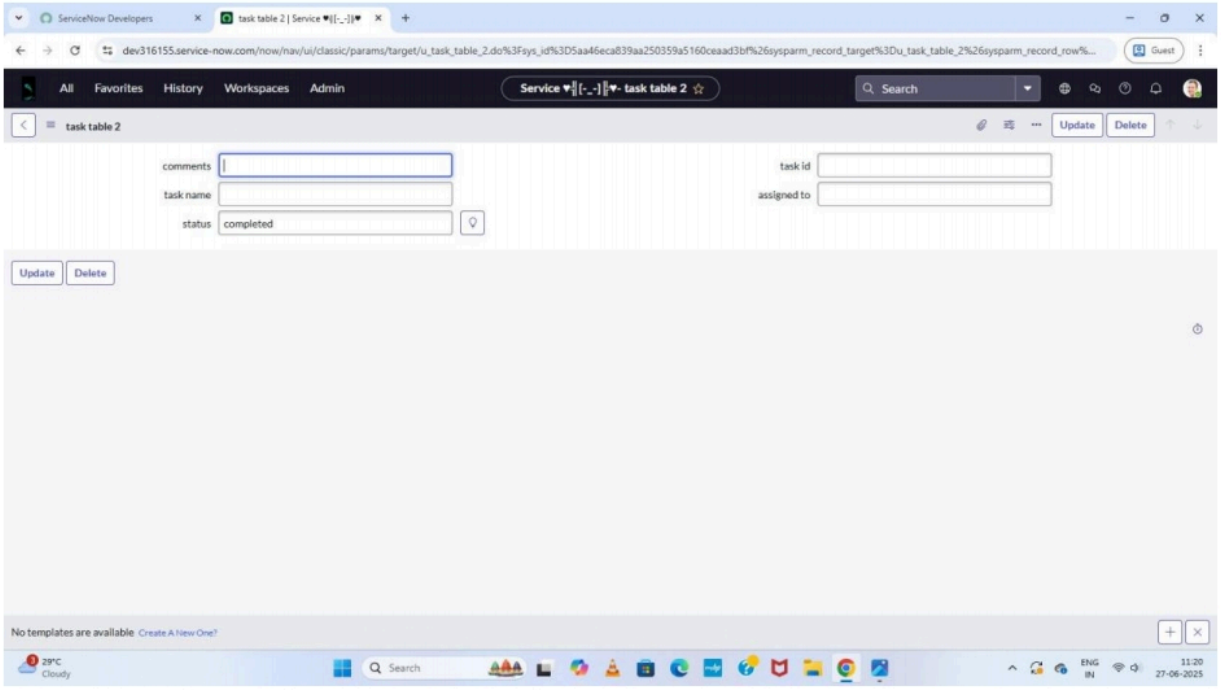
Give the approve field as " status"

Give approver as alice p

Click on Done.

Go to application navigator search for task table.

It status field is updated to completed




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