

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

Team ID: NM2025TMID18272

Team Members:

Team Leader: MONIKA R

Team Member: VENKATESHWARAN K

Team Member: VICKEY R

Team Member: SRIHARI M

Table of contents

S.No	Title	Page No
1	About the Project	1
2	Creating Users	2
3	Creating Groups	4
4	Creating Roles	6
5	Creating Tables	8
6	Assign Users to Groups	9
7	Assign Roles to Users	11
8	Assign table access to the Application	12
9	Create ACL	1
10	Creating Flow Designer	16
11	Conclusion	17

Problem Statement:

In a small project management team consisting of a Project Manager (Alice) and a Team Member (Bob), there is a need to efficiently manage project tasks and ensure accountability throughout the project lifecycle. The current system lacks clear role definitions, access controls, and a structured workflow, leading to confusion regarding task assignments and progress tracking.

Objective:

The project aims to design and implement a streamlined framework for managing users, groups, and roles in an enterprise system, with robust access control policies and automated workflows. This ensures secure, efficient, and role-based access to resources, thereby improving system governance, reducing administrative overhead, and enhancing compliance with organizational and regulatory requirements.

Skills:

- **Technical Skills:** User, group, and role management, access control (RBAC), workflow automation, IAM tools (ServiceNow/Active Directory), scripting for automation, audit & compliance management.
- **Soft Skills:** Problem-solving, analytical thinking, project management, teamwork, documentation, and attention to detail

TASK INITIATION

Milestone 1 : Users

Activity 1: 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 shows the ServiceNow user creation interface. The form is for a user named 'alice p'. The fields are as follows:

- User ID: alice
- First name: alice
- Last name: p
- Title: (empty)
- Department: (empty)
- Email: alice@gmail.com
- Language: --None--
- Calendar integration: Outlook
- Time zone: System (America/Los_Angeles)
- Date format: System (yyyy-MM-dd)
- Business phone: (empty)
- Mobile phone: (empty)
- Photo: Click to add...
- Password needs reset: ☐
- Locked out: ☐
- Active: ☒
- Web service access only: ☐
- Internal Integration User: ☐

Buttons: Update, Set Password, Delete.

Related Links: View linked accounts, View Subscriptions, Reset a password.

Entitled Custom Tables: Roles (4), Groups (1), Delegates, Subscriptions, User Client Certificates.

Table: Search

User = alice p

Table	Application	Role
-------	-------------	------

Create one more user:

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

naan mudhalvan login

- Student

Bob p | User | ServiceNow

chatgpt - Search

Project statement opti

developer.servicenow

ServiceNow Developer

https://dev226259.service-now.com/now/nav/ui/classic/params/target/sys_user.do%3Fsys_id%3D714dd87783232103d90fb6feaad3e3%26sysparm_record_targ...

servicenow

All Favorites History Workspaces Admin

User - Bob p

Search

User Bob p

Update Set Password Delete

User ID

bob

First name

Bob

Last name

p

Title

Department

Password needs reset

☐

Locked out

☐

Active

☒

Web service access only

☐

Internal Integration User

☐

Email

bob@gmail.com

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...

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

Table

Search

User = Bob p

Table

Application

Role

3

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 **Project Title**

The screenshot shows the ServiceNow 'Group - project team' form. The form has the following fields:

- Name: project team
- Group email: [empty]
- Manager: [empty]
- Parent: [empty]
- Description: [empty]

Below the form are 'Update' and 'Delete' buttons. A tabbed interface shows 'Roles', 'Group Members (2)', and 'Groups'. The 'Roles' tab is active, displaying a table with columns: Created, Role, Granted by, and Inherits. The table is currently empty, showing 'No records to display'.

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

The screenshot shows the ServiceNow interface for creating a new role. The form is titled 'Role - project member'. It has fields for 'Name' (filled with 'project member'), 'Application' (set to 'Global'), and 'Description'. There are 'Update' and 'Delete' buttons. Below the form, there is a 'Related Links' section with a link 'Run Point Scan'. At the bottom, there is a table with tabs for 'Contains Roles', 'Applications with Role (1)', 'Modules with Role', and 'Custom Tables'. The 'Contains Roles' tab is active, showing a search bar and a table with the header 'Role = project member' and a sub-header 'Contains'. The table is currently empty, displaying 'No records to display'.

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

The screenshot shows the ServiceNow interface for creating a new table named 'project table'. The 'Columns' tab is active, displaying a list of columns to be added to the table. The columns are as follows:

Column label	Type	Reference	Max length	Default value	Display
description	String	(empty)	40		false
Updates	Integer	(empty)	40		false
project name	String	(empty)	40		false
Updated by	String	(empty)	40		false
project id	Integer	(empty)	40		false
Updated	Date/Time	(empty)	40		false
end date	Date	(empty)	40		false
status	Choice	(empty)	40		false
Created by	String	(empty)	40		false
Sys ID	Sys ID (GUID)	(empty)	32		false
Created	Date/Time	(empty)	40		false
project manager	String	(empty)	40		false
start date	Date	(empty)	40		false

Create one more table:

9. Create another table as: task table 2 and fill with following details.
10. Click on submit.

naan mudhalvan login x - Student x task table 2 | Table | S x chatgpt - Search x Project statement opt x developer.servicenow x ServiceNow Developer x

https://dev226259.servicenow.com/now/nav/ui/classic/params/target/sys_db_object.do%3Fsys_id%3D1ff935cc837b62103d90f6b6feaad370%26sysparm_record_t...

servicenow All Favorites History Workspaces Admin Table - task table 2 Search

Table task table 2 Delete Update Delete All Records

A table is a collection of records in the database. Each record corresponds to a row in a table, and each field on a record corresponds to a column on that table. Applications use tables and records to manage data and processes. [More Info](#)

* Label task table 2 Application Global

* Name u_task_table_2

Columns Controls Application Access

Table Columns for text Search 1 to 13 of 13 New

Dictionary Entries

Column label	Type	Reference	Max length	Default value	Display
due date	Date	(empty)	40	(empty)	false
Created by	String	(empty)	40	(empty)	false
Sys ID	Sys ID (GUID)	(empty)	32	(empty)	false
Created	Date/Time	(empty)	40	(empty)	false
comments	String	(empty)	40	(empty)	false
u_approver	Reference	User [sys_user]	32	(empty)	false
status	Choice	(empty)	40	(empty)	false
Updated by	String	(empty)	40	(empty)	false
Updates	Integer	(empty)	40	(empty)	false
Updated	Date/Time	(empty)	40	(empty)	false
assigned to	String	(empty)	40	(empty)	false
task name	String	(empty)	40	(empty)	false
task id	Integer	(empty)	40	(empty)	false

Insert a new row...

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

The screenshot shows the ServiceNow web interface for configuring a group named 'project team'. The page includes fields for Name, Manager, Group email, Parent, and Description. Below these fields are 'Update' and 'Delete' buttons. The 'Group Members' tab is active, displaying a table with two users: 'alice p' and 'Bob p'. The table has a search bar and a 'User' column. The 'Group' is set to 'project team'. The table shows 1 to 2 of 2 rows.

Group	User
project team	alice p
project team	Bob p

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 'alice p'. The page includes fields for User ID, First name, Last name, Title, Department, Email, Language, Calendar integration, Time zone, Date format, Business phone, and Mobile phone. There are also checkboxes for 'Password needs reset', 'Locked out', 'Active', 'Web service access only', and 'Internal Integration User'. Below these fields are buttons for 'Update', 'Set Password', and 'Delete'. A section titled 'Related Links' contains links for 'View linked accounts', 'View Subscriptions', and 'Reset a password'. At the bottom, there is a table titled 'Entitled Custom Tables' with columns for 'Role', 'State', 'Inherited', and 'Inheritance Count'. The table lists three roles: 'u_task_table_2_user', 'u_project_table_user', and 'project member', all with a state of 'Active' and 'Inherited' set to 'false'.

Role	State	Inherited	Inheritance Count
u_task_table_2_user	Active	false	
u_project_table_user	Active	false	
project member	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.

naan mudhalvan login x - Student x Bob p | User | ServiceNow x chatgpt - Search x Project statement opti x developer.servicenow x ServiceNow Developer x

https://dev226259.service-now.com/now/nav/ui/classic/params/target/sys_user.do%3Fsys_id%3D714dd877832322103d90f6b6feaad3e3%26sysparm_record_targ...

servicenow All Favorites History Workspaces Admin User - Bob p Search Update Set Password Delete

User ID Bob

First name Bob

Last name p

Title

Department

Password needs reset

Locked out

Active

Web service access only

Internal Integration User

Email bob@gmail.com

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...

Update Set Password Delete

Related Links

[View limited accounts](#)

[View Subscriptions](#)

[Reset a password](#)

Entitled Custom Tables Roles (2) Groups (1) Delegates Subscriptions User Client Certificates

Role Search Actions on selected rows... Edit...

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

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

The screenshot shows the 'Application Menu - project table' configuration page in ServiceNow. The page includes a form with the following fields:

- * Title: project table
- Application: Global
- Active: ☒
- Roles: project member
- Category: Custom Applications
- Hint: (empty)
- Description: (empty)

At the bottom, there is a table listing the application menu items:

Application menu	Title	Table	Active	Filter	Order	Link type	Device type	Roles	Updated
project tables	project table [u_project_table]		true			List of Records		u_project_table_user	2025-08-31 08:30:29

5. Search for task table2 and click on edit application.
6. Give the project member and team member role for task table 2 application

The screenshot shows the 'Module - task table 2s' configuration page in ServiceNow. The page includes a form with the following fields:

- Title: task table 2s
- Application menu: task table 2
- Order: (empty)
- Hint: (empty)
- Display name: task table 2s

Below the form, there is a section for 'Roles' with the following roles assigned:

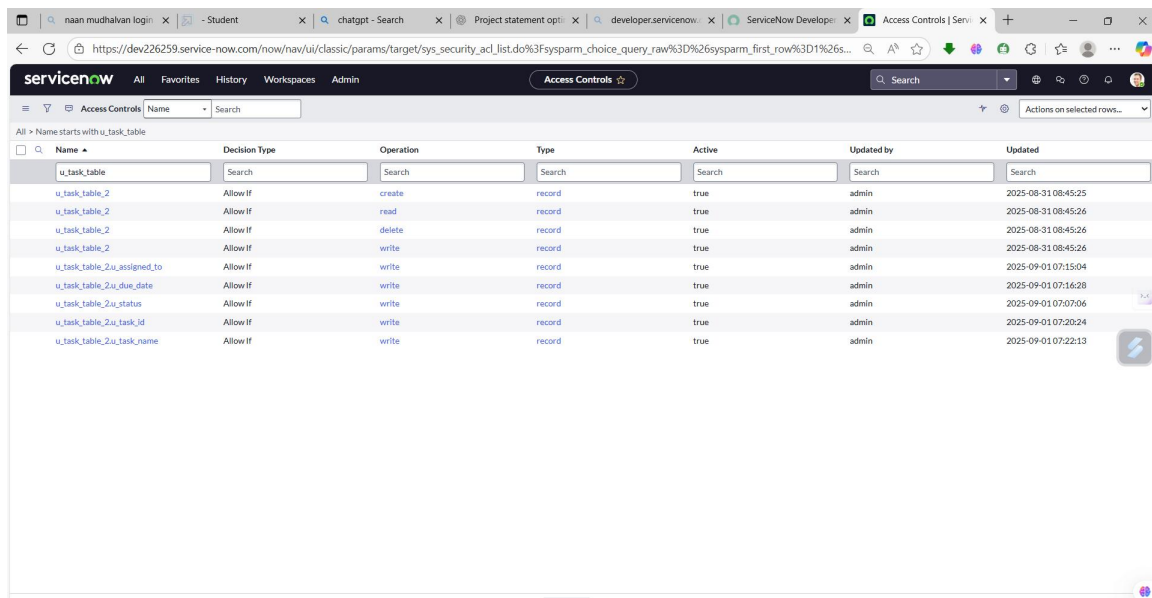
- u_task_table_2_user, Team member, project member

At the bottom, there is a table listing the application menu items:

Name	Active	Application menu	Filter	Order	Path	Path Relative To Root	Roles	Domain	Table
task table 2s	true	task table 2				false	u_task_table_2_user	global	task table 2 [u_task_table_2]

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
6. Fill the following details to create a new ACL
7. Scroll down under requires role
8. Double 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



The screenshot shows the ServiceNow Access Controls interface. The table displays the following data:

Name	Decision Type	Operation	Type	Active	Updated by	Updated
u_task_table	Search		Search			
u_task_table_2	Allow If	create	record	true	admin	2025-08-31 08:45:25
u_task_table_2	Allow If	read	record	true	admin	2025-08-31 08:45:26
u_task_table_2	Allow If	delete	record	true	admin	2025-08-31 08:45:26
u_task_table_2	Allow If	write	record	true	admin	2025-08-31 08:45:26
u_task_table_2u_assigned_to	Allow If	write	record	true	admin	2025-09-01 07:15:04
u_task_table_2u_due_date	Allow If	write	record	true	admin	2025-09-01 07:16:28
u_task_table_2u_status	Allow If	write	record	true	admin	2025-09-01 07:07:06
u_task_table_2u_task_id	Allow If	write	record	true	admin	2025-09-01 07:20:24
u_task_table_2u_task_name	Allow If	write	record	true	admin	2025-09-01 07:22:13

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

naan mudhalvan login x - Student x chatgpt - Search x Project statement opti x developer.servicenow x ServiceNow Developer x Create Created | task t x

https://dev226259.service-now.com/now/nav/ui/classic/params/target/u_task_table_2.do%3Fsys_id%3D-1%26sys_js_list%3Dtrue%26sys_target%3Du_task_table_2%...

servicenow All Favorites History Process Mining Workspace task table 2 - Create Created

task table 2 New record

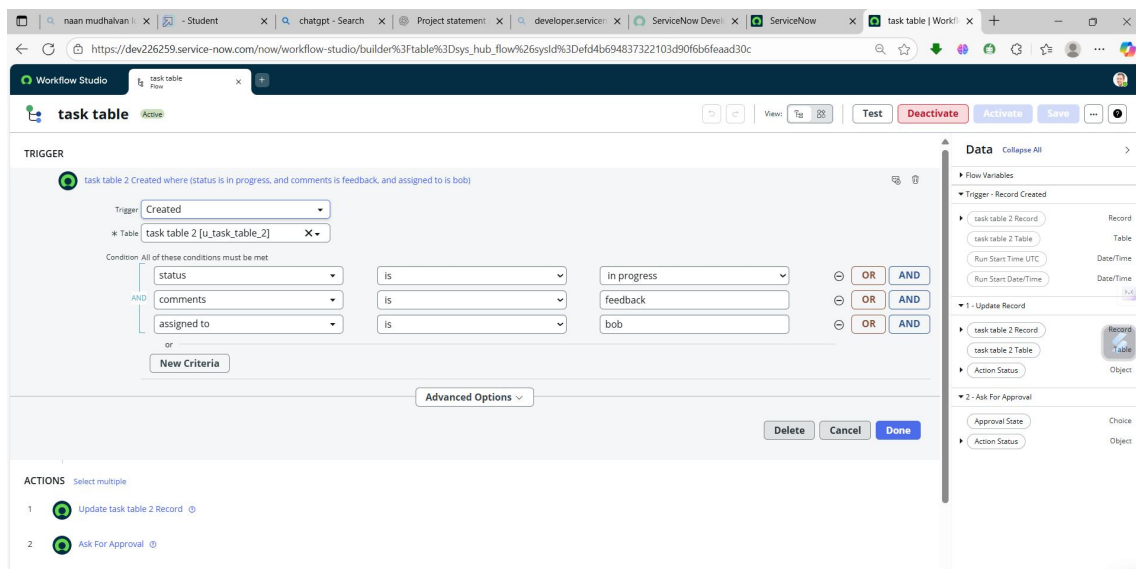
task id due date comments u_approver status -- None -- assigned to task name

Submit

Milestone 9: Flow

Activity 1: Create a Flow to Assign operations ticket to group

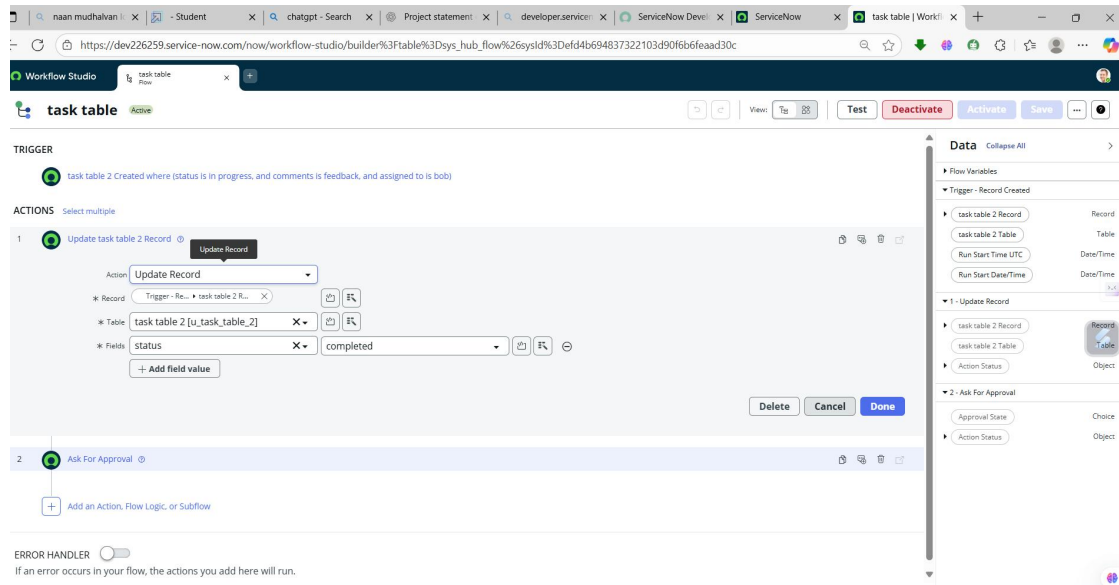
1. Open service now.
2. Click on All >> search for Flow Designer
3. Click on Flow Designer under Process Automation.
4. After opening Flow Designer Click on new and select Flow.
5. Under Flow properties Give Flow Name as “ task table”.
6. Application should be Global.
7. Click build flow. **next step:**
 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. **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. **Next step:**



1. Now under Actions.

2. Click on Add an action.

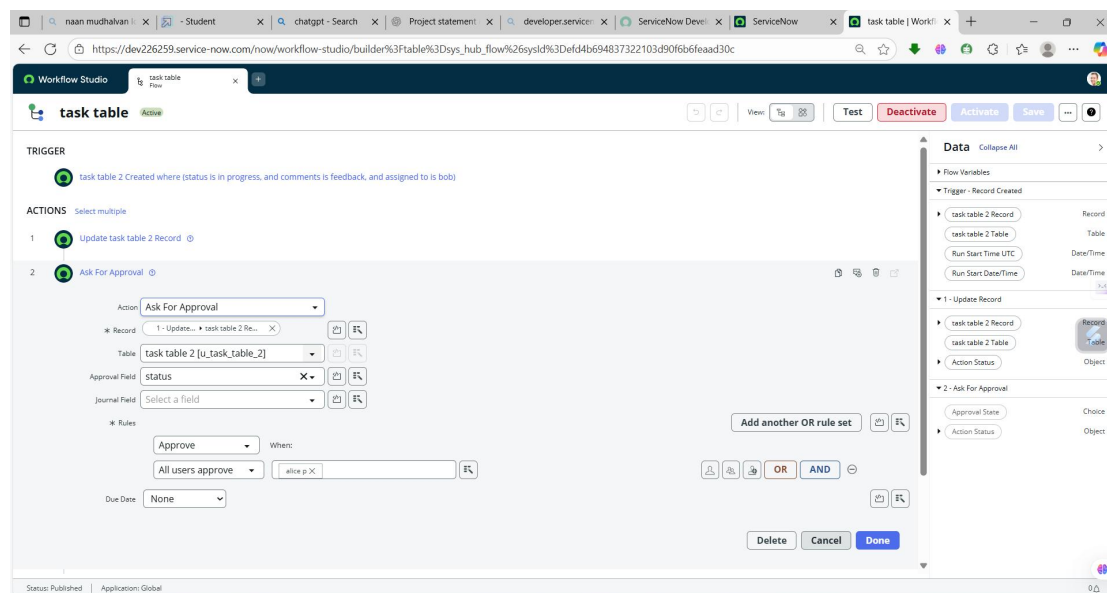
3. Select action in that ,search for “ ask for approval ”.

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.



9. Go to application navigator search for task table.

10.It status field is updated to completed

The screenshot shows the ServiceNow 'task table 2 - Create Created' form. The status field is set to 'completed'. Other fields include task id, due date, comments, u_approver, assigned to (bob), and task name. A 'Submit' button is visible at the bottom left.

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 view. The table has the following columns: State, Approver, Comments, Approval for, and Created. The data row shows a single approval request.

State	Approver	Comments	Approval for	Created
Approved	alice p		(empty)	2025-09-03 07:27:35

Conclusion :

This project on **optimizing user, group, and role management with access control and workflows** has shown the importance of establishing a structured approach to identity and access management within organizations. By implementing role-based access control (RBAC), the system ensures that users receive the right access at the right time, reducing the risks of unauthorized activities and maintaining the principle of least privilege.

The introduction of **workflow automation** further enhanced efficiency by streamlining processes such as onboarding, approvals, and de-provisioning. This not only reduced manual effort but also improved accuracy and accountability, while audit trails and compliance features provided greater transparency for governance. Together, these elements strengthened security while improving overall productivity.

In conclusion, the project demonstrates that effective user and role management is not just a technical necessity but a strategic requirement for modern organizations. By combining access control with automated workflows, organizations can achieve scalability, compliance, and operational efficiency, creating a secure and sustainable framework for managing digital identities.