

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

Team Id: NM2025TMID05092

Team size:4

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Problem Context:

In a small project environment, a Project Manager (Alice) and a Team Member (Bob) are responsible for delivering tasks. However, the absence of well-defined roles, access restrictions, and structured workflows often creates confusion in responsibilities, accountability, and progress monitoring.

Objectives:

- 1. Role Definition:** Clearly outline the duties of Alice as Project Manager and Bob as Team Member, ensuring both responsibility and access boundaries are transparent.
- 2. Access Control:** Introduce mechanisms that limit Bob's ability to create or edit projects beyond his assigned tasks, while still allowing him to view and update his responsibilities.
- 3. Workflow Organization:** Establish a structured process that enables Alice to assign work, track task progress, and oversee completion in a timely and efficient manner.

Key Skills/Tools: Users, Groups, Roles, Tables, Access Control Lists (ACL), Workflow/Flow Designer.

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 browser tabs include 'naam mudhalvan login - Search', '- Student', 'developer.servicenow.com - Search', 'ServiceNow Developers', and 'Alice p | User | ServiceNow'. The URL is 'https://dev190286.servicenow.com/now/hav/ui/classic/params/target/sys_user.do%3Fsys_id%3D3d36da5585c3332210f3b8533ed40131de%26sysparm_record_target%3Dsys_user%26sysp...'. The page title is 'User - Alice p'. The form contains the following fields and options:

- User ID:
- First name:
- Last name:
- Title:
- Department:
- Email:
- Language:
- Calendar integration:
- Time zone:
- Date format:
- Business phone:
- Mobile phone:
- 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, Groups, Delegates, Subscriptions, User Client Certificates.

Table: Search

Create one more user:

7. Create another user with the following details

8. Click on submit

The screenshot shows the ServiceNow user management interface for a user named 'Bob p'. The form is divided into two main sections: personal information and system settings. The personal information section includes fields for User ID (bob), First name (Bob), Last name (p), Title, and Department. The system settings section includes fields for Email (bob@gmail.com), Language, Calendar integration (Outlook), Time zone (System (America/Los Angeles)), Date format (System (yyyy-MM-dd)), Business phone, and Mobile phone. There are also checkboxes for 'Password needs reset', 'Locked out', 'Active' (checked), 'Web service access only', and 'Internal Integration User'. At the bottom, there are buttons for 'Update', 'Set Password', and 'Delete'. Below the form, there are 'Related Links' for 'view linked accounts', 'view Subscriptions', and 'reset a password'. At the very bottom, there is a navigation bar with tabs for 'Entitled Custom Tables', 'Roles', 'Groups', 'Delegates', 'Subscriptions', and 'User Client Certificates'.

User ID: bob

First name: Bob

Last name: p

Title:

Department:

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 Groups Delegates Subscriptions User Client Certificates

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.

ServiceNow Group - New Record

Name: project team

Manager: [Search]

Group email: [Email]

Parent: [Search]

Description: [Text Area]

Submit

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.

ServiceNow Role - project member

Name: project member

Application: Global

Elevated privilege: []

Description: [Text Area]

Update Delete

Contains Roles Applications with Role Modules with Role Custom Tables

for text Search

Role = project member

Contains

No records to display

Create one more role:

7. Create another role with the following details

8. Click on submit

The screenshot shows the ServiceNow 'Role - New Record' form. The form is titled 'Role - New Record' and has a 'Submit' button in the top right corner. The 'Name' field is labeled with a red asterisk and contains the text 'team member'. The 'Application' dropdown menu is set to 'Global'. The 'Elevated privilege' checkbox is unchecked. The 'Description' field is empty. A 'Submit' button is located at the bottom left of the form area.

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

servicenow All Favorites History Workspaces Admin Table - New Record Search Submit Cancel

Name Create module ☒

Extends table Create mobile module ☒

Add module to menu -- Create new -- New menu name

Remote Table ☐

Columns Controls Application Access

Table Columns for text Search

Dictionary Entries

	Column label	Type	Reference	Max length	Default value	Display
X	project id					false
X	project name					false
X	project manager					false
+	<input type="text" value="st"/>					

8. Click on submit

ServiceNow Developers x New Record | Table | ServiceNow x +

servicenow All Favorites History Workspaces Admin Table - New Record Search Submit Cancel

Name Create module ☒

Extends table Create mobile module ☒

Add module to menu -- Create new -- New menu name

Remote Table ☐

Columns Controls Application Access

Table Columns Column label Search

Dictionary Entries

	Column label	Type	Reference	Max length	Default value	Display
X	Updated by	String	(empty)	40	40	false
X	Updates	Integer	(empty)	40	40	false
X	Updated	Date/Time	(empty)	40	40	false
X	Sys ID		(empty)	32	40	false
X			(empty)	40	40	false
X			(empty)	40	40	false
+	Insert a new row...					

Create one more table:

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

10. Click on submit.

Table - New Record

Table Columns: Column label Search

Dictionary Entries

	Column label	Type	Reference	Max length	Default value	Display
X	Updated by	String	(empty)		40	false
X	Updates	Integer	(empty)		40	false
X	Updated	Date/Time	(empty)		40	false
X	Sys ID	Integer	(empty)		32	false
X	Created by	String	(empty)		40	false
X	Created	Date/Time	(empty)		40	false
X	task id	Integer				false
X	task name	String				false
X	assigned to	String				false
X	due date	Date				false
X	status	Choice				false
X	comments	String				false
+	Insert a new row...					

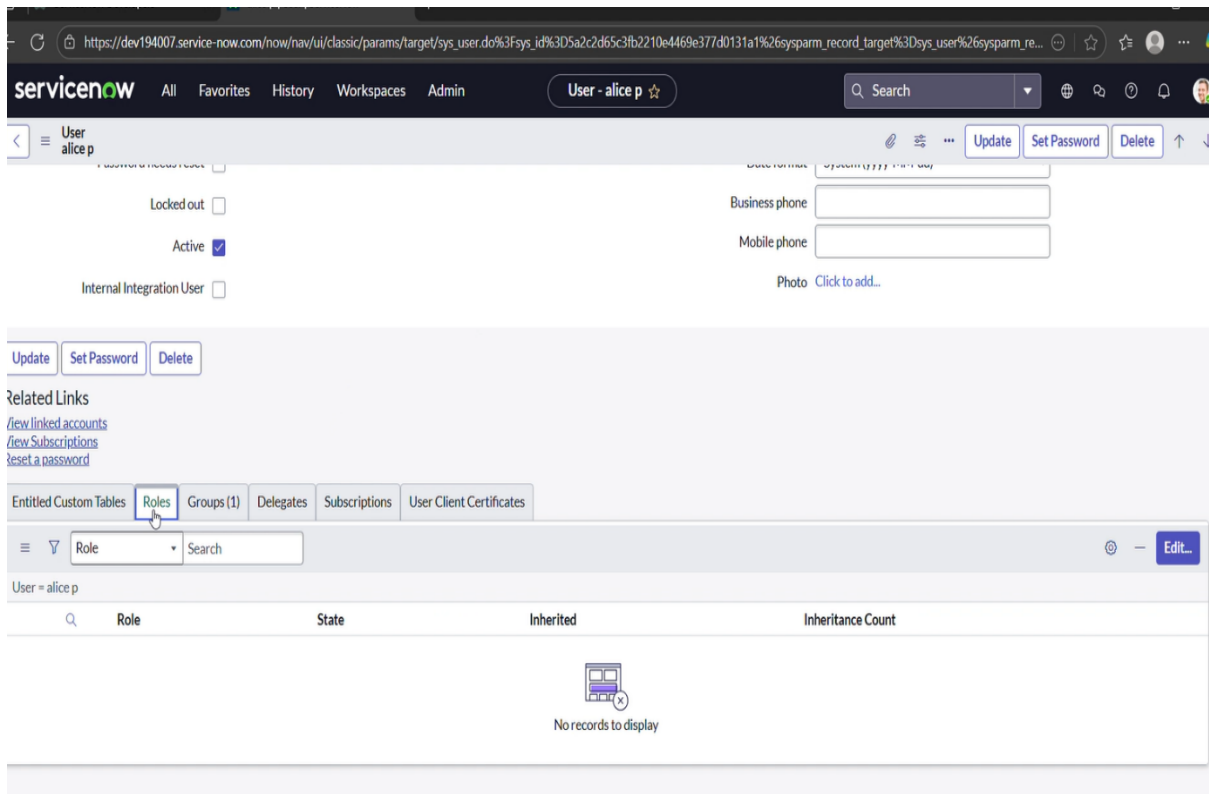
Submit Cancel

Related Links

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



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.

servicenow All Favorites History Workspaces Admin User - alice p Search

User alice p Update Set Password Delete

☐ Password needs reset
☐ Locked out
☒ Active
☐ Internal Integration User

Date format System (yyyy-MM-dd)
 Business phone
 Mobile phone
 Photo Click to add...

Update Set Password Delete

[View linked 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...

User = alice p

Role	State	Inherited	Inheritance Count
u_project_table_user	Active	false	
u_task_table_2_user	Active	false	

1 to 2 of 2

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.

The screenshot shows the ServiceNow user profile page for a user named 'bob p'. The page is divided into two main sections: user details and system settings. The user details section includes fields for User ID (bob), First name (bob), Last name (p), Title, Department, Password needs reset, Locked out, Active (checked), and Internal Integration User. The system settings section includes fields for Email (bob@gmail.com), Identity type (Human), Language (None), Calendar integration (Outlook), Time zone (System (America/Los Angeles)), Date format (System (yyyy-MM-dd)), Business phone, Mobile phone, and Photo (Click to add...). Below the user details section, there are buttons for 'Update', 'Set Password', and 'Delete'. At the bottom, there are tabs for 'Entitled Custom Tables', 'Roles', 'Groups (1)', 'Delegates', 'Subscriptions', and 'User Client Certificates'. The 'Groups (1)' tab is currently selected, showing a table with one group named 'Group'.

Milestone 7: Application access

Activity 1: Assign table access to application

1. while creating a table it automatically create 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

The screenshot shows the ServiceNow Application Menu page for 'project table'. The page is divided into two main sections: application details and application menu. The application details section includes a description: 'Restricts access to the specified roles. Otherwise, all users can view the application menu when it is active.' Below this, there is a field for 'Roles' with a value of 'u_project_table_user'. The application menu section includes a description: 'Specifies the menu category, which defines the navigation menu style. The default value is Custom Applications.' Below this, there is a field for 'Category' with a value of 'Custom Applications'. The application menu section also includes a field for 'Hint' and a field for 'Description'. At the bottom, there are buttons for 'Update' and 'Delete'. Below the application details section, there are tabs for 'Modules', 'Order', and 'Search'. The 'Modules' tab is currently selected, showing a table with columns: Title, Table, Active, Filter, Order, Link type, Device type, Roles, and Updated. The table contains one row with the title 'Application menu - project table'.

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

The screenshot shows the ServiceNow 'Access Control' 'New record' form. At the top, there's a warning banner: 'Warning: A role, security attribute, data condition, script or ACL control via reference fields is required to properly secure access with this ACL.' The form fields include: 'Type' (record), 'Operation' (write), 'Decision Type' (Allow If), 'Application' (Global), 'Active' (checked), 'Advanced' (unchecked), 'Admin overrides' (checked), 'Protection policy' (None), 'Name' (a dropdown with a red asterisk), and 'Description' (a text area). Below these fields are 'Applies To' buttons: 'Add Filter Condition' and 'Add OR Clause'. At the bottom, there's a 'Conditions' section with a dropdown arrow.

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
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 have the edit access

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

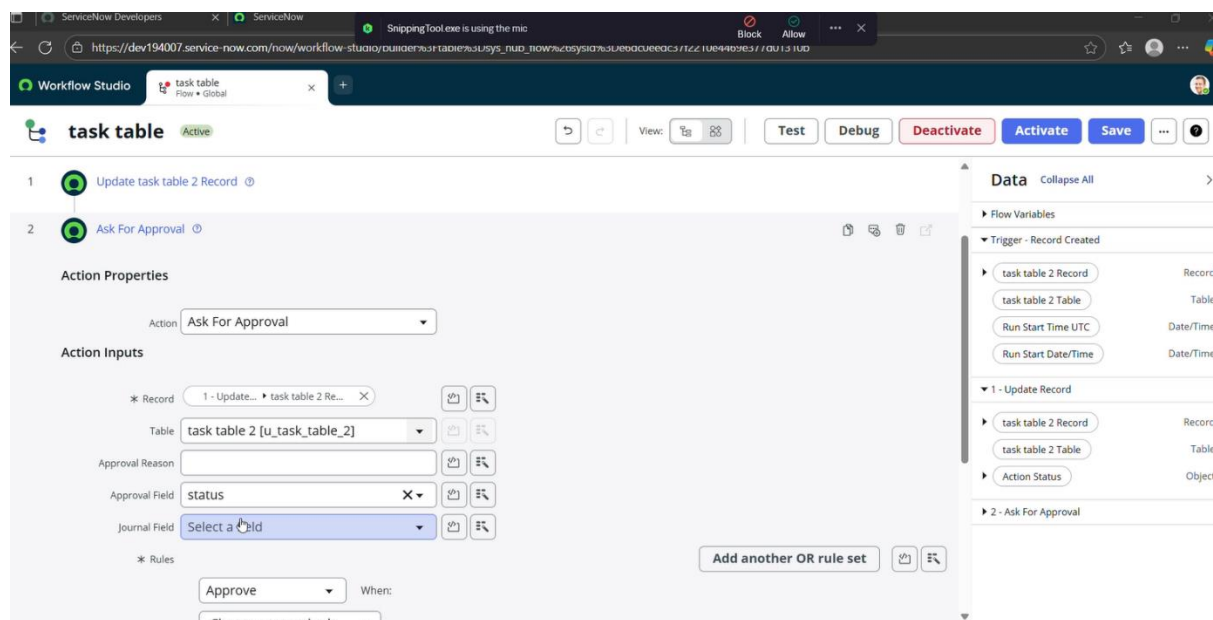
3. Click on Flow Designer under Process Automation.

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.

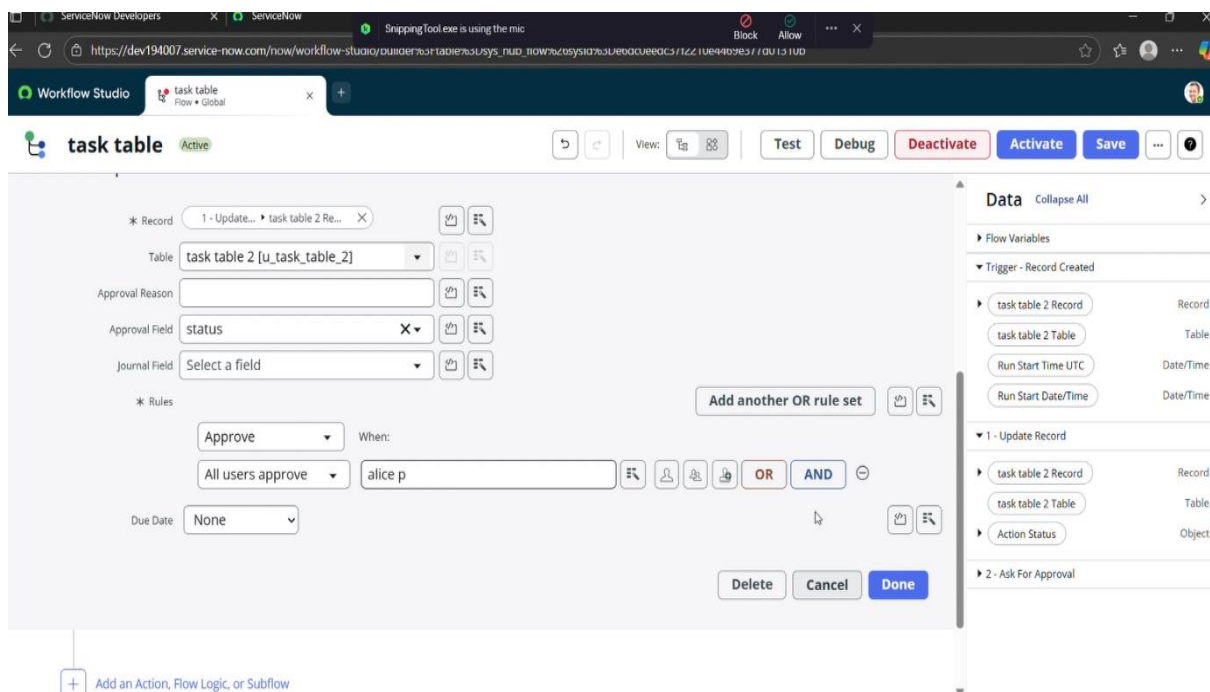
2. Select action in that, search for “update records”.

3. In Record field drag the fields from the data navigation from Right Side (Data pill)

4. Table will be auto assigned after that

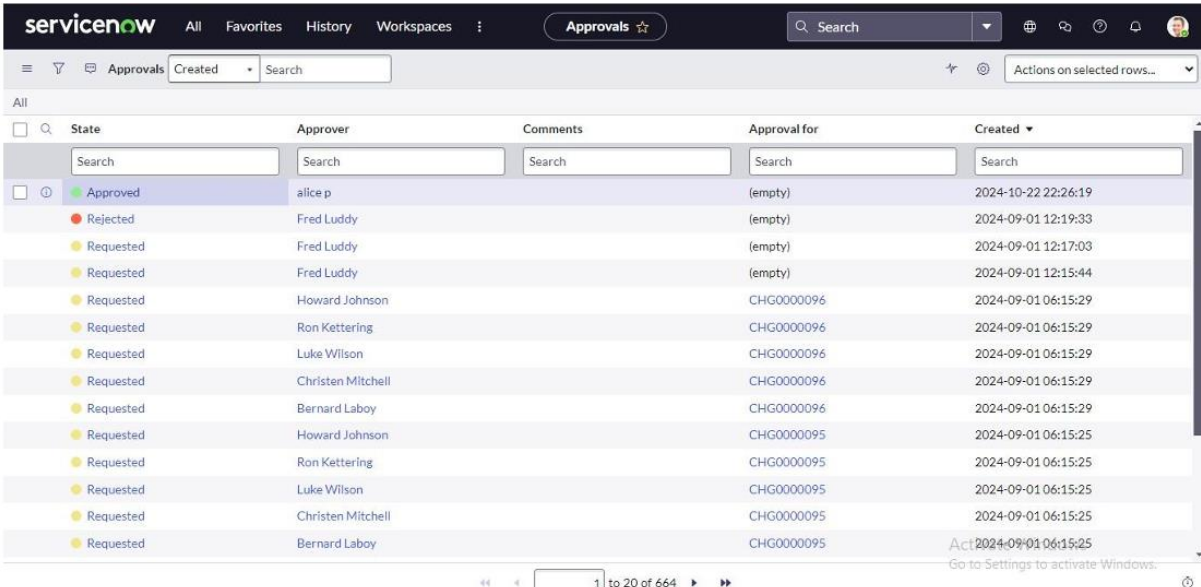
5. Add fields as “status” and value as “completed”

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. Its status field is updated to completed
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 displays the ServiceNow 'Approvals' page. The top navigation bar includes 'servicenow', 'All', 'Favorites', 'History', 'Workspaces', and an 'Approvals' button. A search bar is present on the right. Below the navigation bar, there's a filter section with 'Approvals' selected and a 'Created' dropdown. The main table lists approval requests with columns for 'State', 'Approver', 'Comments', 'Approval for', and 'Created'. The first row is highlighted in blue and shows an 'Approved' state with approver 'alice p' and a creation date of '2024-10-22 22:26:19'. Subsequent rows show 'Rejected' and 'Requested' states with various approvers and creation dates. The bottom of the page shows a pagination bar indicating '1 to 20 of 664' items.

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		CHG00000096	2024-09-01 06:15:29
Requested	Ron Kettering		CHG00000096	2024-09-01 06:15:29
Requested	Luke Wilson		CHG00000096	2024-09-01 06:15:29
Requested	Christen Mitchell		CHG00000096	2024-09-01 06:15:29
Requested	Bernard Laboy		CHG00000096	2024-09-01 06:15:29
Requested	Howard Johnson		CHG00000095	2024-09-01 06:15:25
Requested	Ron Kettering		CHG00000095	2024-09-01 06:15:25
Requested	Luke Wilson		CHG00000095	2024-09-01 06:15:25
Requested	Christen Mitchell		CHG00000095	2024-09-01 06:15:25
Requested	Bernard Laboy		CHG00000095	2024-09-01 06:15:25

Conclusion:

This approach provides a streamlined system for managing projects by defining roles, applying access restrictions, and organizing workflows. It helps the team collaborate effectively, improves accountability, simplifies task tracking, and ensures successful project delivery.