

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

Team ID => NM2025TMID20238

Team Members:

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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:

To design and implement a streamlined project task management system in ServiceNow for a small project team, enabling clear role definitions (Project Manager and Team Member), role-based access controls, and a structured workflow. This solution aims to improve task assignment clarity, ensure accountability, and enhance visibility into project progress throughout the project lifecycle.

Skills:

- Tensorflow
- Oracle DB

Task Initiation:

Milestone 1: Users

**Activity 1:** Create users

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

servicenow User - alice p

Update Set Password Delete

User ID: Alice  
First name: alice  
Last name: p  
Title:   
Department:   
Password needs reset:   
Locked out:   
Active: ☒  
Web service access only:   
Internal Integration User:   
Email: alice@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

User = alice p

Table	Application	Role
No records to display		

## Creating one more user Bob:

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

servicenow User - New Record

Submit

To set up the User's password, save the record and then click Set Password.

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...

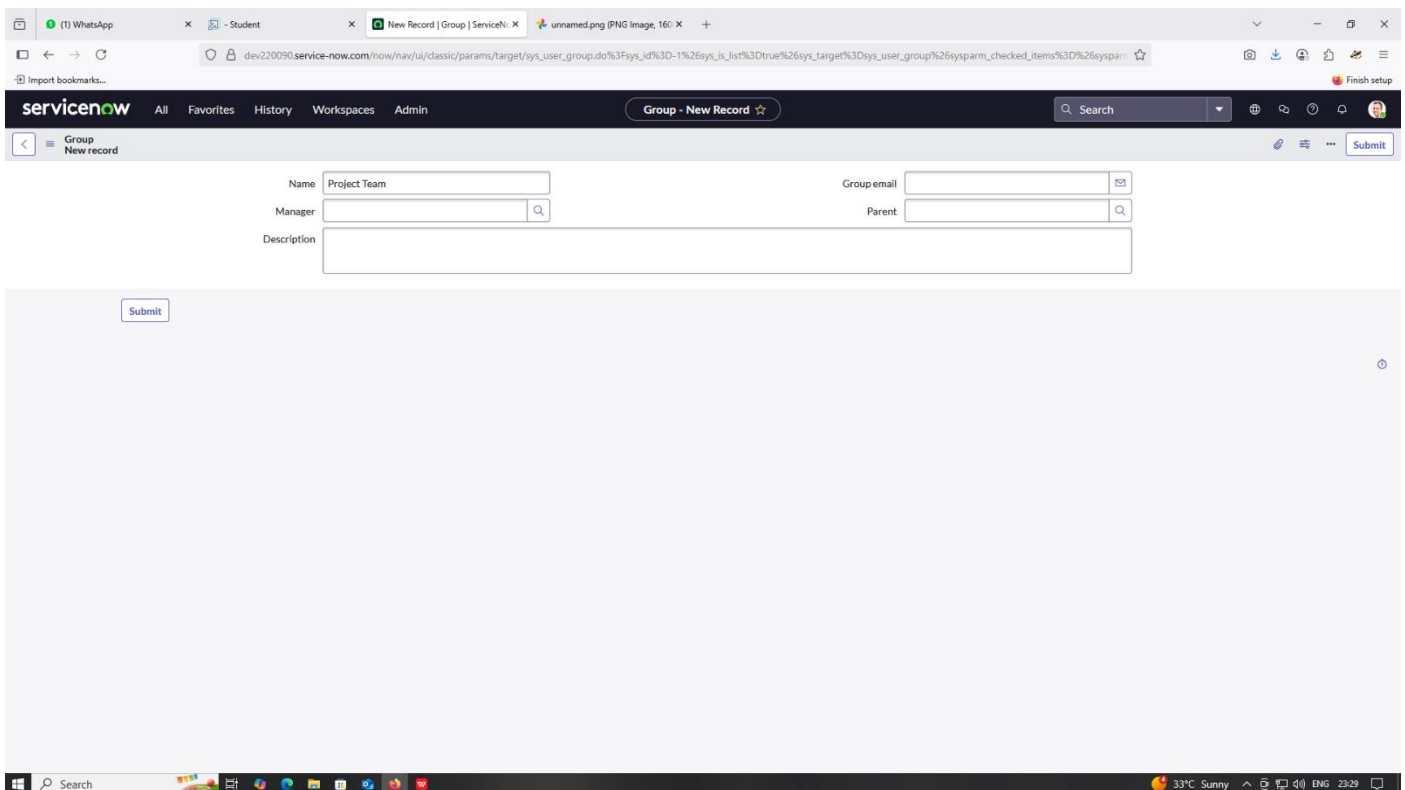
Submit

Related Links  
View linked accounts  
View Subscriptions

## Milestone 2: Groups

### Activity 1: Create groups

1. Open Service Now Developer PDI
2. Click on All -> search for groups
3. Select groups under the system security section.
4. Click on new
5. Fill the following details to create a new group.
6. Click on submit.

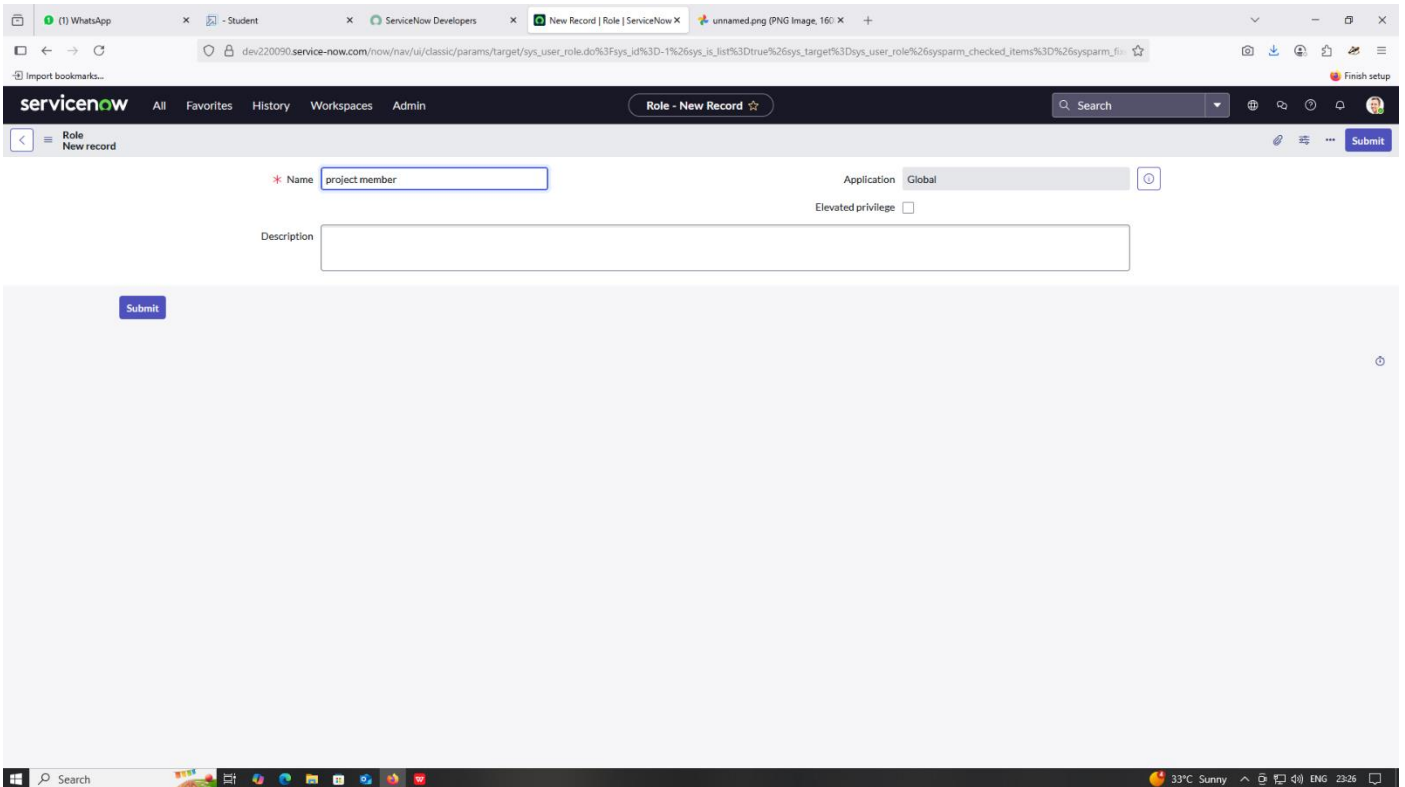


The screenshot shows a web browser window with the ServiceNow interface. The browser tabs include 'WhatsApp', 'Student', 'New Record | Group | ServiceN...', and 'unnamed.png'. The address bar shows a URL from dev220090.service-now.com. The ServiceNow header includes the logo, navigation links (All, Favorites, History, Workspaces, Admin), a 'Group - New Record' button, a search bar, and a 'Finish setup' link. The main form area is titled 'Group - New record' and contains the following fields: 'Name' (with the value 'Project Team'), 'Group email' (with an email icon), 'Manager' (with a search icon), 'Parent' (with a search icon), and 'Description' (a large text area). A 'Submit' button is located at the bottom left of the form area. The Windows taskbar at the bottom shows the search bar, taskbar icons, and system tray information (33°C Sunny, 23:29).

## Milestone 3: Roles

### Activity 1: Create Roles

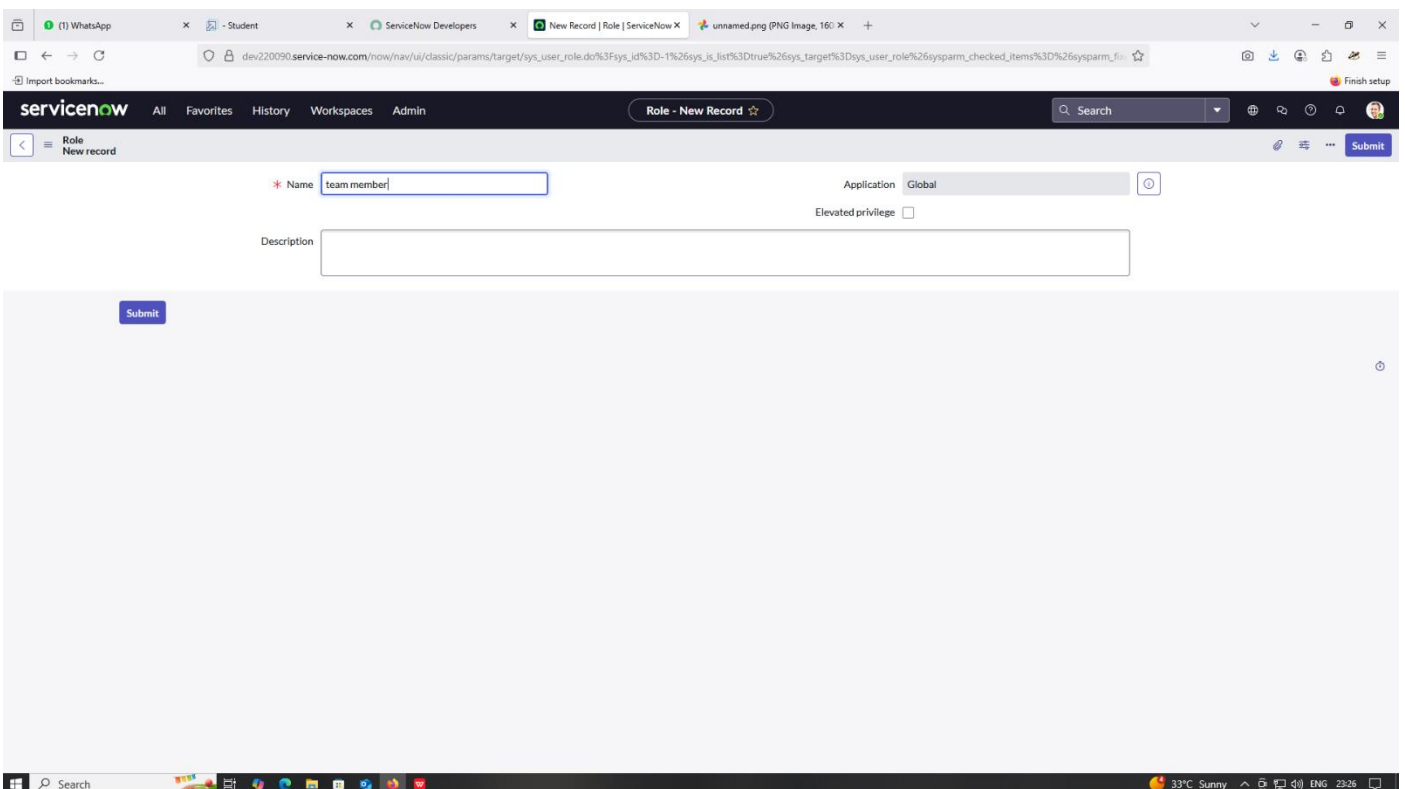
1. Open Service Now Developer PDI
2. Click on All -> search for Roles
3. Select Roles under the system security section.
4. Click on new.
5. Fill the following details to create a new role.
6. Click on submit.



The screenshot shows the ServiceNow 'Role - New Record' form. The 'Name' field is populated with 'project member'. The 'Application' dropdown is set to 'Global'. The 'Elevated privilege' checkbox is unchecked. The 'Description' field is empty. A 'Submit' button is visible at the bottom left of the form area.

Create one more role:

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

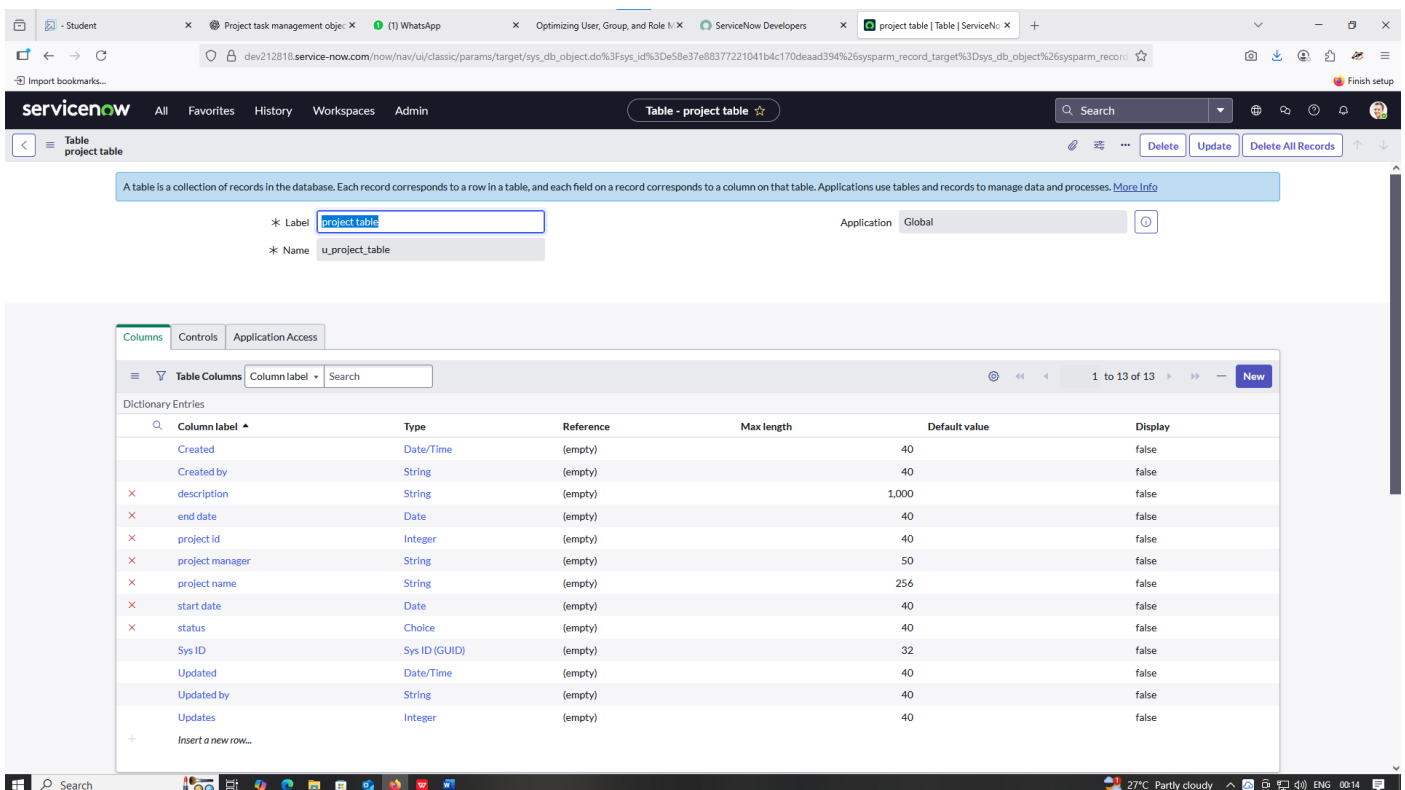


The screenshot shows the ServiceNow 'Role - New Record' form. The 'Name' field is populated with 'team member'. The 'Application' dropdown is set to 'Global'. The 'Elevated privilege' checkbox is unchecked. The 'Description' field is empty. A 'Submit' button is visible at the bottom left of the form area.

## Milestone 4: Table

### Activity 1: Create Table

1. Open Service Now Developer PDI
2. Click on All -> Search for tables
3. Select tables under the system definition section
4. Click on New
5. Fill the following details to create a new table
  - a. Label: Project table
  - b. Check the boxes Create module & Create mobile module
6. Under new menu name: project table
7. Under table columns give the columns with data types.



The screenshot shows the ServiceNow Developer PDI interface for creating a new table. The 'Table - project table' configuration page is displayed. The 'Columns' tab is active, showing a list of columns with their labels, types, references, max lengths, default values, and display status. The columns list includes Created, Created by, description, end date, project id, project manager, project name, start date, status, Sys ID, Updated, Updated by, and Updates. A 'New' button is visible at the bottom right of the columns list.

Column label	Type	Reference	Max length	Default value	Display
Created	Date/Time	(empty)	40	40	false
Created by	String	(empty)	40	40	false
description	String	(empty)	1,000	40	false
end date	Date	(empty)	40	40	false
project id	Integer	(empty)	40	40	false
project manager	String	(empty)	50	40	false
project name	String	(empty)	256	40	false
start date	Date	(empty)	40	40	false
status	Choice	(empty)	40	40	false
Sys ID	Sys ID (GUID)	(empty)	32	40	false
Updated	Date/Time	(empty)	40	40	false
Updated by	String	(empty)	40	40	false
Updates	Integer	(empty)	40	40	false

8. Click on submit

### Create one more table

9. Create another table as : task table 2
10. Fill the following details to create task table 2
11. Click on submit.

ServiceNow interface showing the configuration for a table named "task table 2".

**Table Configuration:**

- Label: task table 2
- Name: u\_task\_table\_2
- Application: Global

**Columns:**

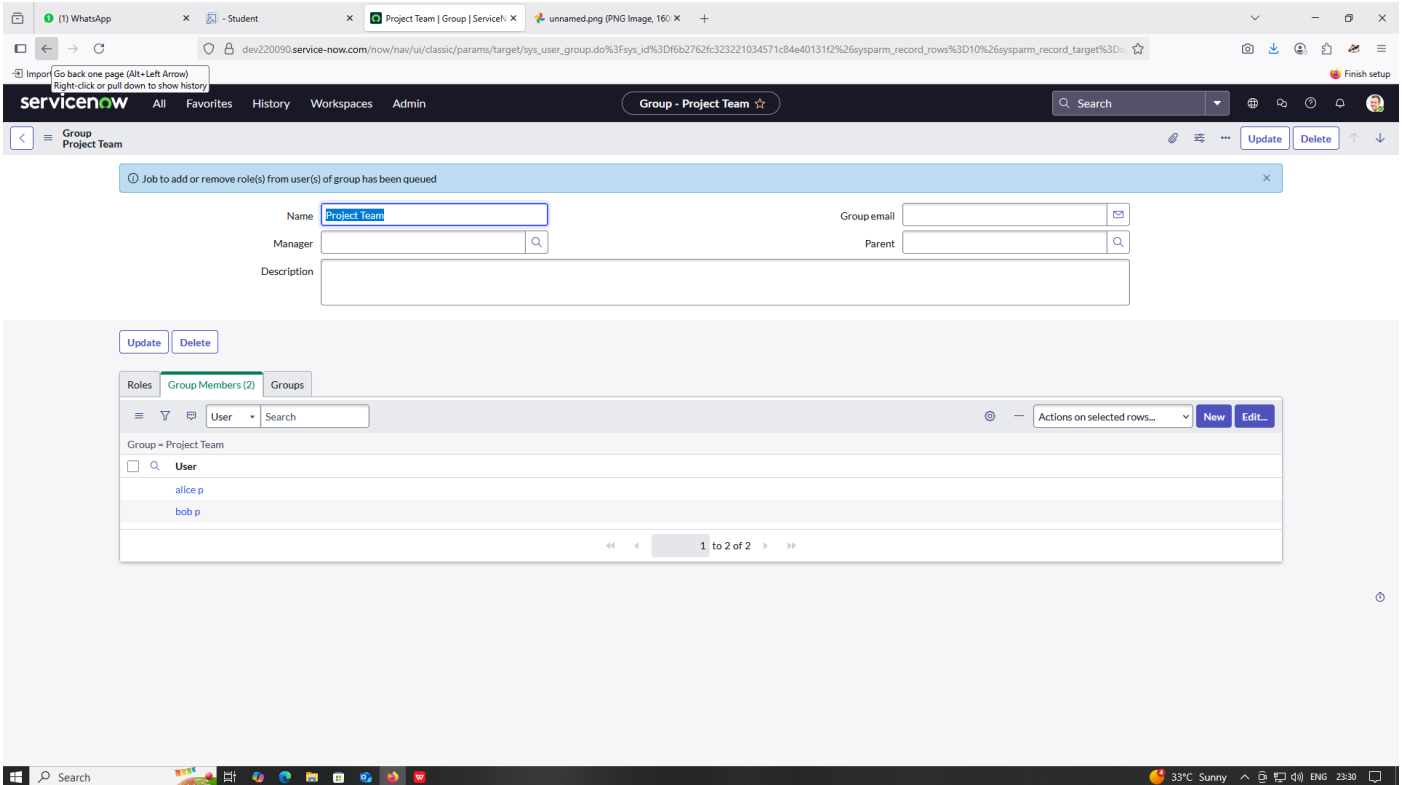
Column label	Type	Reference	Max length	Default value	Display
assigned to	String	(empty)		50	false
comments	String	(empty)		1,000	false
Created	Date/Time	(empty)		40	false
Created by	String	(empty)		40	false
due date	Date	(empty)		40	false
status	Choice	(empty)		40	false
Sys ID	Sys ID (GUID)	(empty)		32	false
task id	Integer	(empty)		40	false
task name	String	(empty)		100	false
Updated	Date/Time	(empty)		40	false
Updated by	String	(empty)		40	false
Updates	Integer	(empty)		40	false

Buttons: Delete, Update, Delete All Records

## Milestone 5: Assign users to groups

### Activity 1: Assign users to project team group

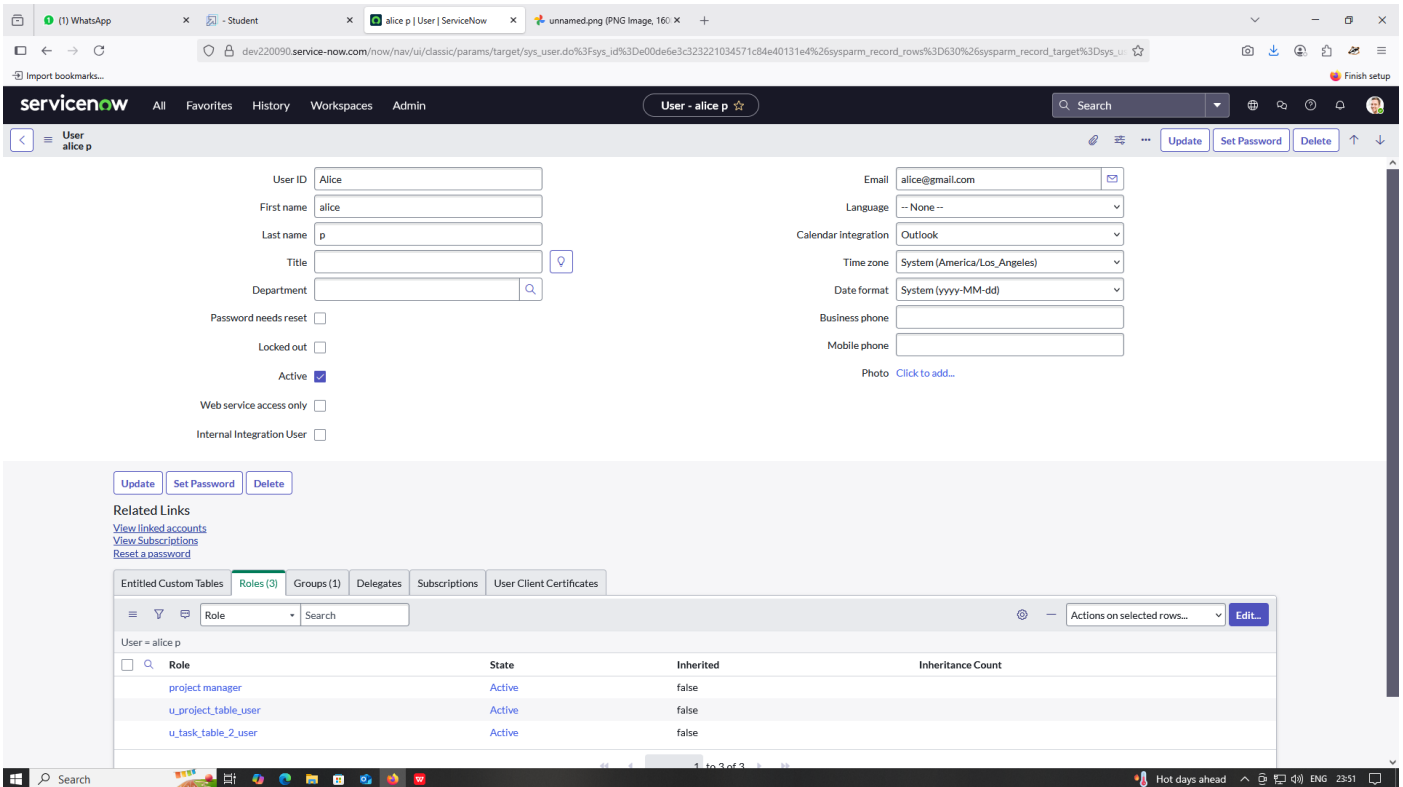
1. Open Service Now Developer PDI
2. Click on All -> search for groups.
3. Select tables under the system definition section.
4. Select the project team group under group members.
5. Click on edit.
6. Select Alice P and Bob P and save.



## Milestone 6: Assign roles to users

### Activity 1: Assign roles to alice user

1. Open Service Now Developer PDI
2. Select tables under the 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.



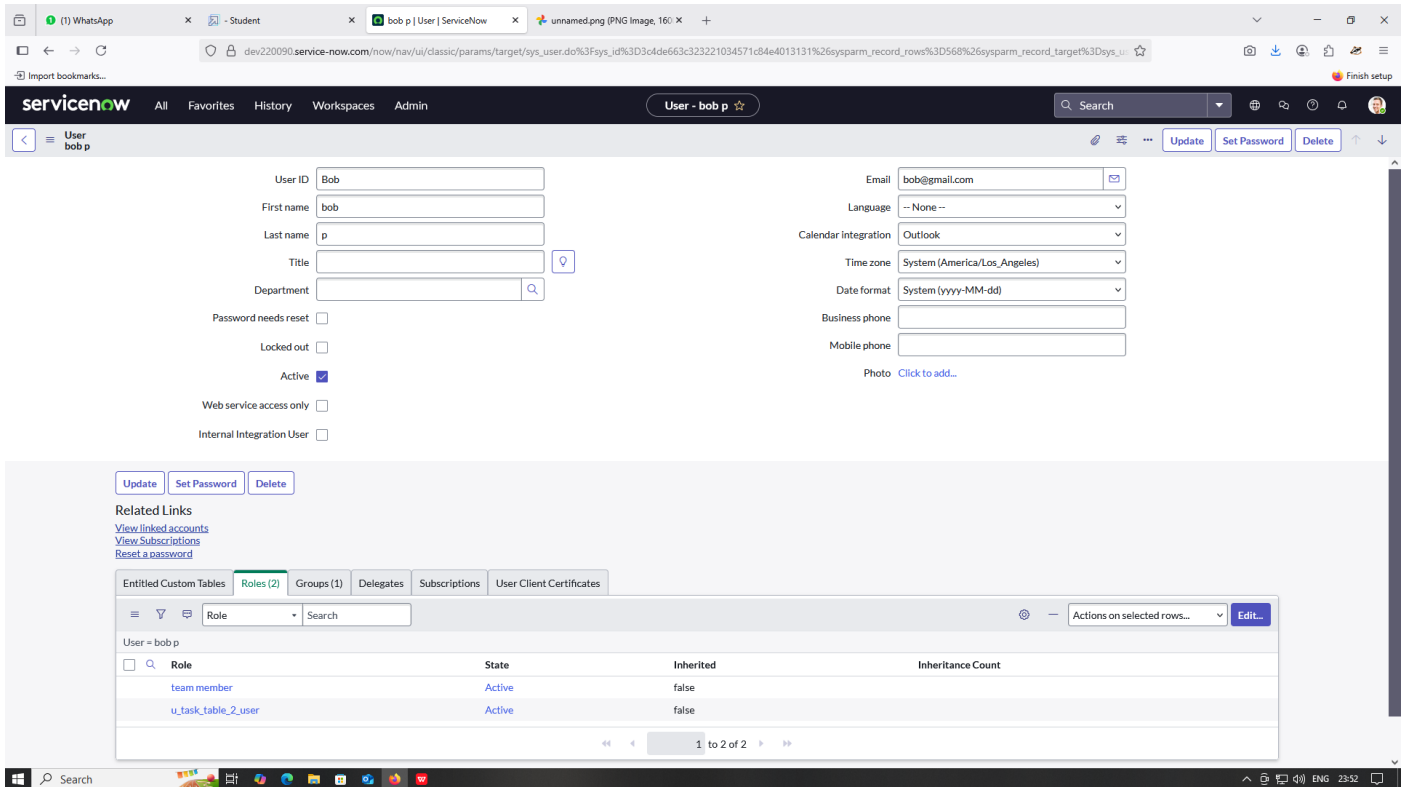
The screenshot shows the ServiceNow user management interface for user 'alice p'. The user details form includes fields for User ID, First name, Last name, Title, Department, Email, Language, Calendar integration, Time zone, Date format, Business phone, and Mobile phone. The user is currently active and has a password that needs to be reset. Below the form, there are links for 'Update', 'Set Password', and 'Delete'. The 'Related Links' section includes 'View linked accounts', 'View Subscriptions', and 'Reset a password'. The 'Entitled Custom Tables' section shows a table with columns for Role, State, Inherited, and Inheritance Count. The table lists three roles: 'project manager', 'u\_project\_table\_user', and 'u\_task\_table\_2\_user', all of which are active and not inherited.

Role	State	Inherited	Inheritance Count
project manager	Active	false	
u_project_table_user	Active	false	
u_task_table_2_user	Active	false	

## Activity 2: Assign roles to bob user.

1. Open Service Now Developer PDI
2. Select tables under the system definition section.
3. Select the bob p user under team member.
4. Click on edit.
5. Select team member and give table role and save.
6. Click on project icon Impersonate the user to bob p.
7. We can see the task table 2





The screenshot shows the ServiceNow user profile page for 'User - bob p'. The page includes fields for personal information (User ID, First name, Last name, Title, Department), contact information (Email, Business phone, Mobile phone), and preferences (Language, Calendar integration, Time zone, Date format). Below these are checkboxes for 'Password needs reset', 'Locked out', 'Active', 'Web service access only', and 'Internal Integration User'. At the bottom, there is a table of roles for the user.

Role	State	Inherited	Inheritance Count
team member	Active	false	
u_task_table_2_user	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 project table application
3. Click on edit module.
4. Give project member roles to that application.
5. Search for task table 2 and click on edit application.
6. Give the project member and team member role for task table 2 application.

servicenow 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

Modules	Order	Search	Actions on selected rows...	New						
Application menu = project table										
<input type="checkbox"/>	<input type="text"/>	Title	Table	Active	Filter	Order	Link type	Device type	Roles	Updated
<input type="checkbox"/>	<input type="text"/>	project tables	project table [u_project_table]	true			List of Records		u_project_table_user	2025-09-02 07:35:59
1 to 1 of 1										

servicenow Application Menu - task table 2

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  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

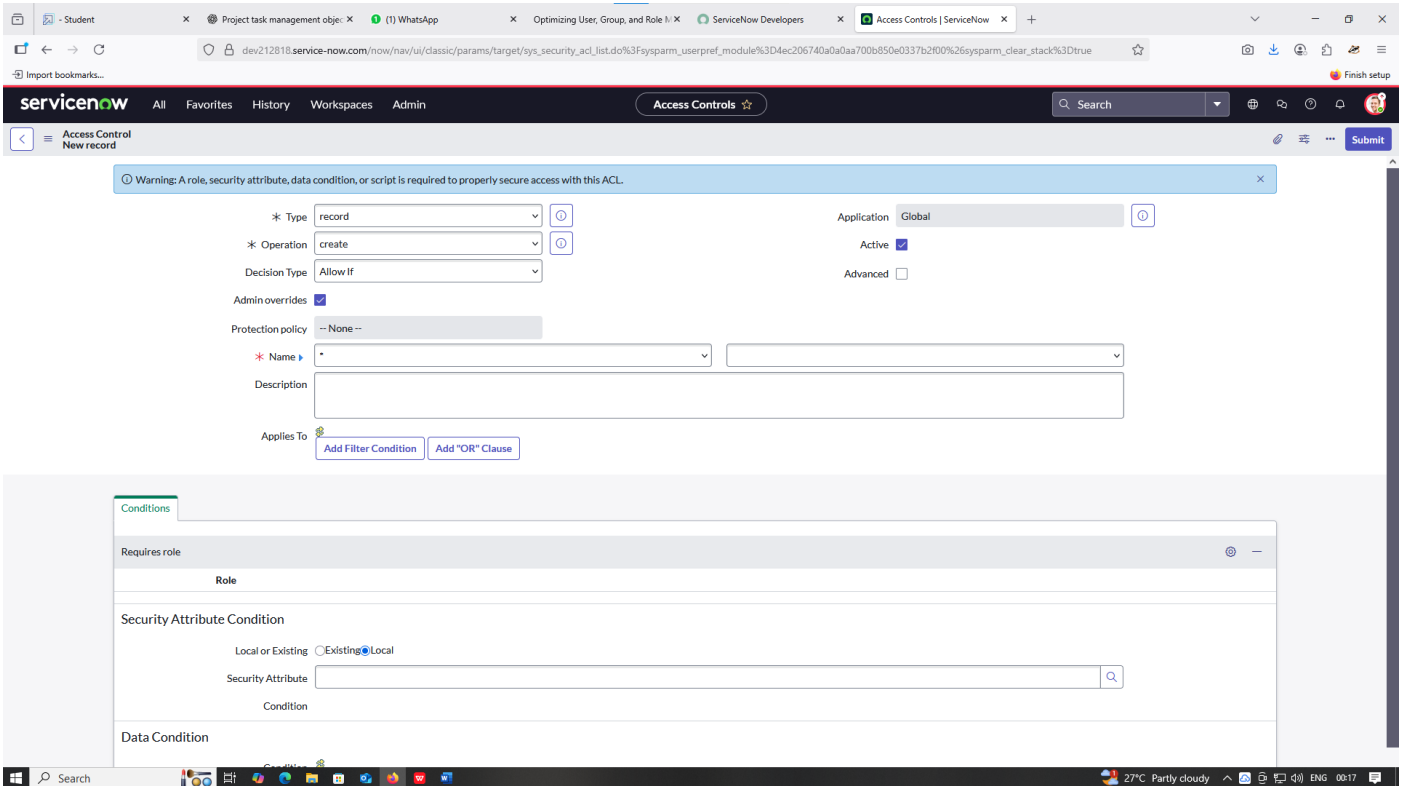
Modules	Order	Search	Actions on selected rows...	New						
Application menu = task table 2										
<input type="checkbox"/>	<input type="text"/>	Title	Table	Active	Filter	Order	Link type	Device type	Roles	Updated
<input type="checkbox"/>	<input type="text"/>	task table 2s	task table 2 [u_task_table_2]	true			List of Records		u_task_table_2_user	2025-09-02 07:48:03
1 to 1 of 1										

## Milestone 8: Access control list

### Activity 1: Create ACL

1. Open Service Now developer PDI
2. Click on All -> Search for ACL

3. Select Access Control (ACL) under the system security section.
4. Click on elevate role
5. Click on new.



Warning: A role, security attribute, data condition, or script is required to properly secure access with this ACL.

\* Type: record

\* Operation: create

Decision Type: Allow If

Application: Global

Active: ☒

Advanced: ☐

Admin overrides: ☒

Protection policy: --None--

\* Name:

Description:

Applies To: [Add Filter Condition](#) [Add "OR" Clause](#)

Conditions

Requires role

Role

Security Attribute Condition

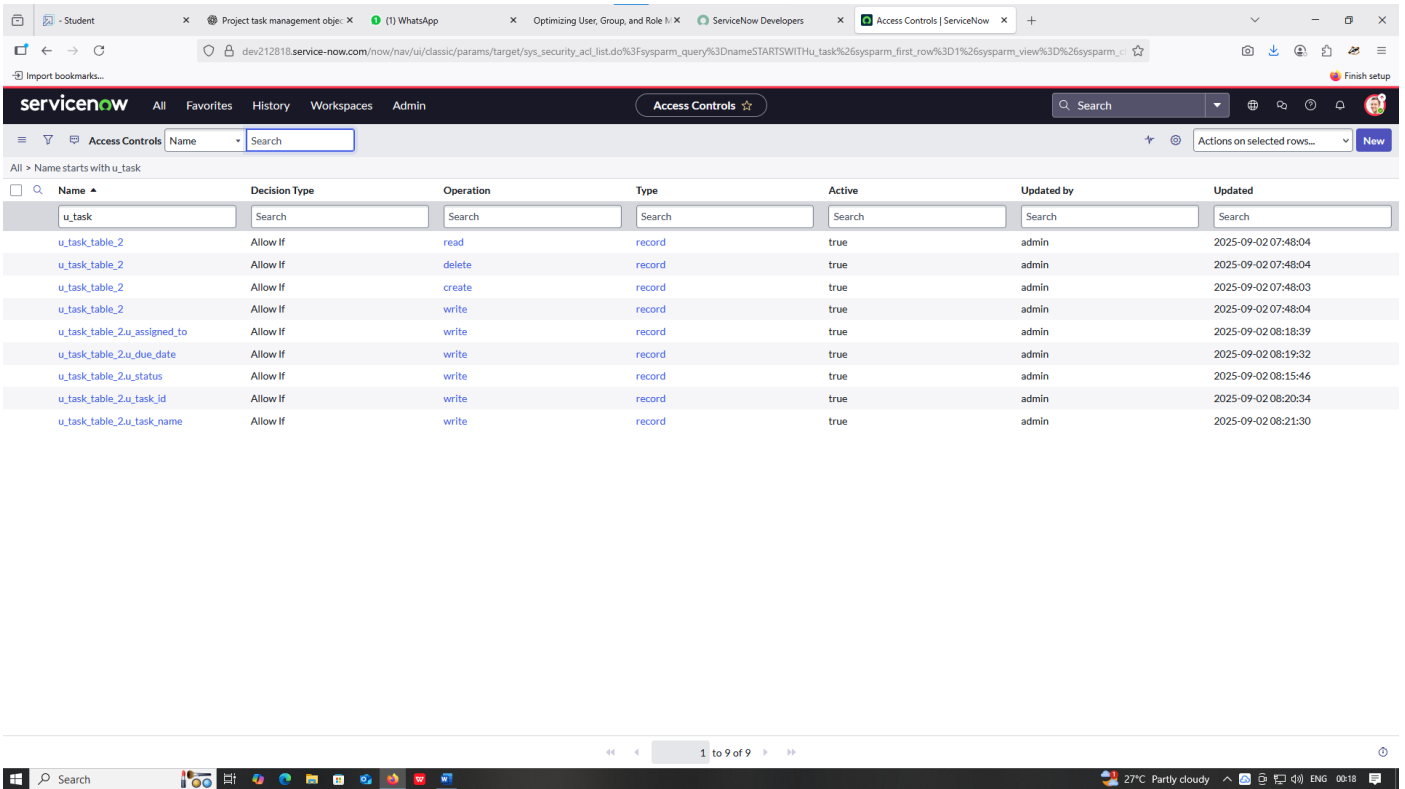
Local or Existing: ☐ Existing ☒ Local

Security Attribute:

Condition:

Data Condition

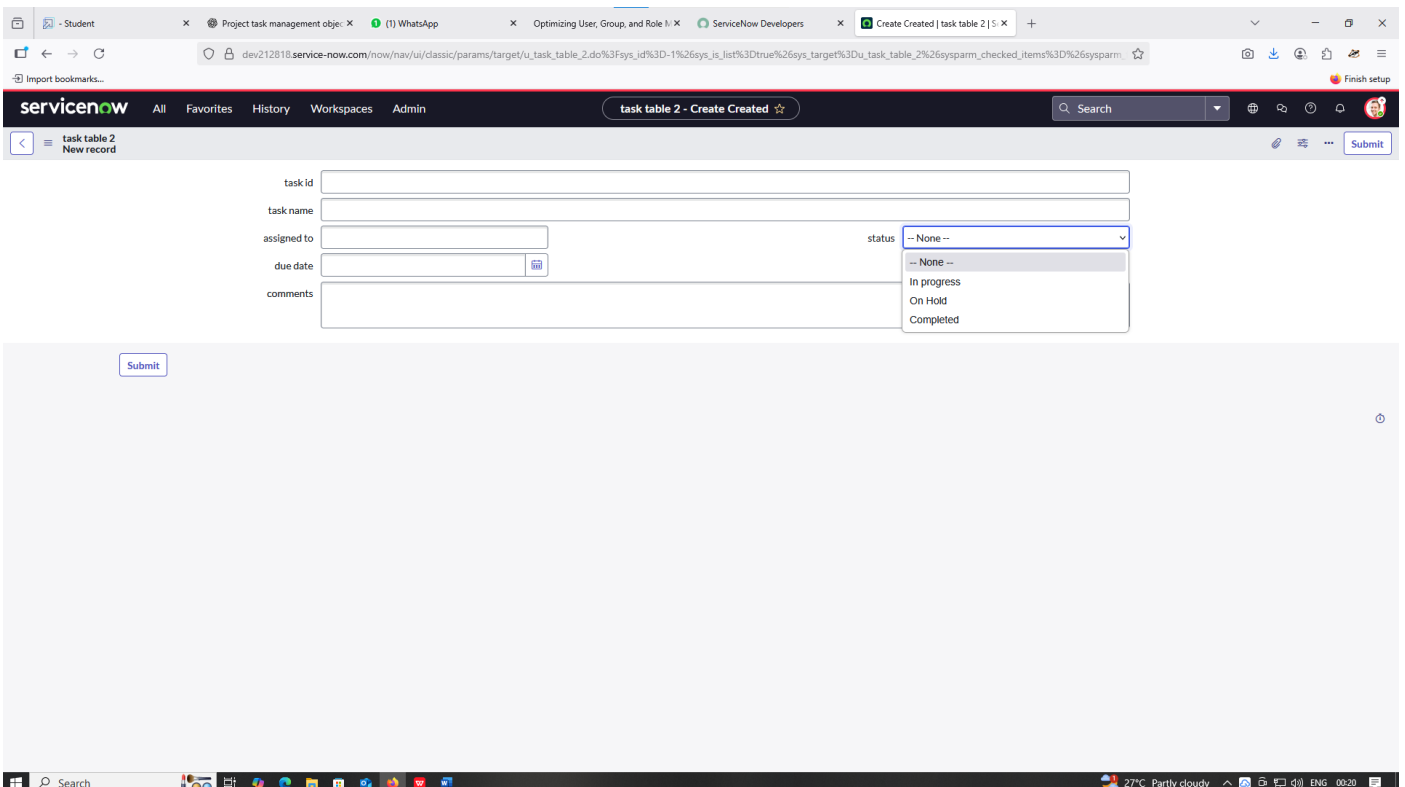
6. Fill the following details to create a new ACL.
7. Scroll down under requires role.
8. Double click on insert a new role.
9. Give task table and team member role.
10. Click on Submit
11. Similarly create four acs for the following fields.



The screenshot shows the ServiceNow 'Access Controls' page. The table lists various access rules for 'u\_task' and its sub-tables. The columns are: Name, Decision Type, Operation, Type, Active, Updated by, and Updated.

Name	Decision Type	Operation	Type	Active	Updated by	Updated
u_task	Search	Search	Search	Search	Search	Search
u_task_table_2	Allow If	read	record	true	admin	2025-09-02 07:48:04
u_task_table_2	Allow If	delete	record	true	admin	2025-09-02 07:48:04
u_task_table_2	Allow If	create	record	true	admin	2025-09-02 07:48:03
u_task_table_2	Allow If	write	record	true	admin	2025-09-02 07:48:04
u_task_table_2u_assigned_to	Allow If	write	record	true	admin	2025-09-02 08:18:39
u_task_table_2u_due_date	Allow If	write	record	true	admin	2025-09-02 08:19:32
u_task_table_2u_status	Allow If	write	record	true	admin	2025-09-02 08:15:46
u_task_table_2u_task_id	Allow If	write	record	true	admin	2025-09-02 08:20:34
u_task_table_2u_task_name	Allow If	write	record	true	admin	2025-09-02 08:21:30

12. Click on profile on top right side
13. Click on impersonate user
14. Select Bob user
15. Go to all and select task table 2 in the application menu bar
16. Comment and status fields are have the edit access.

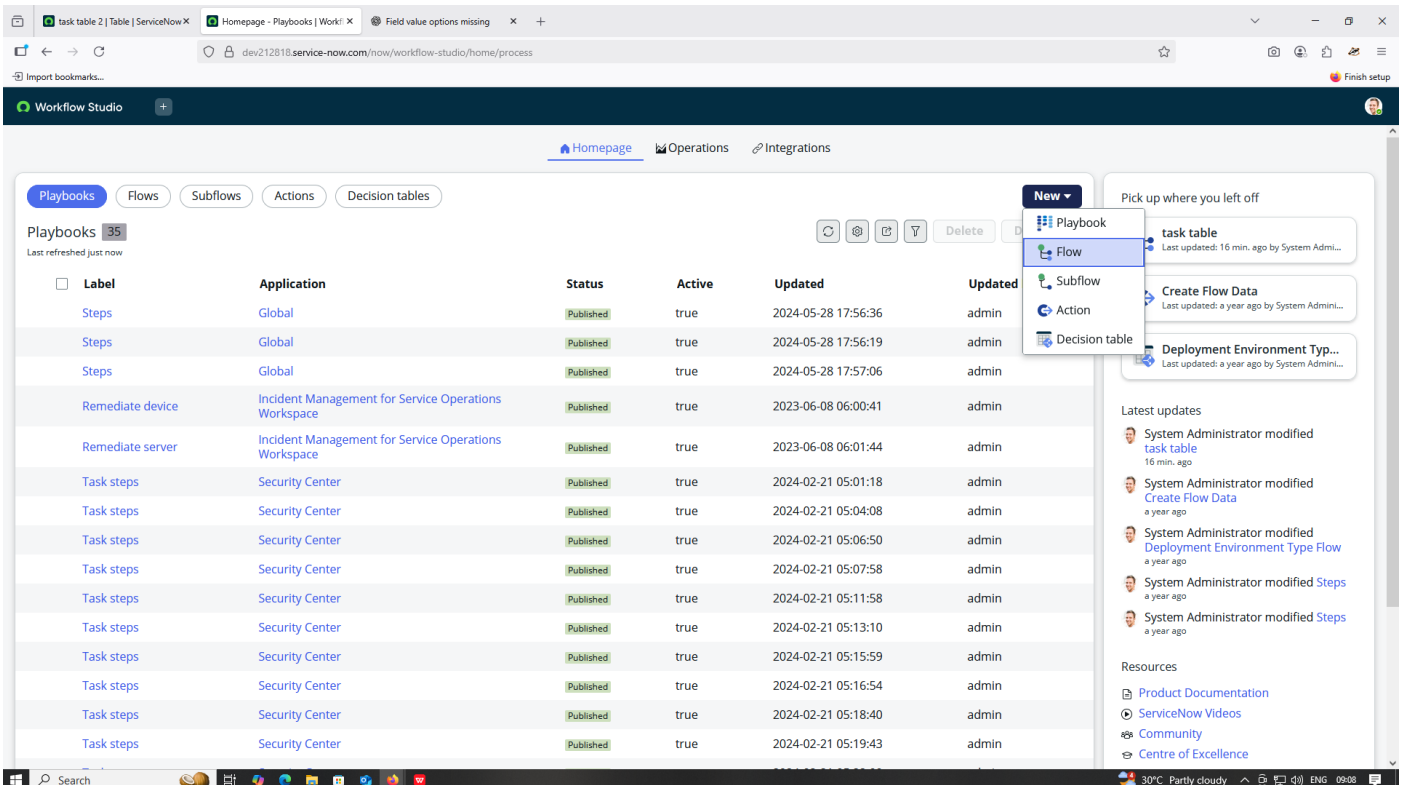


The screenshot shows the 'task table 2 - Create Created' form in ServiceNow. The form includes fields for task id, task name, assigned to, due date, and comments. A dropdown menu for 'status' is open, showing options: -- None --, -- None --, In progress, On Hold, and Completed. A 'Submit' button is visible at the bottom left.

## Milestone 9: Flow

## Activity 1: Create a Flow to Assign operations ticker to group

1. Open Service Now developer PDI
2. Click on All -> search 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.



The screenshot shows the ServiceNow Workflow Studio interface. The 'New' dropdown menu is open, showing options: Playbook, Flow, Subflow, Action, and Decision table. The 'Flow' option is selected. The main table lists various flows with columns: Label, Application, Status, Active, Updated, and Updated by. The 'task table' flow is highlighted in the 'Latest updates' section on the right.

Label	Application	Status	Active	Updated	Updated by
Steps	Global	Published	true	2024-05-28 17:56:36	admin
Steps	Global	Published	true	2024-05-28 17:56:19	admin
Steps	Global	Published	true	2024-05-28 17:57:06	admin
Remediate device	Incident Management for Service Operations Workspace	Published	true	2023-06-08 06:00:41	admin
Remediate server	Incident Management for Service Operations Workspace	Published	true	2023-06-08 06:01:44	admin
Task steps	Security Center	Published	true	2024-02-21 05:01:18	admin
Task steps	Security Center	Published	true	2024-02-21 05:04:08	admin
Task steps	Security Center	Published	true	2024-02-21 05:06:50	admin
Task steps	Security Center	Published	true	2024-02-21 05:07:58	admin
Task steps	Security Center	Published	true	2024-02-21 05:11:58	admin
Task steps	Security Center	Published	true	2024-02-21 05:13:10	admin
Task steps	Security Center	Published	true	2024-02-21 05:15:59	admin
Task steps	Security Center	Published	true	2024-02-21 05:16:54	admin
Task steps	Security Center	Published	true	2024-02-21 05:18:40	admin
Task steps	Security Center	Published	true	2024-02-21 05:19:43	admin

Latest updates:

- System Administrator modified [task table](#) 16 min. ago
- System Administrator modified [Create Flow Data](#) a year ago
- System Administrator modified [Deployment Environment Type Flow](#) a year ago
- System Administrator modified [Steps](#) a year ago
- System Administrator modified [Steps](#) a year ago

Resources:

- [Product Documentation](#)
- [ServiceNow Videos](#)
- [Community](#)
- [Centre of Excellence](#)

The screenshot displays the ServiceNow Workflow Studio interface. The browser's address bar shows the URL: dev212818.service-now.com/now/workflow-studio/builder%3FtypeSysId%3D2d85e527439231106c4bb0117fb8f208%26sysId%3D-1. The application header includes 'Workflow Studio' and a tab for 'New Flow'. The main workspace is split into two panels. The left panel contains a canvas with a few blue rectangular blocks and a plus icon, representing a flow diagram. The right panel is titled 'Let's get the details for your flow' and contains three input fields: 'Flow name' with the value 'task table', 'Application' with a dropdown menu set to 'Global', and 'Description' with the placeholder text 'Describe your flow.'. Below these fields is a link that says '> Show additional properties'. At the bottom right of the interface, there are two buttons: 'Cancel' and 'Build flow'. The Windows taskbar is visible at the very bottom of the image.

## Activity 2: Adding Trigger

1. Click add 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
  - a. Field: status operator: is Value: in Progress
  - b. Field: Comments operator: is Value: Feedback
  - c. Field: Assigned to Operator: is Value: bob
5. After that click on Done.

Workflow Studio | task table | Flow

task table | Inactive

View: [Icons] | Test | Activate | Save | ...

### TRIGGER

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

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

### ACTIONS

Select multiple

[X] | Action | Flow Logic | Subflow

### ERROR HANDLER

If an error occurs in your flow, the actions you add here will run.

Status: Modified | Application: Global

## Activity 3: Add an Action

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.

Tables | ServiceNow | task table | Workflow Studio | Field value options missing

dev212818.service-now.com/now/workflow-studio/builder%3Ftable%3Dsys\_hub\_flow%26sysid%3D834050b083f7221041b4c170deaad3b1

Workflow Studio | task table | Flow

task table | Inactive

View: [Icons] | Test | Activate | Save | ...

### TRIGGER

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

### ACTIONS

Select multiple

1. Update 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

+ Add field value

Delete | Cancel | Done

+ Add an Action, Flow Logic, or Subflow

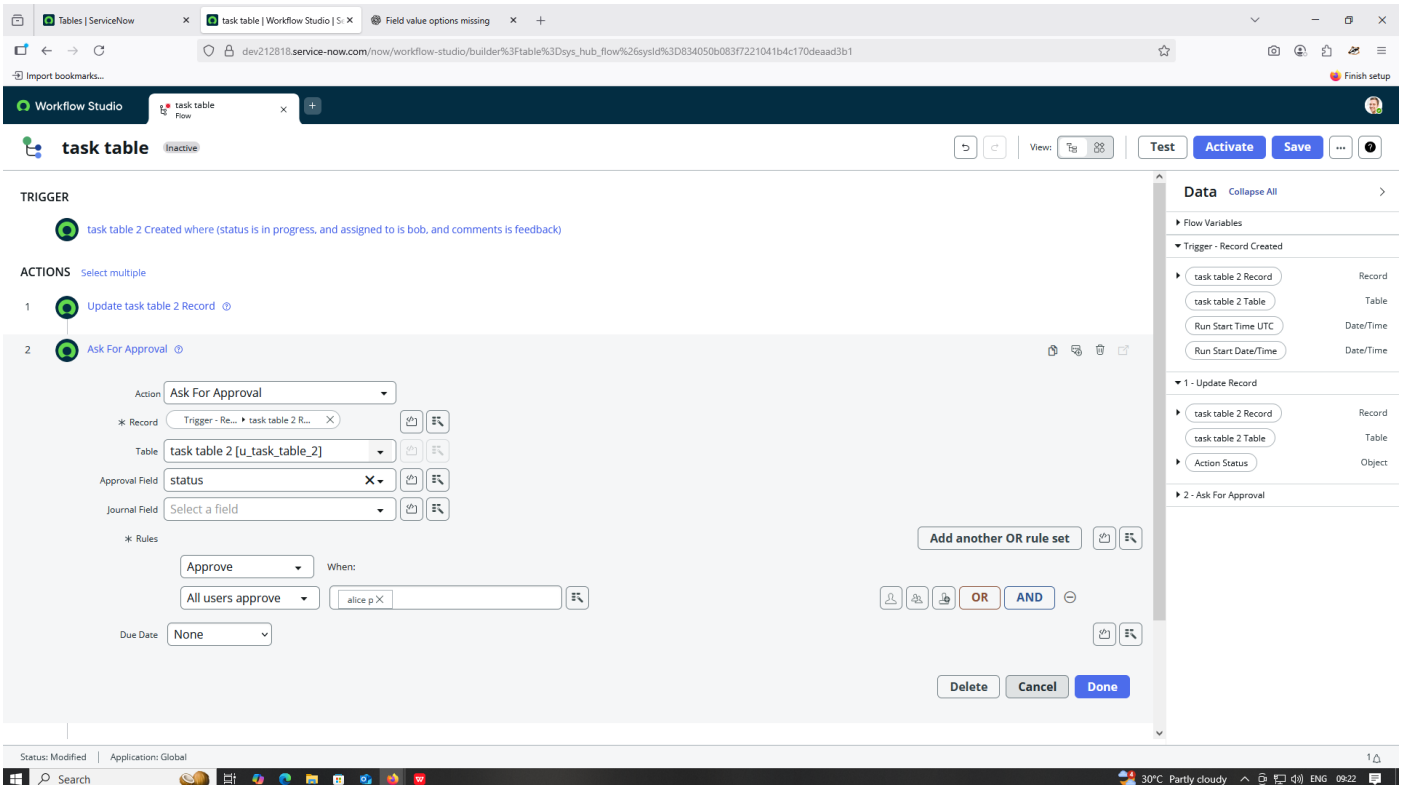
### ERROR HANDLER

If an error occurs in your flow, the actions you add here will run.

Status: Modified | Application: Global

## Activity 4: Create Ask Approvals

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 fields as “status”
7. Give approver as Alice P
8. Click on Done.



The screenshot displays the ServiceNow Workflow Studio interface for configuring a workflow named 'task table'. The interface includes a top navigation bar with tabs for 'Tables | ServiceNow', 'task table | Workflow Studio', and 'Field value options missing'. The main workspace is divided into sections for 'TRIGGER', 'ACTIONS', and 'Data'.

**TRIGGER:** A single trigger is listed: 'task table 2 Created where (status is in progress, and assigned to is bob, and comments is feedback)'.

**ACTIONS:** Two actions are listed: 'Update task table 2 Record' and 'Ask For Approval'. The 'Ask For Approval' action is selected and expanded, showing the following configuration:

- Action:** Ask For Approval
- Record:** Trigger - Re... → task table 2 R...
- Table:** task table 2 [u\_task\_table\_2]
- Approval Field:** status
- Journal Field:** Select a field
- Rules:**
  - Approve:** Approve
  - When:** All users approve
  - alice p X**
- Due Date:** None

**Data:** A sidebar on the right shows the data navigation pane with a 'Collapse All' button. It lists the following data elements:

- Flow Variables:**
  - Trigger - Record Created
- 1 - Update Record:**
  - task table 2 Record (Record)
  - task table 2 Table (Table)
  - Run Start Time UTC (Date/Time)
  - Run Start Date/Time (Date/Time)
- 2 - Ask For Approval:**
  - task table 2 Record (Record)
  - task table 2 Table (Table)
  - Action Status (Object)

The bottom of the interface shows the status 'Modified' and 'Application: Global'. The Windows taskbar at the bottom indicates the system time as 09:22 and the weather as 30°C Partly cloudy.

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



Workflow Studio

task table

TRIGGER

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

ACTIONS Select multiple

1 Update 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

+ Add field value

2 Ask For Approval

+ Add an Action, Flow Logic, or Subflow

ERROR HANDLER

If an error occurs in your flow, the actions you add here will run.

Status: Draft Application: Global

11.Go to application navigator and search for my approval

12.Click on my approval under the service desk section.

13.Alice p got approval request then right click on requested then select approved.

Approvals | ServiceNow

Approvals

State	Approver	Comments	Approval for	Created
Approved	alice p		(empty)	2025-09-02 09:39:44
Requested	Bernard Laboy		CHG0000053	2025-06-03 06:09:38
Requested	Bernard Laboy		CHG0000071	2025-06-03 06:12:10
Requested	Bernard Laboy		CHG0000037	2025-06-03 06:04:51
Requested	Bernard Laboy		CHG0000076	2025-06-03 06:13:15
Requested	Bernard Laboy		CHG0000094	2025-06-03 06:15:21
Requested	Bernard Laboy		CHG0000051	2025-06-03 06:09:31
Requested	Bernard Laboy		CHG0000073	2025-06-03 06:12:19
Requested	Bernard Laboy		CHG0000090	2025-06-03 06:15:07
Requested	Bernard Laboy		CHG0000074	2025-06-03 06:12:23
Requested	Bernard Laboy		CHG0000055	2025-06-03 06:09:47
Requested	Bernard Laboy		CHG0000078	2025-06-03 06:13:24
Requested	Bernard Laboy		CHG0000091	2025-06-03 06:15:11
Requested	Bernard Laboy		CHG0000045	2025-06-03 06:07:48
Requested	Bernard Laboy		CHG0000081	2025-06-03 06:13:36
Requested	Bernard Laboy		CHG0000052	2025-06-03 06:09:35
Requested	Bernard Laboy		CHG0000049	2025-06-03 06:08:06
Requested	Bernard Laboy		CHG0000047	2025-06-03 06:07:57
Requested	Bernard Laboy		CHG0000065	2025-06-03 06:11:39
Requested	Bernard Laboy		CHG0000084	2025-06-03 06:13:49

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## 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.