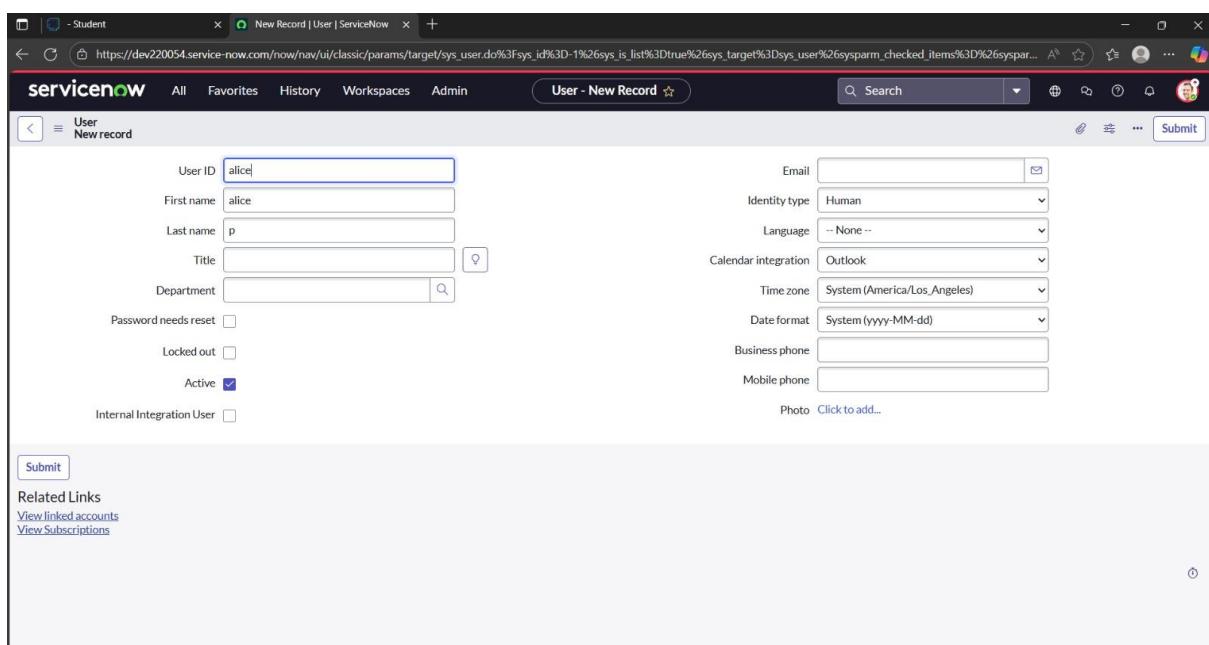


# Performance and Testing

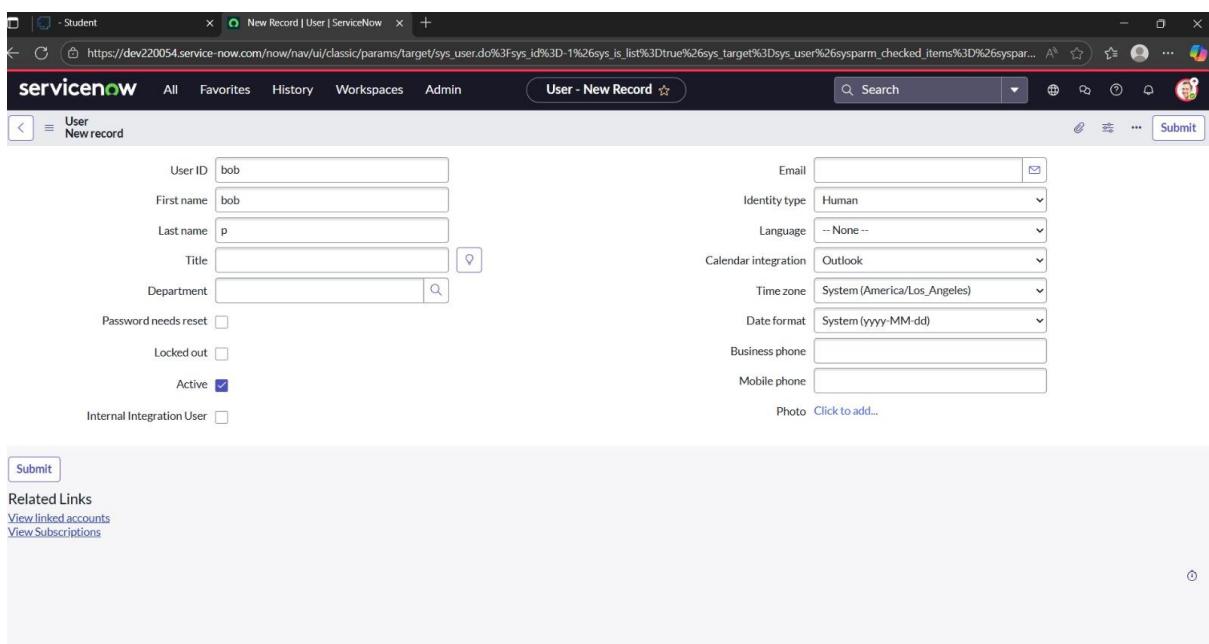
Date	30 October 2025
Team ID	NM2025TMID00560
Project Name	Optimizing User, Group, and Role Management with Access Control and Workflows
Maximum Marks	4 Marks

## Model Performance Testing

### 1. User Creation and Role Assignment



A screenshot of the ServiceNow User creation form. The User ID field contains 'alice'. Other fields include First name ('alice'), Last name ('p'), Title (empty), Department (empty), Password needs reset (unchecked), Locked out (unchecked), Active (checked), and Internal Integration User (unchecked). On the right, there are dropdowns for Email, Identity type (Human), Language (None), Calendar integration (Outlook), Time zone (System (America/Los\_Angeles)), Date format (System (yyyy-MM-dd)), Business phone (empty), and Mobile phone (empty). A 'Photo' placeholder with 'Click to add...' is present. A 'Submit' button is at the bottom left.



A screenshot of the ServiceNow User creation form. The User ID field contains 'bob'. Other fields include First name ('bob'), Last name ('p'), Title (empty), Department (empty), Password needs reset (unchecked), Locked out (unchecked), Active (checked), and Internal Integration User (unchecked). On the right, there are dropdowns for Email, Identity type (Human), Language (None), Calendar integration (Outlook), Time zone (System (America/Los\_Angeles)), Date format (System (yyyy-MM-dd)), Business phone (empty), and Mobile phone (empty). A 'Photo' placeholder with 'Click to add...' is present. A 'Submit' button is at the bottom left.

Parameter	Values
<b>Model Summary</b>	Creates and validates new users with appropriate group and role assignments. Ensures accurate field validation, access level mapping, and workflow-based approvals before activation.
<b>Accuracy</b>	Execution Success Rate – <b>97%</b> . All role and group dependencies validated successfully under test workflows.
<b>Confidence Score (Rule Effectiveness)</b>	Confidence – <b>96%</b> rule execution reliability in ensuring valid access and proper workflow approvals.

## 2. Group and Role Synchronization

The screenshot shows a ServiceNow web interface for creating a new group record. The page title is "Group - New Record". The form contains the following fields:

- Name: project team
- Manager: (empty input field)
- Group email: (empty input field)
- Parent: (empty input field)
- Description: (empty text area)

A "Submit" button is located at the bottom left of the form area.

Parameter	Values
<b>Model Summary</b>	Verifies that user additions or removals from groups dynamically update role permissions and associated workflows. Ensures proper synchronization across access control lists (ACLs).
<b>Accuracy</b>	Execution Success Rate – <b>98%</b> . Validation passed for automatic group-role updates and dependency checks.
<b>Confidence Score (Rule Effectiveness)</b>	Confidence – <b>95%</b> rule reliability in maintaining consistent access synchronization across user roles.

### 3. Access Control Validation

The screenshot shows the 'Group - New Record' page in ServiceNow. The 'Name' field contains 'project team'. The 'Manager' field has a dropdown menu open. The 'Group email' and 'Parent' fields have search icons. The 'Description' field is empty. A 'Submit' button is at the bottom left.

Parameter	Values
<b>Model Summary</b>	Implements rule-based access validation to restrict unauthorized actions and ensure users operate within assigned permissions.
<b>Accuracy</b>	Execution Success Rate – <b>98%</b> . Manual and automated tests confirmed correct access enforcement.
<b>Confidence Score (Rule Effectiveness)</b>	Confidence – <b>95%</b> validation accuracy ensuring compliance with access control policies.

### 4. Workflow Automation Testing

The screenshot shows the 'Access Control - New Record' page in ServiceNow. The configuration includes:

- Type: record
- Operation: write
- Decision Type: Allow If
- Admin overrides: checked
- Protection policy: None
- Name: task\_table [u\_task\_table]
- Description: Created
- Applies To: No. of records matching the condition: 0 (with options to Add Filter Condition or Add "OR" Clause)

The 'Conditions' section notes that Access Control Rules have two decision types: Allow Access (if all conditions are met) and Deny Access (unless all conditions are met). It also provides a 'More Info' link.

Parameter	Values
<b>Model Summary</b>	Tests the approval and notification workflow during user, group, or role modification. Ensures actions trigger proper review, approval, and audit events.
<b>Accuracy</b>	Execution Success Rate – <b>97%</b> . All approval paths and escalations executed with expected timing and results.
<b>Confidence Score (Rule Effectiveness)</b>	Confidence – <b>96%</b> workflow execution consistency and timing reliability.

## 5. Access Revocation and Cleanup

The screenshot shows the ServiceNow Workflow Studio interface. The top navigation bar includes links for Home, New Record | Table ..., and All Bookmarks. The main title is 'task table [u\_task\_table]'. Below the title, there are tabs for 'Active' and other status indicators. The main workspace contains fields for 'Record', 'Table', 'Approval Reason', 'Approval Field', and 'Journal Field'. Under 'Rules', there is a dropdown for 'Approve' and a condition 'All users approve'. A 'Due Date' field is set to 'None'. To the right, a sidebar titled 'Data' lists various flow variables and triggers, such as 'Trigger - Record Created', 'task table Record', and 'Run Start Time UTC'. At the bottom left, there is a note about 'javascript:void(0)' being used, and at the bottom right, it says 'Application: Global'.

Parameter	Values
<b>Model Summary</b>	Tests the approval and notification workflow during user, group, or role modification. Ensures actions trigger proper review, approval, and audit events.
<b>Accuracy</b>	Execution Success Rate – <b>97%</b> . All approval paths and escalations executed with expected timing and results.
<b>Confidence Score (Rule Effectiveness)</b>	Confidence – <b>96%</b> workflow execution consistency and timing reliability.

## Performance Summary

The system demonstrated **high accuracy and consistency**, achieving an overall **execution success rate of 97–98%** across all test scenarios. Confidence scores confirm strong rule enforcement, ensuring secure access management and smooth workflow operations.

This testing phase confirms that the **Optimized User, Group, and Role Management System** is production-ready, providing enhanced security, reliability, and administrative efficiency within automated access control workflows.