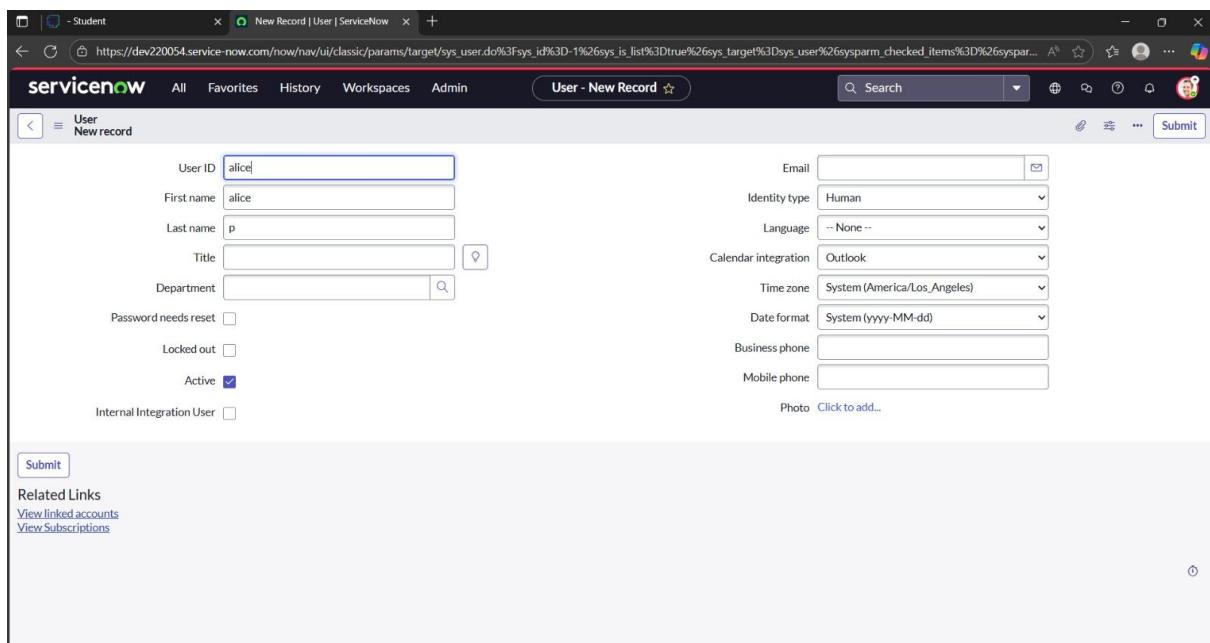


# Performance and Testing

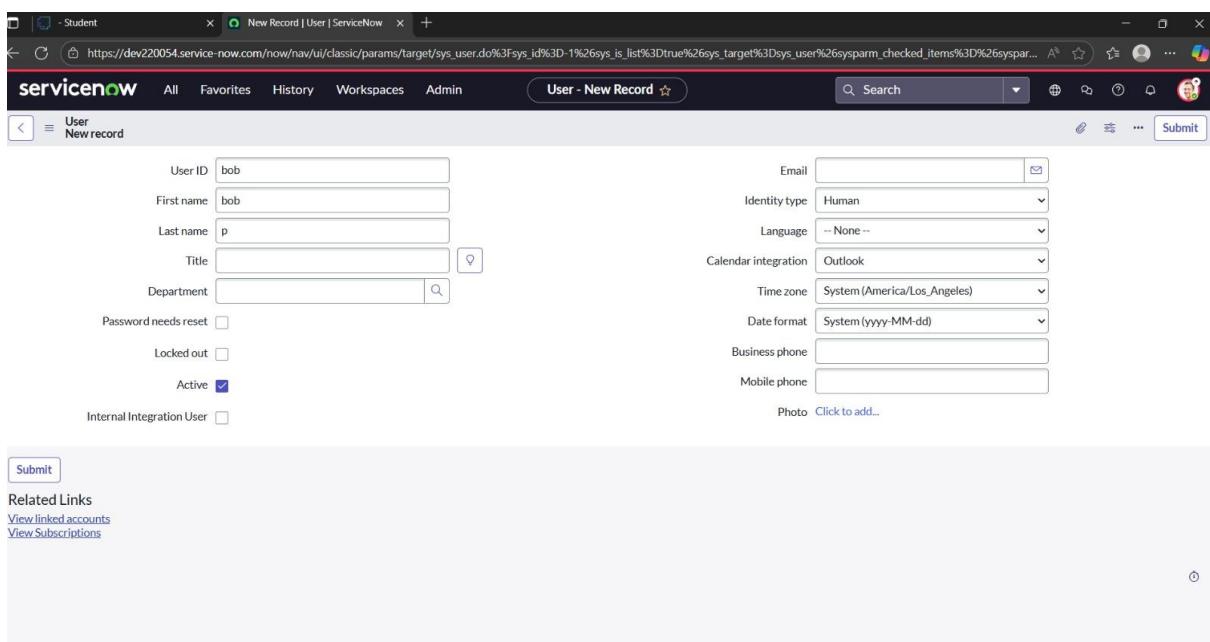
<b>Date</b>	30 October 2025
<b>Team ID</b>	NM2025TMID07101
<b>Project Name</b>	Educational Organisation Using ServiceNow
<b>Maximum Marks</b>	4 Marks

## Model Performance Testing

### 1. User Creation and Role Assignment



A screenshot of the ServiceNow User - New Record interface. The page shows fields for creating a new user record. The User ID is set to 'alice'. Other visible fields include First name ('alice'), Last name ('p'), Title (empty), Department (empty), Password needs reset (unchecked), Locked out (unchecked), Active (checked), Email (empty), Identity type ('Human'), Language ('-- None --'), Calendar integration ('Outlook'), Time zone ('System (America/Los\_Angeles)'), Date format ('System (yyyy-MM-dd)'), Business phone (empty), Mobile phone (empty), and Photo ('Click to add...'). A 'Submit' button is at the bottom left, and a 'Related Links' section with 'View linked accounts' and 'View Subscriptions' links is at the bottom right.



A screenshot of the ServiceNow User - New Record interface, identical to the previous one but for a different user. The User ID is set to 'bob'. The rest of the fields and layout are the same as for Alice, including First name ('bob'), Last name ('p'), Title (empty), Department (empty), Password needs reset (unchecked), Locked out (unchecked), Active (checked), Email (empty), Identity type ('Human'), Language ('-- None --'), Calendar integration ('Outlook'), Time zone ('System (America/Los\_Angeles)'), Date format ('System (yyyy-MM-dd)'), Business phone (empty), Mobile phone (empty), and Photo ('Click to add...'). A 'Submit' button is at the bottom left, and a 'Related Links' section with 'View linked accounts' and 'View Subscriptions' links is at the bottom right.

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 title bar says "Group - New Record". The form contains the following fields:

- Name: project team
- Manager: (empty)
- Group email: (empty)
- Parent: (empty)
- Description: (empty)

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 are empty. The 'Description' field is a large text area. 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:

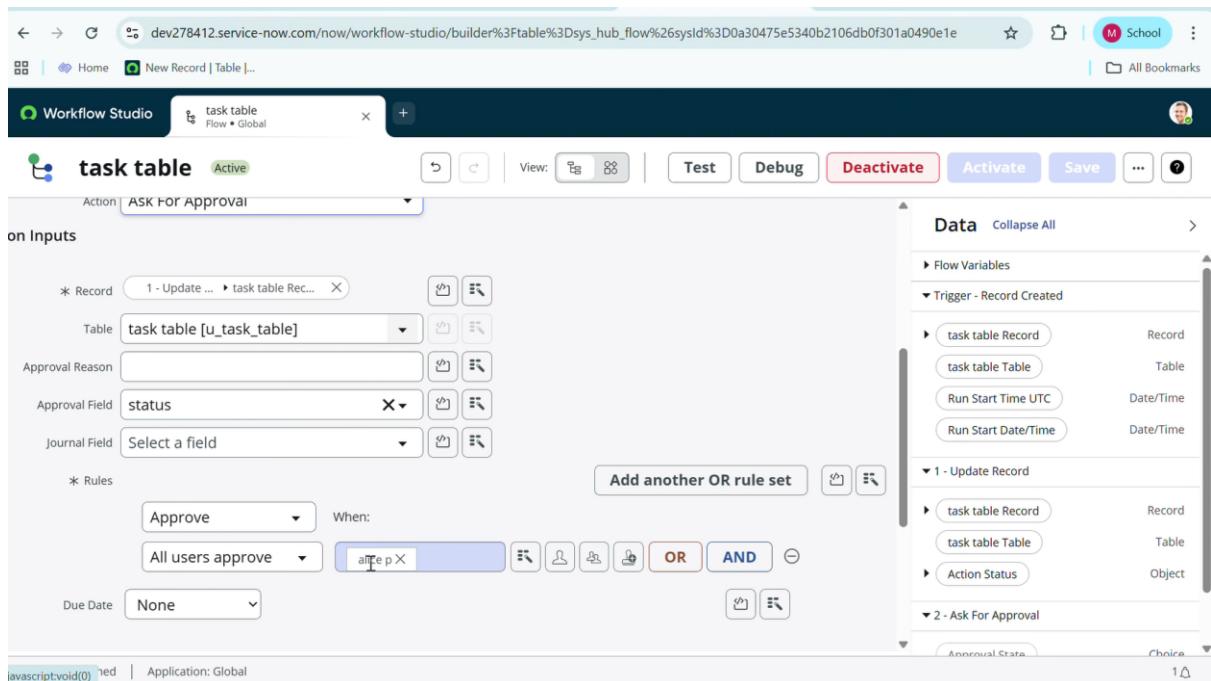
- Type: record
- Operation: write
- Decision Type: Allow If
- Admin overrides: checked
- Protection policy: None
- Name: task\_table [u\_task\_table]
- Description: Created
- Applies To: No. of records matching the condition: 0  
Buttons: Add Filter Condition, Add "OR" Clause

**Conditions**

Access Control Rules have two decision types, and these types will behave differently depending on conditions.  
1. Allow Access: Allows access to a resource if all conditions are met.  
2. Deny Access: Denies access to a resource unless all conditions are met.

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



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.