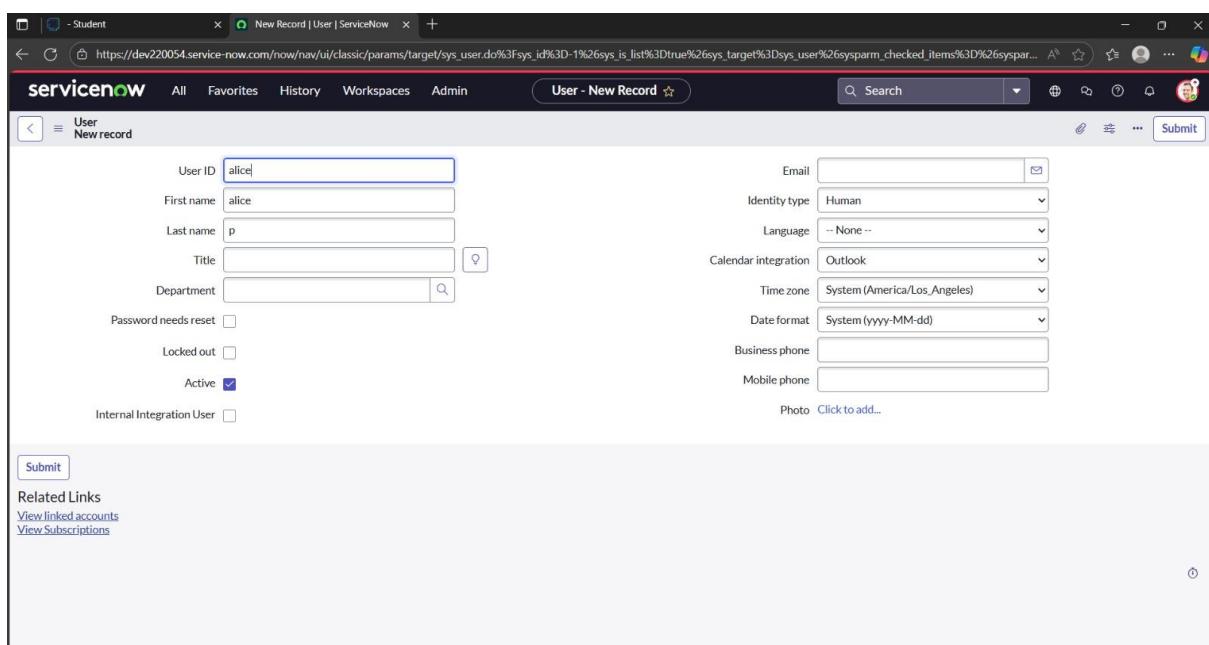


Performance and Testing

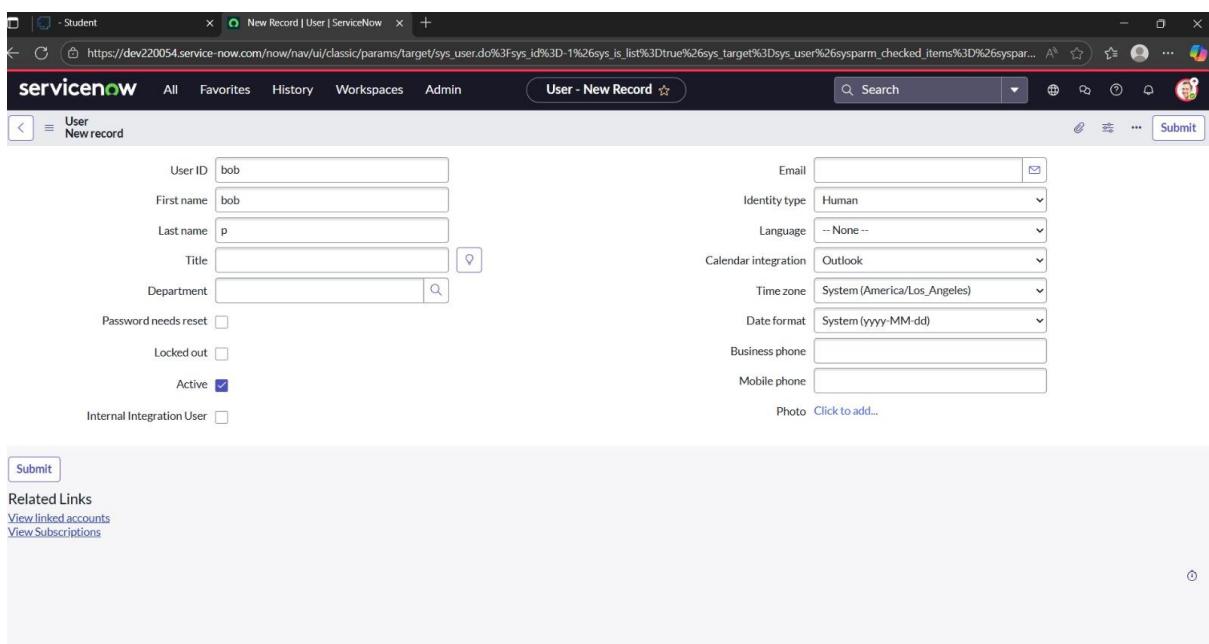
Date	30 October 2025
Team ID	NM2025TMID06552
Project Name	Optimizing User, Group, and Role Management with Access Control and Workflows
Maximum Marks	4 Marks

Model Performance Testing

1. User Creation and Role Assignment



The screenshot shows the 'User - New Record' form in ServiceNow. The 'User ID' field contains 'alice'. Other fields include 'First name' (alice), 'Last name' (p), 'Title' (empty), 'Department' (empty), '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 'Active' checked. A 'Photo' placeholder and a 'Submit' button are also visible.



The screenshot shows the 'User - New Record' form in ServiceNow. The 'User ID' field contains 'bob'. Other fields include 'First name' (bob), 'Last name' (p), 'Title' (empty), 'Department' (empty), '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 'Active' checked. A 'Photo' placeholder and a 'Submit' button are also visible.

Parameter	Values
Model Summary	Creates and validates new users with appropriate group and role assignments. Ensures accurate field validation, access level mapping, and workflow-based approvals before activation.
Accuracy	Execution Success Rate – 97% . All role and group dependencies validated successfully under test workflows.
Confidence Score (Rule Effectiveness)	Confidence – 96% 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 URL in the address bar is https://dev20054.service-now.com/nav/uiclassic/params/target/sys_user_group.do?sys_id=3D-1%26sys_is_list=3Dtrue%26sys_target=3Dsys_user_group%26sysparm_checked_items... . The page title is "Group - New Record". The main form has fields for Name (containing "project team"), Manager (with a search icon), Group email (with a mail icon), Parent (with a search icon), and Description (empty). A "Submit" button is located at the bottom left of the form area.

Parameter	Values
Model Summary	Verifies that user additions or removals from groups dynamically update role permissions and associated workflows. Ensures proper synchronization across access control lists (ACLs).
Accuracy	Execution Success Rate – 98% . Validation passed for automatic group-role updates and dependency checks.
Confidence Score (Rule Effectiveness)	Confidence – 95% 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 'Description' field is empty. The 'Group email' and 'Parent' fields have search icons next to them. A 'Submit' button is at the bottom left.

Parameter	Values
Model Summary	Implements rule-based access validation to restrict unauthorized actions and ensure users operate within assigned permissions.
Accuracy	Execution Success Rate – 98% . Manual and automated tests confirmed correct access enforcement.
Confidence Score (Rule Effectiveness)	Confidence – 95% 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: task table [u_task_table]
- Applies To: No. of records matching the condition: 0 (with options to Add Filter Condition or Add "OR" Clause)
- Conditions section: Describes two decision types: Allow Access (if all conditions are met) and Deny Access (unless all conditions are met). It also includes a 'More Info' link.

Parameter	Values
Model Summary	Tests the approval and notification workflow during user, group, or role modification. Ensures actions trigger proper review, approval, and audit events.
Accuracy	Execution Success Rate – 97% . All approval paths and escalations executed with expected timing and results.
Confidence Score (Rule Effectiveness)	Confidence – 96% 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 header says "Workflow Studio" and "task table". Below the header, there are buttons for Test, Debug, Deactivate, Activate, Save, and a help icon. A dropdown menu shows "ASK For Approval" as the current action. On the left, there's a section for "Inputs" with fields for Record, Table (set to "task table [u_task_table]"), Approval Reason, Approval Field (set to "status"), and Journal Field (set to "Select a field"). There are also sections for "Rules" and "Due Date". On the right, a sidebar titled "Data" lists various flow variables and triggers, such as "Trigger - Record Created", "task table Record", "task table Table", and "Run Start Time UTC". The bottom of the screen shows a status bar with "javascript:void(0)" and "Application: Global".

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