PROJECT DESIGN PHASE

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Team ID: NM2025TMID01606
Project Name: Optimizing User Group and Role Management with Access Control and Workflows

INTRODUCTION TO DESIGN PHASE:

The design phase focuses on planning the structure and workflow of the "Optimizing User Group and Role Management with Access Control and Workflows" system. This phase involves designing data tables, role mappings, access control lists (ACLs), workflows, and dashboards to ensure that the platform provides secure and efficient role-based access control within ServiceNow. By defining the logical and visual framework early, the project establishes a strong foundation for a scalable and compliant implementation.

STEPS:

1. **Creation of New Update Set:**
Navigate to All >> Local Update Sets >> New. Enter the name as "User Role Management System" and make it current.

2. **Table Creation:**
Create the following tables to organize user and role data:
• User Table – Stores basic information about users.
• Role Table – Defines system roles and their associated permissions.
• Access Control Table – Links users and roles to specific modules or workflows.
• Workflow Table – Manages process automation for access approval and role assignment.

3. **Form Layout:**
Design forms for the User and Role tables using ServiceNow's form layout editor. Include fields like User ID, Role Name, Access Level, and Department for quick reference and configuration.

4. **Form Design:**
Use the Form Designer to arrange user access fields, assign relationships between users and roles, and ensure a streamlined interface for administrators.

5. **Number Maintenance:**
Configure automatic numbering for User IDs and Role IDs under Number Maintenance. This ensures unique and traceable identifiers across the access control system.

6. **Process Flow:**
Design workflow processes for role assignment and approval:
New $\rightarrow$ Pending Approval $\rightarrow$ Approved $\rightarrow$ Active $\rightarrow$ Suspended $\rightarrow$ Revoked.

These workflows automate and track each stage of role lifecycle management.

7. **Client Scripts:**
Implement the following scripts:
• Auto-populate Script – Automatically fills in user details based on selection.
• Validation Script – Verifies role assignment consistency and prevents conflicts.
• Access Update Script – Updates role permissions dynamically upon changes.

CONCLUSION OF DESIGN PHASE:

The design phase defines a structured and secure framework for managing users, roles, and workflows within the system. By planning tables, forms, and access control mechanisms in advance, the project ensures clarity, scalability, and compliance. With these components well-structured, the project is ready to progress to the next phase of development and implementation.