

**Project Design
Phase Proposed
Solution**

Date	2 November 2025
Team ID	NM2025TMID06605
Project Name	Optimizing User, Group, and Role Management with Access Control and Workflows
Maximum Marks	2 Marks

Proposed Solution Template:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Organizations face challenges in efficiently managing users, groups, and roles across multiple systems. Manual access control often leads to errors, unauthorized access, and compliance risks. Without automation and workflow-based management, enterprises struggle to maintain security, auditability, and operational efficiency.
2.	Idea / Solution description	The proposed solution automates user, group, and role management through a workflow-driven access control system. Role-Based Access Control (RBAC) principles are applied to assign permissions dynamically. An integrated dashboard provides centralized visibility, reducing manual intervention and increasing compliance.
3.	Novelty / Uniqueness	The solution introduces a unified automation framework that integrates user lifecycle management, workflow approvals, and access control in a single platform. Unlike traditional manual methods, it dynamically adjusts user roles based on context and organizational policies.
4.	Social Impact / Customer Satisfaction	This solution improves organizational security and accountability. It ensures that only authorized individuals access sensitive data and systems. By automating role assignments and reviews, it enhances employee productivity and satisfaction while maintaining regulatory compliance.
5.	Business Model (Revenue Model)	While primarily designed as an internal efficiency and compliance tool, this solution can be offered as a SaaS model for enterprises. It reduces administrative overhead, lowers risk, and improves system reliability—leading to cost savings and better return on IT investment.

6.	Scalability of the Solution	The system can be scaled to support multiple departments, organizations, or access environments. Its modular workflow engine allows integration with various enterprise applications such as HR systems, CRM, or cloud-based identity providers.
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Role-Based Access Control Diagram for PowerPoint



Reference: Infographic created using MidJourney.

Solution Description:

The project 'Optimizing User, Group, and Role Management with Access Control and Workflows' aims to enhance access governance by implementing automated workflows for managing users, groups, and roles within enterprise systems. The solution uses Role-Based Access Control (RBAC) to assign permissions and responsibilities based on organizational roles. Automated approval workflows ensure that any changes to user access are validated before implementation. This approach reduces security risks, prevents unauthorized actions, and ensures compliance with corporate policies and audit requirements.

The centralized access control dashboard allows administrators to view and manage all user permissions in real time. The integration of automated role assignment and periodic access reviews ensures that user privileges remain appropriate throughout their lifecycle. By combining automation, monitoring, and policy enforcement, this project creates a secure, scalable, and efficient access management framework.