# Project Design Phase-II

## Technology Stack (Architecture & Stack)

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| Date | 07 November 2025 |
| Team ID | NM2025TMID09105 |
| Project Name | Optimizing User, Group, and Role Management with Access Control and Workflows |
| Maximum Marks | 4 Marks |

**Technical Architecture:**

The deliverable presents the architectural design and technology stack implemented in the project "Optimizing User, Group, and Role Management with Access Control and Workflows". It illustrates how various components—such as user management, group assignments, and role-based access control—are integrated within a workflow-driven system to ensure secure operations and maintain data integrity.

**Example:**

**Table-1: Components & Technologies:**

| S.No | Component | Description | Technology Date & Time |
|---|---|---|---|
| 1 | User Interface | The admin interacts through a web dashboard to manage users, groups, and roles. | ServiceNow Web UI |
| 2 | Application Logic - 1 | Implements automated workflows for role and group assignments. | ServiceNow Flow Designer |
| 3 | Application Logic - 2 | Validates user-role and group relationships before performing updates. | ServiceNow Scripts / GlideRecord |

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|---|---|---|---|
| 4 | Application Logic - 3 | Sends notifications for updates or changes in access privileges | ServiceNow Notifications |
| 5 | Database | Stores details related to users, groups, and roles. | ServiceNow CMDB |
| 6 | Cloud Infrastructure | Hosted and managed securely on the ServiceNow SaaS environment. | ServiceNow SaaS Platform |
| 7 | File Storage | Maintains system logs and audit records for tracking. | ServiceNow System Logs |
| 8 | External API | Connects with HRMS systems for identity verification and synchronization. | ServiceNow REST API |

## Table-2: Application Characteristics:

| S.No | Characteristics | Description | Technology Date & Time |
|---|---|---|---|
| 1 | Security Implementation | Ensures role-based access control, ACL protection, and secure workflows. | ServiceNow ACLs & Scoped Applications |
| 2 | Scalable Architecture | Provides a SaaS-based scalable framework suitable for large enterprises. | ServiceNow Cloud Platform |
| 3 | Availability | Maintains high system uptime through redundant ServiceNow instances. | Load-balanced SaaS Nodes |

| 4 | Performance | Optimized workflows enhance system performance and reduce delays. | Flow Designer, Background Scripts |
|---|---|---|---|
| 5 | Integration | Enables seamless connectivity with external systems via REST APIs. | ServiceNow Integration Hub |