| Date | 01 Nov 2025 |
|---|---|
| Team ID | NM2025TMID01533 |
| Project Name | Optimizing User, Group, and Role Management with Access Control and Workflows |
| Maximum Marks | 4 Marks |

## Solution Architecture:

**Workflow for Role-Based Access Control and Task Management**

1. **User Identification and Role Assignment** o Each team member is assigned a role upon onboarding (e.g., Project Manager, Team Member). o Roles determine the level of access and control over project resources and tasks.
2. **Task Creation and Allocation** o The Project Manager creates tasks and assigns them to specific team members based on their roles.
   o Tasks are categorized by priority, deadline, and required skills.
3. **Access Control Implementation** o Role-based permissions ensure that users only access relevant tools, documents, and information. o Admin rights remain with the Project Manager, while members access only assigned task zones.
4. **Task Execution and Status Updates** o Team members execute tasks and regularly update progress within the system. o Each status change (e.g., In Progress, Blocked, Completed) triggers a notification to the relevant stakeholders.
5. **Review and Feedback** o The Project Manager reviews task outputs and provides feedback or approvals.
   o A feedback loop ensures continuous improvement and knowledge transfer.
6. **Reporting and Documentation** o The system generates reports on task completion, timelines, and performance. o These insights help in future project planning and accountability.

## Example - Solution Architecture Diagram:

Figure 1: Architecture and data flow of the Optimizing User, Group, and Role Management with Access Control and Workflows

## Optimizing User, Group, and Role Management with Access Control Workflow

| User Management | Role Management |
|---|---|
| Manage users and groups | Define user roles (e.g. Project Manager, Team Member) |

| Access Control | Task Assignment |
|---|---|
| Assign permissions based on roles | Assign tasks to users |

| Approval | Task Updates |
|---|---|
| Approve tasks if required | Update task status |

| Audit and Reporting | Workflow Automation |
|---|---|
| Review user activities end generate reports | Automate task assignmenl and approval |

| Project Management |
|---|
| Track project progress |