Project Design Phase Solution Architecture

Date	02 Nov 2025
Team ID	NM2025TMID00760
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
   - Each team member is assigned a role upon onboarding (e.g., Project Manager, Team Member).
   - Roles determine the level of access and control over project resources and tasks.
2. Task Creation and Allocation
   - The Project Manager creates tasks and assigns them to specific team members based on their roles.
   - Tasks are categorized by priority, deadline, and required skills.
3. Access Control Implementation
   - Role-based permissions ensure that users only access relevant tools, documents, and information.
   - Admin rights remain with the Project Manager, while members access only assigned task zones.
4. Task Execution and Status Updates
   - Team members execute tasks and regularly update progress within the system.
   - Each status change (e.g., In Progress, Blocked, Completed) triggers a notification to the relevant stakeholders.
5. Review and Feedback
   - The Project Manager reviews task outputs and provides feedback or approvals.
   - A feedback loop ensures continuous improvement and knowledge transfer.
6. Reporting and Documentation
   - The system generates reports on task completion, timelines, and performance.
   - These insights help in future project planning and accountability.

Example - Solution Architecture Diagram:

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

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

User Management
Manage users and groups

Role Management
Define user roles (e.g. Project Manager, Team Member)

Access Control
Assign permissions based on roles

Task Assignment
Assign tasks to users

Approval
Approve tasks if required

Task Updates
Update task status

Audit and Reporting
Review user activities end generate reports

Workflow Automation
Automate task assignmenl and approval

Project Management
Track project progress