

Project Design Phase – II

Data Flow Diagram & User Stories

Date	1 November 2025
Team ID	NM2025TMID00630
Project Name	Optimizing User, Group, and Role Management with Access Control and Workflows
Maximum Marks	4 Marks

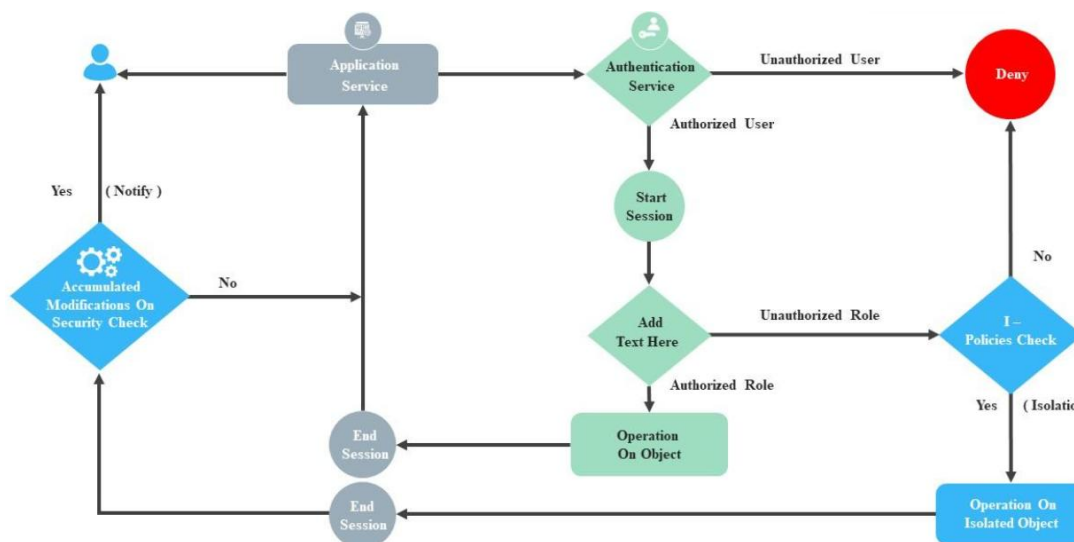
Data Flow Diagrams (DFD):

A **Data Flow Diagram (DFD)** is a graphical representation that shows how data moves within a system. It helps in understanding how information is input, processed, stored, and output.

In the project “**Optimizing User, Group, and Role Management with Access Control and Workflows,**” the DFD explains how administrators manage users, groups, and roles within the system. It also illustrates how access permissions are verified and how workflows are triggered for approval or updates.

The DFD shows the interaction between the **Admin, System, and Access Control Database** to ensure proper role assignment and secure data handling. When a new user or role is created or modified, the system validates permissions, updates the workflow, and stores the changes securely.

Example:



1. **Admin** logs into the system to manage users, groups, or roles.
2. Admin **creates or updates** a user/group/role.
3. The **system checks access control rules** to verify allowed permissions.

4. If approval is needed, a **workflow is triggered** and sent to the approver.
5. Once approved, **the database is updated** and a confirmation is shown to the admin.
6. The system **logs all activities** for audit and security tracking.

User Stories:

User stories describe what different users need from the system in simple and goal-oriented language. In this project, they ensure that user, group, and role management is secure, automated, and workflow-driven.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance Criteria	Priority	Release
Administrator	User and Role Management	USN-1	As an admin, I want to create, edit, and delete users, groups, and roles so that system access is managed efficiently.	The system should allow these operations only with proper authorization and workflow approval.	High	Sprint-1
System (Auto-check)	Access Validation	USN-2	As a system, I must verify access permissions and enforce security policies before applying any changes to user or role data.	Changes are applied only if they pass access control validation	High	Sprint-1
Workflow Manager	Approval Workflow	USN-3	As a workflow manager, I want to receive notifications for approval when user or role updates are made.	The system should send workflow alerts and update status after approval or rejection.	Medium	Sprint-2