Project Design Phase-2
Data Flow Diagrams & User Stories

Date	2 NOVEMBER 2025
Team ID	NM2025TMID05988
Project Name	Optimizing User, Group, and Role Management with Access Control and Workflows
Maximum Marks	4 Marks

Data Flow Diagrams:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system.

Level 0 DFD (High-level overview)

This shows the system as a single process and its interaction with external entities.

Entities:

Admin – manages users, groups, roles, workflows.

Users – access resources based on roles and permissions.

External Systems – optional, like authentication or third-party apps.

Process:

User, Group & Role Management System

Data Stores:

User Database

Role Database

Group Database

Workflow Database

Flow:

Admin --> (User, Group & Role Management System) --> User Database

Users --> (User, Group & Role Management System) --> Workflow Database

External Systems --> (System) --> Role/Access Data

Level 1 DFD (Breakdown of main processes)

Here we divide the main system into core processes:

1. User Management

Add, update, delete, or view users.

Data flows: User info $\leftrightarrow$ User DB

2. Group Management

Create/modify groups, assign users to groups.

Data flows: Group info $\leftrightarrow$ Group DB

3. Role Management

Create roles, assign permissions, assign users/groups to roles.

Data flows: Role info $\leftrightarrow$ Role DB

4. Access Control & Workflow Management

Check user permissions, route tasks based on workflow rules.

Data flows: Workflow rules $\leftrightarrow$ Workflow DB

External interactions:

Admin sends commands (Add/Edit/Delete users/groups/roles)

Users request access to resources → system checks workflow & access control

Level 2 DFD (Detailed processes example)

Let's take Access Control & Workflow Management:

1. Request Access (User → System)

2. Check Role & Permissions (System → Role DB)

3. Check Group Policies (System → Group DB)

4. Route Workflow Task (System → Workflow DB)

5. Send Response (Access granted/denied)

User Stories

User stories define what different users need from the system in simple, goal-focused language. In this project, they help ensure the system blocks user deletion only when necessary, protecting incident data.

User Type	Functional Requirements	User Story Number	User Story/ Task	Acceptance Criteria	Priority	Sprint
Project Manager	Task & Workflow Management	USN-1	I want to assign tasks to team members so that work is organized.	The system allows assigning tasks only to active users	High	Sprint-1
System Admin	User Management	USN-2	I want to add, update, or deactivate users.	Users can be created, modified, or deactivated.	High	Sprint-1
Team Member	Task Interaction	USB-3	I want to view and update my assigned tasks	Task updates are immediately visible to the team manager and team	High	Sprint-1