Project Design Phase II

Data Flow Diagram and User Stories

Date	2-10-2025
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Project Name	Optimizing User, Group, and Role Management with Access Control and Workflows
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Data Flow Diagram (Short Version)

External Entities:

Users – Send access requests.

Admins – Approve or reject requests.

HR System – Provides employee data.

Applications – Receive access permissions.

Main Process:

User, Group, and Role Management with Access Control and Workflows

Data Stores:

User Database – Stores user info.

Role & Policy Database – Stores roles and permissions.

Audit Log Repository – Stores activity logs.

Data Flows:

HR System → sends employee data → User Database

Users → send access requests → Management System

System → sends approval → Admins → returns decision → System

System → provisions access → Applications

System → stores logs → Audit Repository

Example: Employee Onboarding in a Company

When a new employee joins a company, the HR System automatically sends their details (like name, department, and designation) to the User Management System. Based on the employee's role — for example, Software Engineer — the

system automatically assigns them to the Engineering Group and gives them access to required applications such as GitHub, Jira, and Email.

If the employee needs additional access (like database permissions), they can submit a workflow request through the portal. The request goes to the Team Lead or Administrator for approval. Once approved, the system automatically grants the necessary access and updates the Audit Log for record-keeping.

Through this automated workflow, the company reduces manual effort, avoids unauthorized access, and ensures that every user has the right permissions according to their role. This improves both security and efficiency in managing users, groups, and access rights.

User Story

Title: Automate user access management with approval workflows

As a system administrator,

I want an automated system to manage user, group, and role access with built-in approval workflows,

so that I can ensure the right people have the right level of access without manual errors or security risks.

Acceptance Criteria

1. The system should automatically create user accounts when HR adds a new employee.

2. Users should be assigned to default groups and roles based on their department or job title.

3. Access requests must go through an approval workflow before permissions are granted.

4. All access changes must be logged in an audit repository.

5. Admins should be able to review, approve, or revoke access easily through a dashboard.