Project Design Phase-II

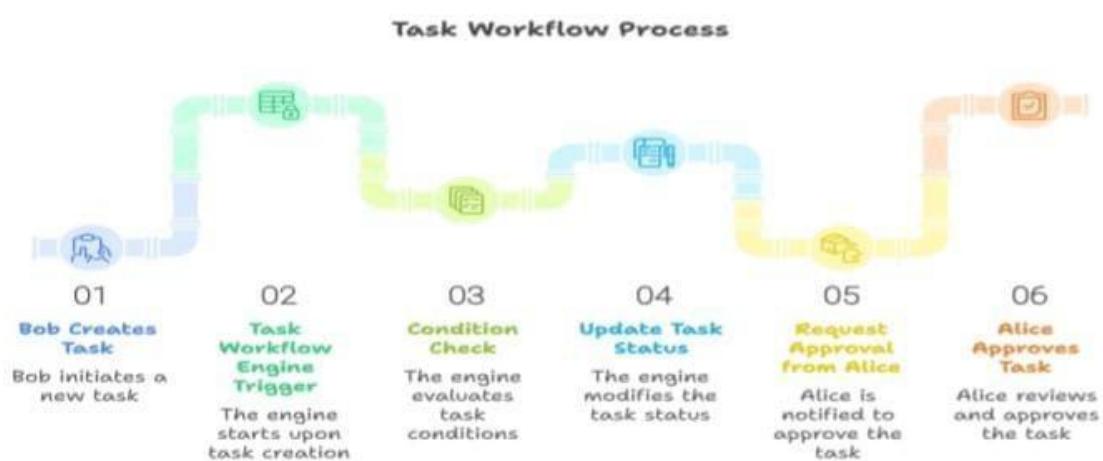## Data Flow Diagrams and User Stories

Date	7 November 2025
Team ID	NM2025TMID09137
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 visual tool used to represent how information moves within a system. A clear and structured DFD effectively illustrates the overall system requirements by showing how data enters, exits, and flows through various components, as well as how it is transformed and stored. In the project "Optimizing User, Group, and Role Management with Access Control and Workflows," Data Flow Diagrams (DFDs) demonstrate how user, group, and role data are processed across different stages of the system. The DFD visualizes the interactions among the admin, system, and database components to ensure validation of actions and maintenance of data consistency.

Example:

Task Workflow Process

01	02	03	04	05	06
Bob Creates Task	Task Workflow Engine Trigger	Condition Check	Update Task Status	Request Approval from Alice	Alice Approves Task
Bob initiates a new task	The engine starts upon task creation	The engine evaluates task conditions	The engine modifies the task status	Alice is notified to approve the task	Alice reviews and approves the task

User Stories:

User stories describe the needs and expectations of various users in simple, goal-oriented language. In this project, they define how the system should efficiently manage user, group, and role configurations while maintaining workflow automation and access control integrity.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance Criteria	Priority / Release
Administrator	User Management	USN-1	As an admin, I want to create, modify, or delete users while ensuring roles and groups are updated automatically.	The system should validate linked entities before any modification.	High / Sprint-1
System	Access Validation	USN-2	As a system, I must automatically validate group and role dependencies before updating access information.	No user or group should have conflicting access mappings.	High / Sprint-1
Manager	Workflow Approval	USN-3	As a manager, I want to review and approve workflow requests related to group and role assignments.	The system should generate notifications for pending approvals.	Medium / Sprint-2