Project Design Phase-II

Data Flow Diagram & User Stories

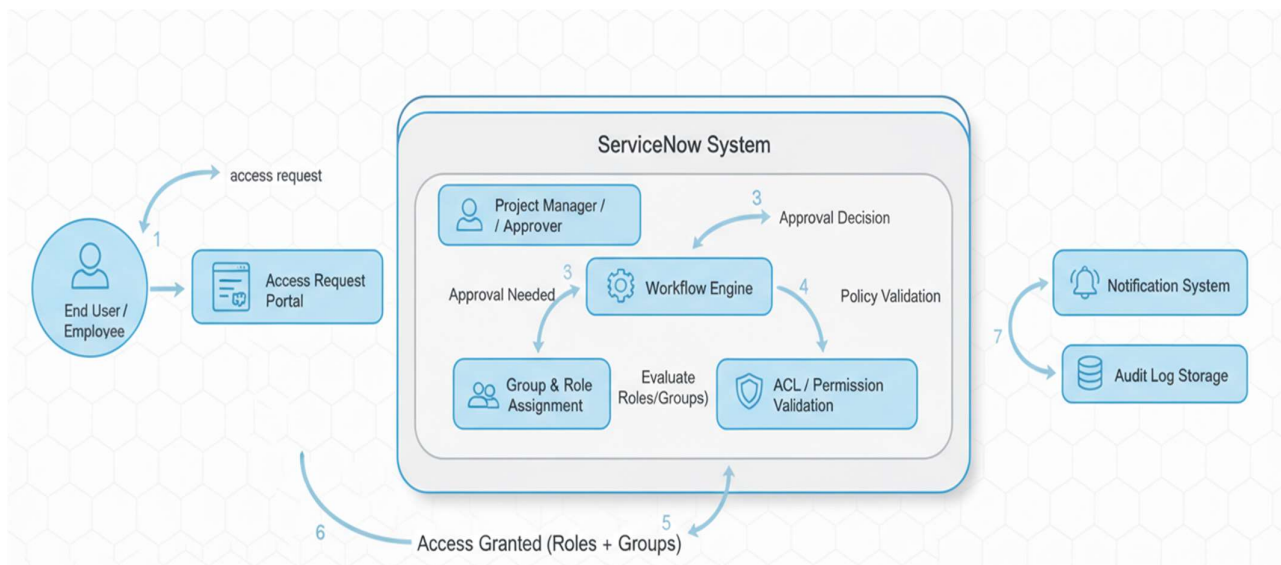| Date	2 November 2025
Team ID	NM2025TMID06157
Project Name	Optimizing User, Group, and Role Management with Access Control and Workflows
Maximum Marks	4 Marks

Data Flow Diagrams:

A Data Flow Diagram (DFD) visually represents how information flows within the access control system in ServiceNow. It shows how user provisioning requests move through the system, how role assignments are validated, how workflows manage approvals, and where data is stored and reviewed.

In this project **"Optimizing User, Group and Role Management with Access Control and Workflows in ServiceNow"**, the DFD explains how user account creation, role assignments, and access approvals are handled. It also shows how the system integrates with HR inputs, validates access rules, triggers approval workflows, and logs audit information for compliance.

When a user's profile or job role changes, the workflow evaluates and updates group/role assignments automatically. Elevated access goes through an approval process, ensuring the principle of **least privilege**.

This maintains security, prevents unauthorized access, and ensures proper audit reporting.

Example Flow:

Data Flow Diagram Description Flow Steps:

1. HR system triggers user create/update event
2. User record created/modified in ServiceNow
3. System checks employee department/role/job function

4. User auto-assigned to corresponding groups
5. Roles assigned based on group membership
6. If elevated role requested, system triggers approval workflow
7. Manager & security team approve/reject request
8. Access granted/denied accordingly
9. All access changes logged in audit history
10. Periodic access review reminders sent to managers/security

User Stories:

User stories describe what different users expect from this ServiceNow access management solution.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance Criteria	Priority	Release
HR Team	User creation & update	USN-1	As an HR user, I want new employee records to automatically trigger user creation in ServiceNow	User is auto-created with basic roles & assigned department groups	High	Sprint-1
System (Auto-Process)	Group & Role assignment	USN-2	As a system, I want to assign groups & roles based on department and job role	User receives correct access based on role rules	High	Sprint-1
Manager	Access approval workflow	USN-3	As a manager, I want to approve or reject employee access requests	Access granted only after manager approval	High	Sprint-1
Security Admin	Policy enforcement	USN-4	As a security admin, I want elevated roles to require security approval	Elevated access activated only after security approval	High	Sprint-1
System (Auto Security Check)	Role validation	USN-5	As a system, I must remove roles when the employee's role changes	Old roles removed automatically on profile change	High	Sprint-2
Compliance/Audit Team	Audit logs	USN-6	As an auditor, I want to review access change logs	System provides exportable audit logs & reports	Medium	Sprint-2
Manager	Access review	USN-7	As a manager, I want periodic reminders to verify user access	System sends access review reminders & review forms	Medium	Sprint-3
End User	Access request self-service	USN-8	As a user, I want to request additional system access	Request submitted, tracked, and routed through approvals	Medium	Sprint-3