

Project Design Phase-II

Technology Stack (Architecture & Stack)

Date	31 October 2025
Team ID	26F183223D3726BBDE54BD8DC6085AFC
Project Name	Optimizing User, Group, and Role Management with Access Control and Workflows
Maximum Marks	2 Marks

Technical Architecture:

The architecture focuses on efficient management of users, groups, and roles within a structured workflow environment in **ServiceNow**. It ensures controlled access, accountability, and automated task flow through access control lists (ACLs) and Flow Designer automation.

Example:

Workflow for project management team with clearly defined roles (Project Manager – *Alice*, Team Member – *Bob*).

Guidelines Followed:

- Included all processes (application logic + technology stack)
- Defined role-based access control (Alice – Manager, Bob – Member)
- Created structured flow automation for task assignment and approval
- Provided secure ACLs and modular design

Table-1: Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Users interact via ServiceNow dashboard to manage roles and groups.	ServiceNow Web UI
2.	Application Logic-1	Create and manage users, groups, and roles with workflows.	Flow Designer, Server Script

3.	Application Logic-2	Assign users to groups and define role-based access control.	ServiceNow Scripting
4.	Application Logic-3	Validate access and update task status using automation flows.	GlideRecord, Notifications
5.	Database	Stores user, group, and role information with task details.	ServiceNow Database Tables
6.	Cloud Database	Managed by ServiceNow Cloud Backend.	ServiceNow Database Tables
7.	External API	Integration for approvals and task triggers (if required).	REST API (ServiceNow Integration)
8.	File Storage	Screenshots and logs stored internally.	ServiceNow Logs
9.	Machine Learning Model	Not applicable for this project.	-
10.	Infrastructure (Server/Cloud)	Hosted and managed on ServiceNow SaaS platform.	ServiceNow Cloud (SaaS)

Table2: Application Characteristics

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Not applicable (ServiceNow is proprietary).	
2.	Security Implementations	Role-based access control, ACLs, and secure workflows.	ACLs, Scoped Applications
3.	Scalable Architecture	SaaS-based model allows scalable user and role management.	ServiceNow Cloud Architecture
4.	Availability	Highly available with ServiceNow Cloud hosting.	Load-balanced ServiceNow Instance
5.	Performance	Optimized through asynchronous flows and automation.	GlideRecord, Background Scripts