

Project design phase-II

Technology Stack (Architecture & Stack)

Date : 02 november 2025

Team ID : NM2025TMID02609

Project Name : Optimizing User, Group, and Role Management with Access Control and Workflows

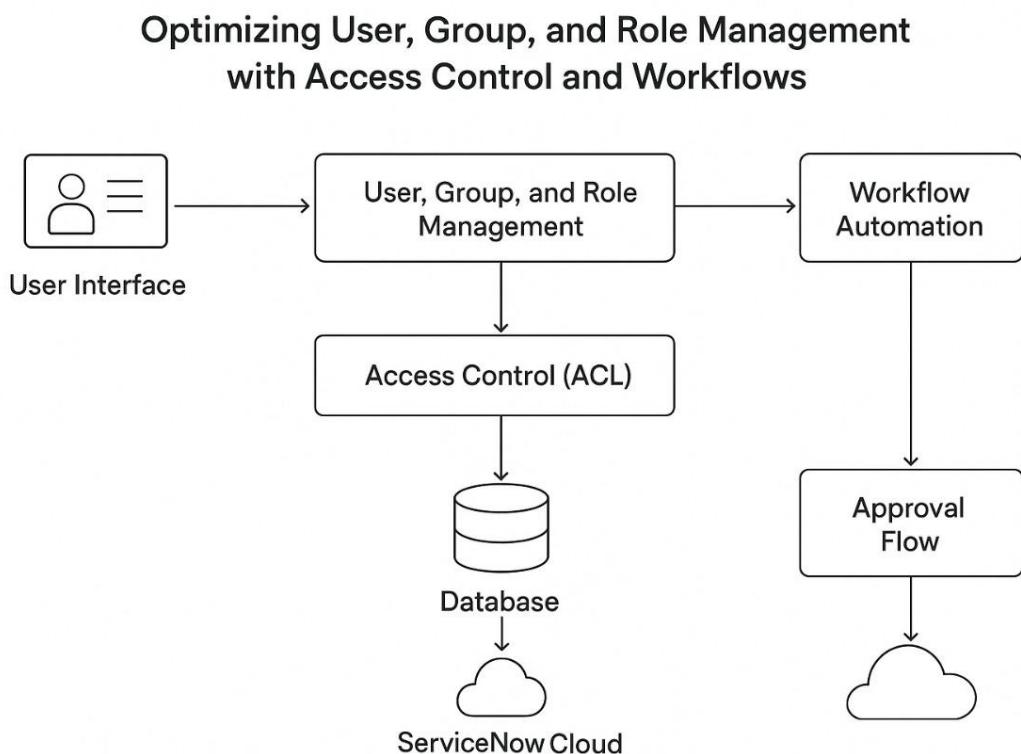
Maximum Marks: 4marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

Example: User, Role, and Workflow Automation for IT Service Management Systems

Reference: https://developer.servicenow.com/dev.do#!/learn/learning-plans/rome/app_store_learnv2_buildmyfirstapp_rome_creating_application_logic



Guidelines:

- Includes all logical processes such as user creation, role assignment, and approval automation.
- Uses **ServiceNow Cloud (SaaS)** infrastructure.
- Integrates built-in modules like Flow Designer and ACLs (no external APIs required).
- Ensures secure data management via ServiceNow's CMDB and task tables.

Table – 1 : Components & Technologies

S.No	Component	Description	Technology
1.	User Interface	Admin, Project Manager, and Team Members interact through the ServiceNow web dashboard.	ServiceNow Web UI
2.	Application Logic – 1	Handles user, group, and role creation and management within the security module.	ServiceNow User & Role Management
3.	Application Logic – 2	Executes workflow automation for task assignment and completion using Flow Designer.	ServiceNow Flow Designer
4.	Application Logic – 3	Manages approval requests and status updates for tasks.	ServiceNow Approval Engine
5.	Access Control Logic (ACL)	Defines permissions for task and project tables based on assigned roles.	Access Control List (ACL) in ServiceNow
6.	Database	Stores user, role, task, and workflow data within ServiceNow CMDB and custom tables.	ServiceNow CMDB
7.	Cloud Infrastructure	Hosted and maintained on the ServiceNow SaaS environment.	ServiceNow Cloud Platform
8.	File Storage	Minimal use; logs and configuration files stored internally	ServiceNow System Logs

Table – 2 : Application Characteristics

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Not applicable (ServiceNow is proprietary).	—
2.	Security Implementations	Enforced through ACLs, roles, and scoped applications.	ACLs, Role-Based Access Control
3.	Scalable Architecture	SaaS-based platform that scales with the organization's user and role base.	ServiceNow Cloud Architecture
4.	Availability	Highly available with load-balanced ServiceNow instances ensuring uptime.	ServiceNow Cloud Hosting
5.	Performance	Optimized by asynchronous flows, background scripts, and indexed tables	Flow Designer, GlideRecord
6.	Reliability	Workflows and ACLs ensure consistent, error-free access management.	ServiceNow Flow Designer, ACL Engine