Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	
Team ID	LTVIP2026TMIDS79123
Project Name	Optimizing User, Group, and Role Management with Access Control and Workflows
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2
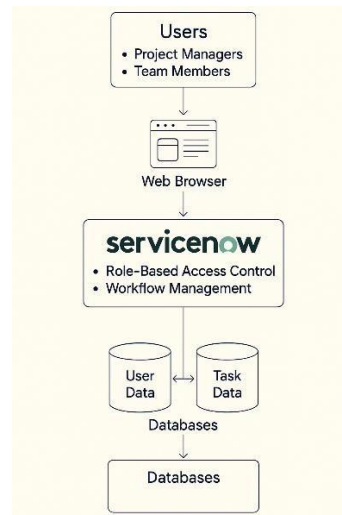
Table-1: Components & Technologies

S.No	Component	Description	Technology / Platform
1	User Interface	Web-based interface for Project Manager and Team Members	ServiceNow UI Builder, HTML5, CSS, JavaScript
2	Application Logic-1	Workflow orchestration and role assignment logic	ServiceNow Flow Designer, Business Rules
3	Application Logic-2	Notification and task lifecycle automation	ServiceNow Notification Engine, Script Actions
4	Application Logic-3	Access validation based on roles	Access Control Rules, ACLs in ServiceNow
5	Database	Stores user data, roles, and task information	ServiceNow CMDB and Tables (MySQL under the hood)
6	Cloud Database	Cloud-based storage with automated backups	ServiceNow Platform-as-a-Service (PaaS)
7	File Storage	Attachment handling and storage	ServiceNow Attachments Module
8	External API-1	Integration with notification channels (e.g., email, MS Teams)	Email API, IntegrationHub connectors
9	External API-2	Optional integration for identity verification	OAuth2, Azure AD, or Aadhar API
10	Machine Learning Model	Intelligent routing of tasks or anomaly detection (if used)	ServiceNow Predictive Intelligence (optional)
11	Infrastructure (Server/Cloud)	Cloud deployment and scalability	ServiceNow Cloud Infrastructure (Multi-tenant SaaS)

Table-2: Application Characteristics

S.No	Characteristics	Description	Technology Used
1	Open-Source Frameworks	Use of client-side scripting frameworks (if extended beyond ServiceNow)	AngularJS (in Service Portal), Bootstrap

S.No	Characteristics	Description	Technology Used
2	Security Implementations	Role-based access control, ACLs, authentication protocols	LDAP, SSO, OAuth2, ACLs, Encryption
3	Scalable Architecture	Modular design with scalable workflows and table structures	ServiceNow Scoped Apps, REST APIs
4	Availability	Highly available via distributed ServiceNow cloud infrastructure	Load-balanced SaaS Architecture
5	Performance	Designed for fast response times with limited API calls and efficient table structures	GlideAjax, Scheduled Jobs, Indexing