

Project Design Phase-II

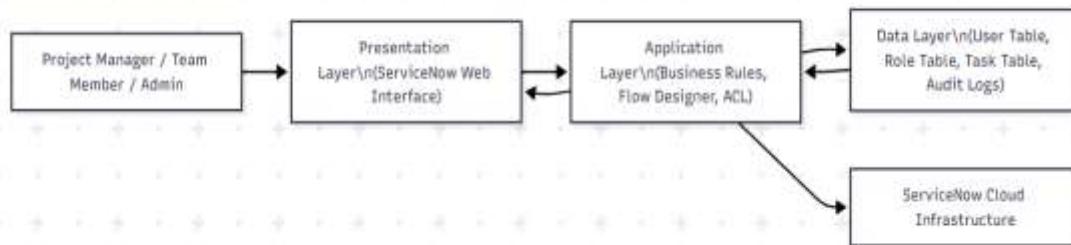
Technology Stack (Architecture & Stack)

Date	02 February 2026
Team ID	LTVIP2026TMIDS60803
Project Name	Optimizing User, Group & 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

Example: Optimizing User, Group & Role Management with Access Control and Workflows



Reference: <https://developer.ibm.com/patterns/ai-powered-backend-system-for-order-processing-during-pandemics/>

Guidelines:

- Include all the processes (As an application logic / Technology Block)
- Provide infrastructural demarcation (Local / Cloud)
- Indicate external interfaces (third party API's etc.)
- Indicate Data Storage components / services
- Indicate interface to machine learning models (if applicable)

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1	User Interface	Web-based dashboard for managing users, roles, and tasks	ServiceNow Web UI (HTML, CSS, JavaScript)
2	Application Logic-1	User & Role Management Logic	ServiceNow Business Rules, Glide API
3	Application Logic-2	Task Workflow Automation	ServiceNow Flow Designer
4	Application Logic-3	Access Control & Permission Management	ServiceNow ACL (Role-Based Access Control)
5	Database	Stores users, roles, groups, tasks, and logs	ServiceNow Relational Database (MySQL-based backend)
6	Cloud Database	Managed cloud-based database service	ServiceNow Cloud Data Storage
7	File Storage	Stores attachments related to tasks	ServiceNow Attachment Storage
8	External API-1	Email notification integration	SMTP / Email Notification Service
9	External API-2	Integration with third-party tools (optional)	REST APIs
10	Machine Learning Model	Task categorization & predictive insights (optional feature)	ServiceNow Predictive Intelligence

S.No	Component	Description	Technology
11	Infrastructure (Server / Cloud)	Cloud-based SaaS deployment model	ServiceNow Cloud Infrastructure

Table-2: Application Characteristics

S.No	Characteristics	Description	Technology
1	Open-Source Frameworks	Uses standard web technologies and REST integration	JavaScript, REST API
2	Security Implementations	Role-Based Access Control, encrypted communication, login authentication	ServiceNow ACL, RBAC, HTTPS (SSL/TLS), IAM Controls
3	Scalable Architecture	Multi-tenant SaaS architecture supporting increasing users & projects	ServiceNow Cloud Platform
4	Availability	24/7 cloud-based availability with redundancy and backup	ServiceNow Data Centers & Load Balancing
5	Performance	Optimized database indexing, caching, workflow optimization for faster processing	ServiceNow Glide Engine & Indexed Tables

References:

<https://c4model.com/>

<https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/>

<https://www.ibm.com/cloud/architecture>

<https://aws.amazon.com/architecture>

<https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d>