

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

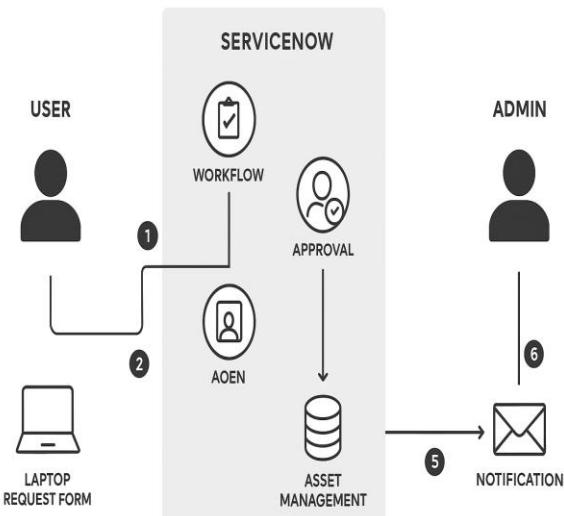
Date	02 NOVEMBER 2025
Team ID	NM2025TMID04453
Project Name	Laptop request catalog item
Maximum Marks	4 Marks

Technical Architecture:

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

Example: Laptop requests are submitted through ServiceNow, routed for manager approval, processed by IT, and assigned as assets with automated tracking and notifications.

Reference: <https://www.atlassian.com/agile/project-management>



Guidelines:

The architecture shows all key processes—from laptop request submission to approval, IT fulfillment, asset assignment, and notifications—along with data storage in ServiceNow tables and CMDB. It also highlights local (user browser) vs. cloud components and notes that machine learning is not applicable since the system is rule-based.

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1	User Interface	Employee and Manager interact via ServiceNow Self-Service Portal	ServiceNow Portal / Web UI
2	Application Logic-1	Catalog form captures laptop request details and validates required fields	ServiceNow Catalog Item + UI Policies
3	Application Logic-2	Routes request for manager approval and triggers IT fulfillment tasks	ServiceNow Flow Designer / Workflows
4	Application Logic-3	Sends automated notifications on request submission, approval, and closure	ServiceNow Notifications
5	Database	Stores request, task, and asset assignment details	ServiceNow Tables (sc_req_item, task, cmdb_ci)

6	Cloud Database	Backend data hosted in ServiceNow cloud	ServiceNow Cloud Database
7	File Storage	Minimal file storage; system stores logs and audit data	ServiceNow System Logs
8	External API-1	(Optional) Integration with HRMS or AD for employee details	REST API / LDAP Integration
9	External API-2	Not applicable	—
10	Machine Learning Model	Not applicable; rule-based workflow system	—
11	Infrastructure (Server / Cloud)	Hosted on ServiceNow SaaS platform	ServiceNow Cloud (SaaS)

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1	Open-Source Frameworks	Not applicable (ServiceNow is a proprietary low-code platform)	—
2	Security Implementations	Role-based access control for Users, Managers, and IT; secure workflows and form access	RBAC, ACLs, Scoped App Policies
3	Scalable Architecture	Scales automatically as organization grows, managed by ServiceNow cloud infrastructure	ServiceNow SaaS Cloud Architecture
4	Availability	High availability ensured through ServiceNow multi-zone cloud deployment	Load-balanced ServiceNow Data Centers
5	Performance	Ensured through optimized workflows, indexed tables, and async processing for tasks/notifications	GlideRecord, Flow Designer, Background Scripts

