

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

Date	01 Nov 2025
Team ID	NM2025TMID01308
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

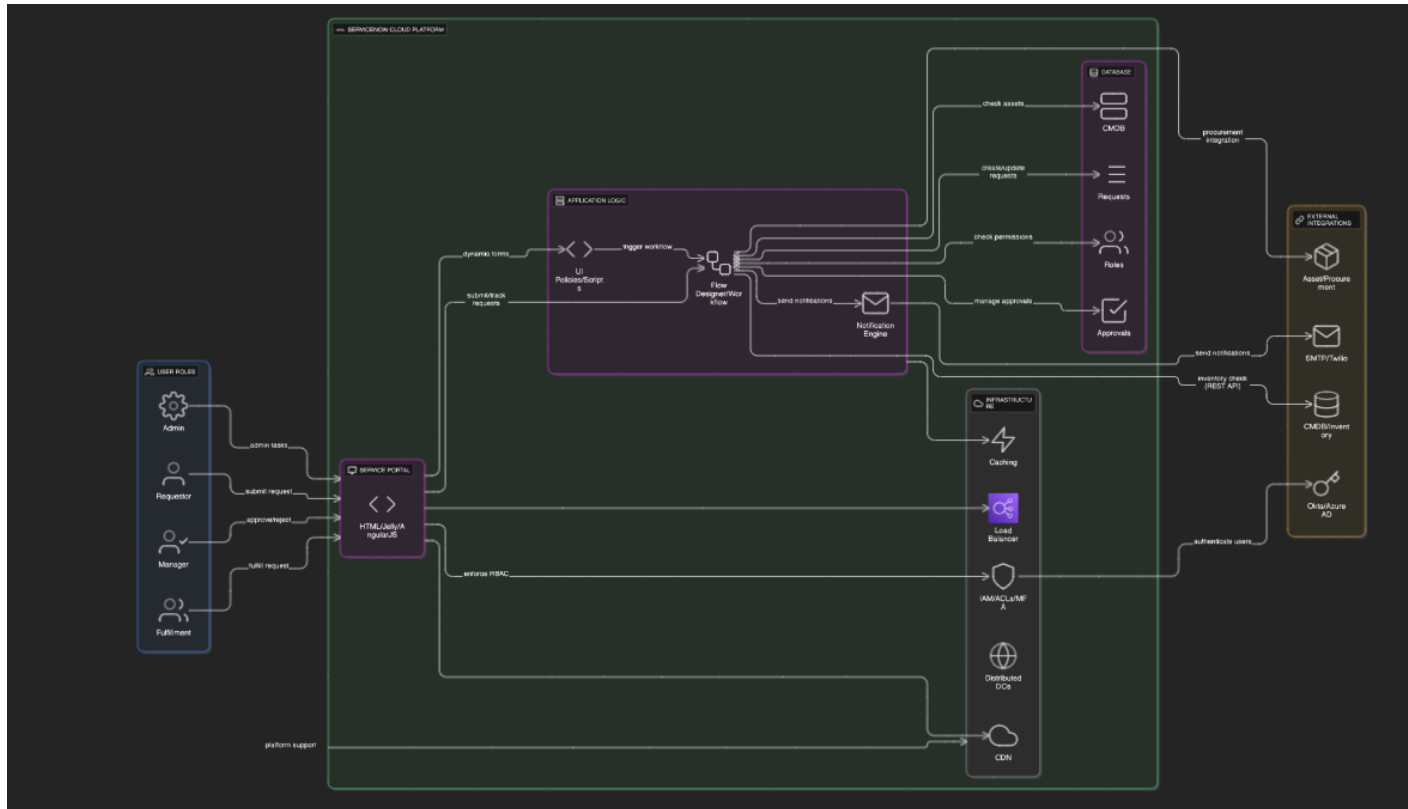


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web-based ServiceNow Service Catalog portal to submit requests	ServiceNow UI Framework (HTML, Jelly, AngularJS inside ServiceNow)
2.	Application Logic-1	Dynamic form behavior using UI Policies and Client Scripts	ServiceNow Server-side scripts (JavaScript, Glide API)

3.	Application Logic-2	Workflow automation and approval processing	ServiceNow Flow Designer / Workflow Engine
4.	Application Logic-3	Email notification and alert logic	ServiceNow Notification Engine
5.	Database	Stores laptop request, approval, and user data	ServiceNow CMDB, Task and Request tables (MySQL-based backend)
6.	External API-1	Integration to fetch laptop availability from CMDB	ServiceNow REST API or OOTB CMDB APIs
7.	Infrastructure (Server / Cloud)	ServiceNow Platform hosted on Cloud	ServiceNow Cloud SaaS Platform

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	ServiceNow platform leverages open-source components like AngularJS for UI, and JavaScript for client/server scripting.	AngularJS, JavaScript
2.	Security Implementations	Role-based access control, multi-factor authentication, encryption of data at rest and in transit, OWASP best practices.	ServiceNow IAM, HTTPS, TLS, ACLs, OAuth2
3.	Scalable Architecture	ServiceNow's multi-tenant cloud architecture supports scalability with modular components and APIs following microservices principles.	ServiceNow Cloud Platform, REST APIs
4.	Availability	High availability with geographically distributed data centers, automated failover, scheduled maintenance windows.	ServiceNow Cloud Infrastructure, Load Balancers
5.	Performance	Optimized workflows, caching mechanisms within ServiceNow, and CDN services for static assets to ensure low latency and high throughput.	ServiceNow Caching Layer, CDN (Akamai or similar)

