

Project Design Phase-II

Technology Stack(Architecture&Stack)

Date	31 October 2025
TeamID	NM2025TMID04347
ProjectName	Laptop Request Catalog Item
Maximum Marks	4Marks

Technical Architecture:

The Deliverables shall include the architectural diagrams below and the information as per the table 1 & table 2

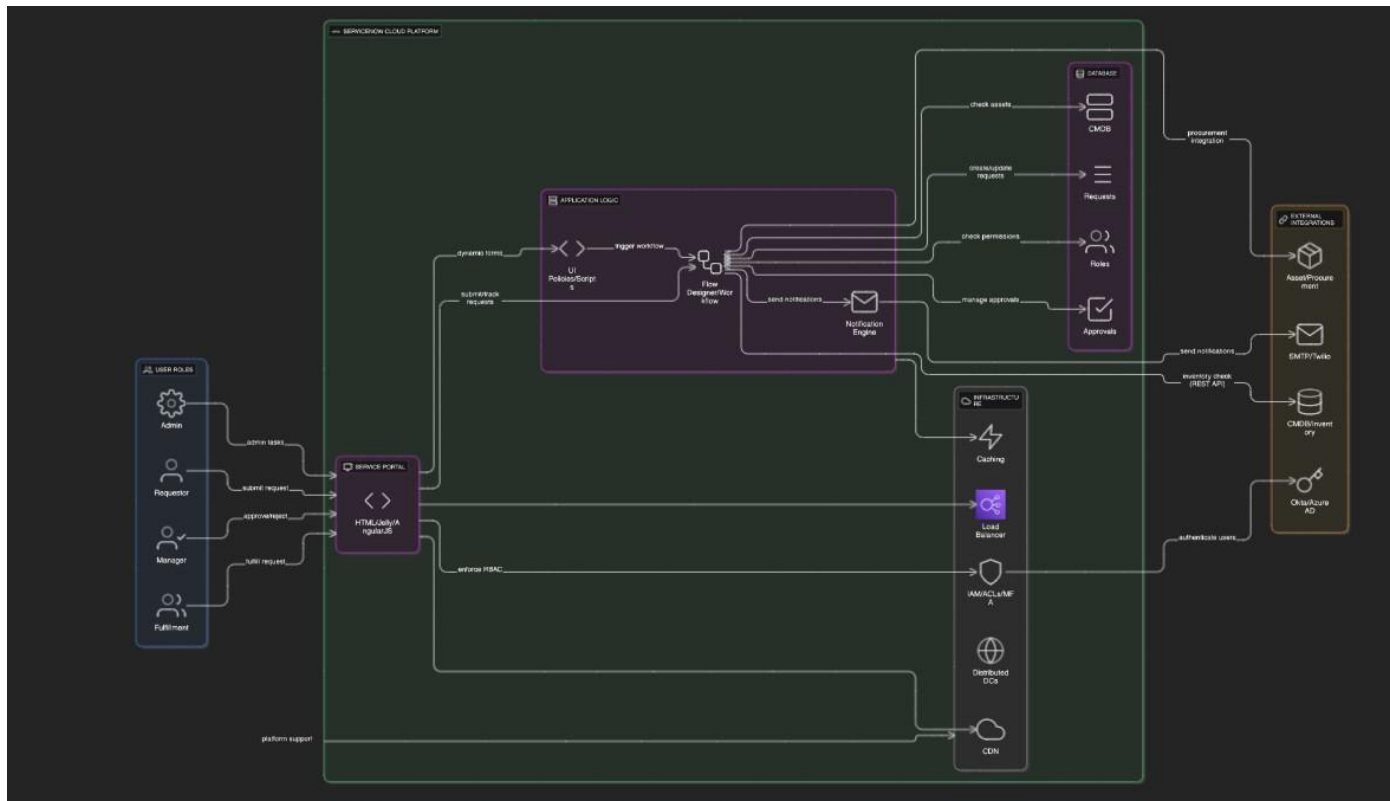


Table-1:Components&Technologies:

S.No	Component	Description	Technology
1.	UserInterface	Web-basedServiceNowServiceCatalogportalto submit requests	ServiceNow UI Framework (HTML, Jelly,AngularJSinsideServiceNow)
2.	ApplicationLogic-1	DynamicformbehaviorusingUIPoliciesandClient Scripts	ServiceNowServer-sidescripts (JavaScript, Glide API)
3.	ApplicationLogic-2	Workflowautomationandapproval processing	ServiceNowFlowDesigner/Workflow Engine
4.	ApplicationLogic-3	Emailnotificationandalertlogic	ServiceNowNotificationEngine
5.	Database	Storeslaptoprequest,approval,anduserdata	ServiceNowCMDB,TaskandRequest tables (MySQL-based backend)
6.	ExternalAPI-1	IntegrationtofetchlaptopavailabilityfromCMDB	ServiceNowRESTAPIorOOTBCMDB APIs
7.	Infrastructure(Server/Cloud)	ServiceNowPlatformhostedonCloud	ServiceNowCloudSaaSPlatform

Table-2:ApplicationCharacteristics:

S.No	Characteristics	Description	Technology
1.	Open-SourceFrameworks	ServiceNow platform leverages open-source componentslikeAngularJSforUI,andJavaScript forclient/serverscripting.	AngularJS,JavaScript
2.	SecurityImplementations	Role-based access control, multi-factor authentication,encryptionofdataatrestandin transit,OWASPbestpractices.	ServiceNowIAM,HTTPS,TLS,ACLs, OAuth2
3.	ScalableArchitecture	ServiceNow’s multi-tenant cloud architecture supportsscalabilitywithmodularcomponentsand APIs following microservices principles.	ServiceNowCloudPlatform,REST APIs
4.	Availability	Highavailabilitywithgeographicallydistributed datacenters,automatedfailover,scheduled maintenance windows.	ServiceNowCloudInfrastructure,Load Balancers
5.	Performance	Optimizedworkflows,cachingmechanismswithin ServiceNow,andCDNservicesforstaticassetsto ensure low latency and high throughput.	ServiceNowCachingLayer,CDN (Akamaized or similar)

