

# Project Design Phase-II

## Technology Stack (Architecture & Stack)

Date	31 January 3035
Team ID	LTVIP2025TMID30301
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 Request Management System using ITSM Catalog (e.g., ServiceNow)

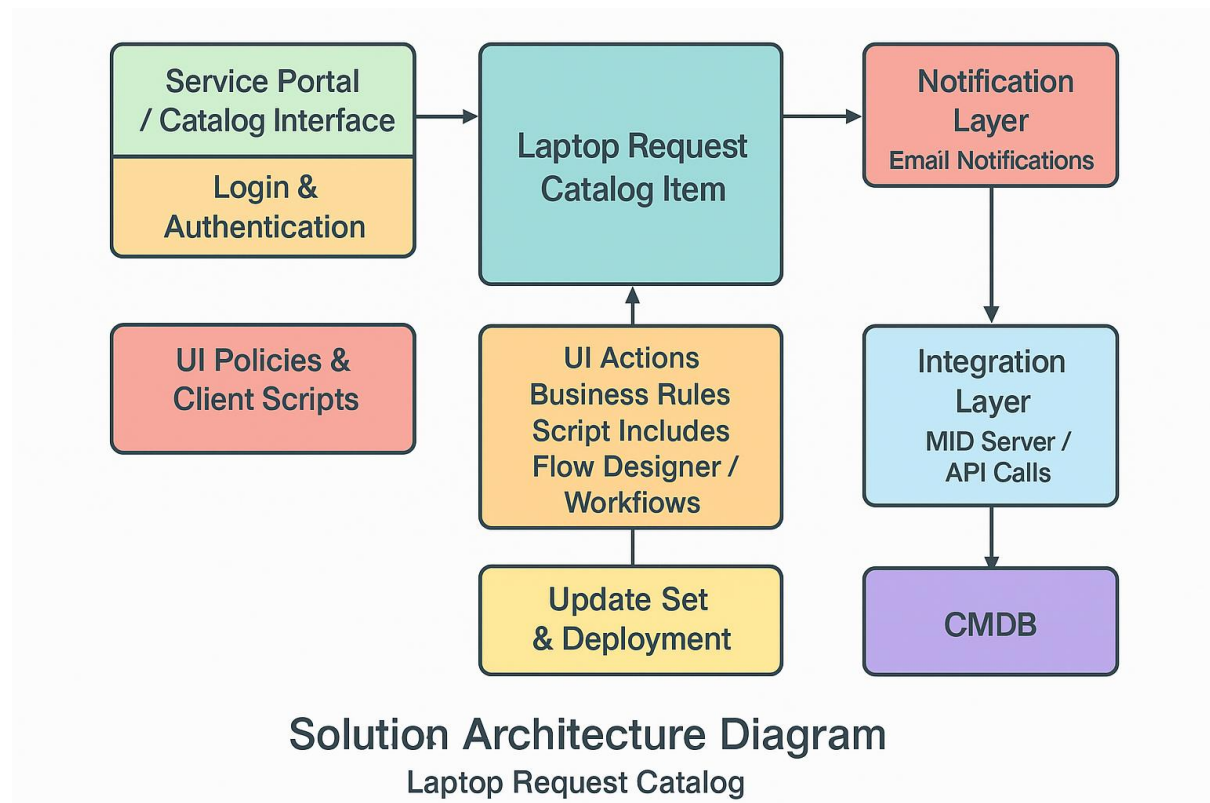


Table 1:

S.No	Component	Description	Technology
1.	User Interface	User interacts with Service Portal to raise a laptop request	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Application Logic-1	Handles catalog item form logic, field validation, submission control	JavaScript (Client Scripts, UI Policies)
3.	Application Logic-2	Business logic for approval, task creation, notifications	Flow Designer, Script Includes, UI Actions
4.	Application Logic-3	Handles integration logic for provisioning and CMDB updates	Business Rules, Integration Scripts (MID Server)
5.	Database	Configuration data like hardware specs, departments, user mappings	MySQL / NoSQL / CMDB (ServiceNow)
6.	Cloud Database	Stores dynamic data and configuration across environments	ServiceNow Cloud CMDB
7.	File Storage	Stores attachments (e.g., justification docs) submitted by users	ServiceNow File Attachment System / Block Storage
8.	External API-1	Integration with IT Asset Management systems	SCCM API, JAMF API
9.	External API-2	Optional integration with HR or employee validation systems	Aadhar API, HRMS API
10.	Machine Learning Model	Recommends laptop models based on role or usage	Python ML Model served via Flask / TensorFlow API
11.	Infrastructure (Server / Cloud)	Hosted on ServiceNow cloud with optional local MID Server for integrations	Cloud: ServiceNow SaaS; Local: MID Server, VPN

**Table-2: Application Characteristics:**

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Frontend frameworks and backend scripting	AngularJS / ReactJS, JavaScript, Python
2.	Security Implementations	Role-based access, encryption, integration security, audit trail	SHA-256, HTTPS, OAuth 2.0, IAM Policies (ServiceNow)
3.	Scalable Architecture	Modular design with catalog items, reusable scripts, and workflows	3-tier architecture with loosely coupled logic
4.	Availability	Highly available via ServiceNow cloud, redundancy via global data centers	Load Balancer, Distributed Cloud Architecture
5.	Performance	Form-level optimization, caching, asynchronous workflows	Client-side validation, Business Rule optimization

