

# Project Design Phase – II

## Technology Stack (Architecture & Stack)

Date	Oct 28
Team Id	NM2025TMID03230
Project Name	Laptop request catalog item
Maximum Marks	4 marks

### Technical Architecture

The *Laptop Request Catalog Item* in Service Now automates the process of requesting, approving, and provisioning laptops for employees. The system ensures standardized hardware distribution, approval workflows, and asset tracking while integrating with CMDB procurement modules.

The Laptop Request Catalog Item



### Guidelines

The *Laptop Request Catalog Item* enables employees to request laptops through the Service Now Service Catalog in a streamlined, automated manner. The following guidelines define the design and development standards to be followed during implementation:

**Table-1: Components & Technologies**

S.No	Component	Description	Technology
1	User Interface	Employee submits laptop request through catalog form; Admin manages via portal/dashboard.	Service Now Service Catalog, Portal U
2	Application Logic-1	Validates user details and checks asset eligibility before submission.	Validates user details and checks asset eligibility before submission.
3	Application Logic-2	Approval workflow based on role hierarchy (manager → IT team).	Flow Designer, Approvals
4	Application Logic-3	Creates asset and task records upon approval.	Business Rules, Glide Record
5	Database	Stores user, catalog item, and asset details.	Service Now Tables (cmdb_ci_computer, sc_req_item, task)
6	Cloud Database	Hosted on Service Now's secure cloud backend.	Service Now Cloud Database
7	File Storage	Stores attached documents like ID proof or business justification.	Service Now Attachments

**Table-2: Application Characteristics**

S.no	Characteristics	Description	Technology
1	<b>Open-Source Frameworks</b>	Not applicable; Service Now is proprietary.	-
2	<b>Security Implementations</b>	Role-based access, encryption, and ACL-based data protection.	Scoped Apps, ACLs

3	<b>Scalable Architecture</b>	SaaS model ensures scalability for multiple departments.	Service Now Multiinstance Cloud
4	<b>Availability</b>	Highly available with redundant Service Now cloud instances.	Load-balanced Cloud Nodes
5	<b>Performance</b>	Optimized via asynchronous processing and indexed tables.	Glide Record, Background Scripts