

# Project Design Phase – II

## Technology Stack (Architecture & Stack)

<b>Date</b>	<b>Oct 28</b>
<b>Team Id</b>	<b>NM2025TMID07769</b>
<b>Project Name</b>	<b>Laptop request catalog item</b>
<b>Maximum Marks</b>	<b>4 marks</b>

### 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	Open-Source Frameworks	Not applicable; Service Now is proprietary.	-
2	Security Implementations	Role-based access, encryption, and ACL-based data protection.	Scoped Apps, ACLs
3	Scalable Architecture	SaaS model ensures scalability for multiple departments.	Service Now Multi-instance Cloud
4	Availability	Highly available with redundant Service Now cloud instances.	Load-balanced Cloud Nodes
5	Performance	Optimized via asynchronous processing and indexed tables.	Glide Record, Background Scripts

