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

| Date	7 November 2025
Team ID	NM2025TMID09149
Project Name	Laptop Request Catalog Item
Maximum Marks	4 Marks

Technical Architecture:

The deliverable includes the architectural diagram and supporting details in Table 1 and Table 2.

This architecture represents how the Laptop Request Catalog Item in ServiceNow enables employees to request laptops efficiently through an automated workflow.

Example: Laptop Request Catalog Item
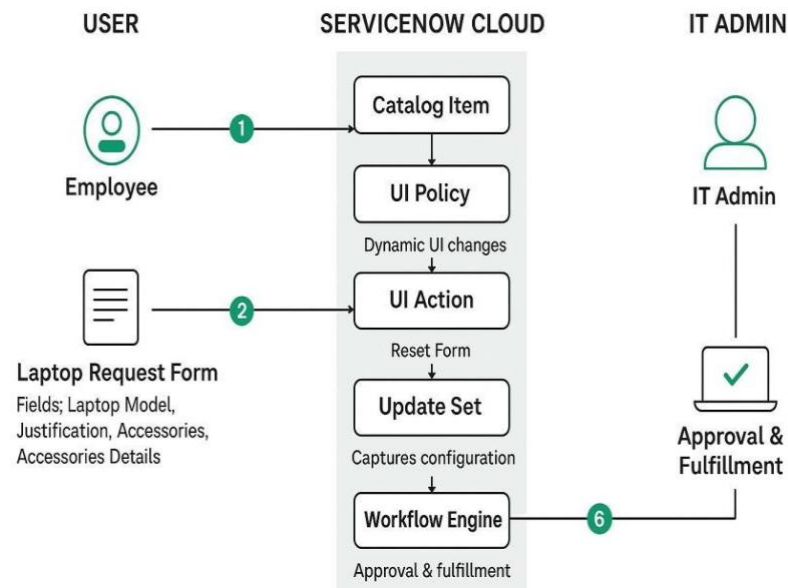
Guidelines:

- Include all ServiceNow processes (catalog item creation, UI policy, UI action, update set).

- Show infrastructure separation — Local Instance and Cloud Instance.

- Indicate external interfaces (email approvals, notifications).

- Highlight data storage in the ServiceNow database.

- Represent automation scripts for dynamic form behavior.

- Show deployment flow of update sets between instances.

Table 1: Components & Technologies

S.No	Component	Description	Technology
1	User Interface	Employees request laptops via Service Catalog form.	ServiceNow Service Catalog UI
2	Application Logic - 1	Catalog item creation with defined variables.	ServiceNow Catalog Item Form
3	Application Logic - 2	Dynamic behavior to show/hide fields based on user input.	Catalog UI Policy
4	Application Logic - 3	"Reset Form" functionality implemented using client script.	ServiceNow UI Action
5	Database	Stores catalog item configurations and variable values.	ServiceNow Tables
6	Cloud Database	Data stored and managed securely in ServiceNow cloud.	ServiceNow Cloud Database
7	File Storage	Update set and configuration stored in ServiceNow instance.	System Update Sets
8	External API (Optional)	Integration for hardware asset inventory (if required).	REST API Integration
9	Update Migration	Migrate update set across instances.	XML Export/Import
10	Infrastructure (Server/Cloud)	Entire system hosted and managed on ServiceNow SaaS.	ServiceNow Cloud (SaaS)

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1	Open-Source Frameworks	Not applicable, as ServiceNow is a proprietary low-code platform.	–
2	Security Implementations	Role-based access ensures only authorized users can create, approve, or manage laptop requests.	Role-Based Access Control (RBAC), ACLs
3	Scalable Architecture	Built on ServiceNow's SaaS model, allowing easy scalability across departments and instances.	ServiceNow Cloud Architecture
4	Availability	Always accessible via the ServiceNow cloud, ensuring 24/7 uptime and redundancy.	Load-balanced ServiceNow Instances
5	Performance	Efficient performance through optimized catalog forms, client scripts, and indexed data tables.	GlideRecord, Service Catalog Optimization