Project Design Phase-II

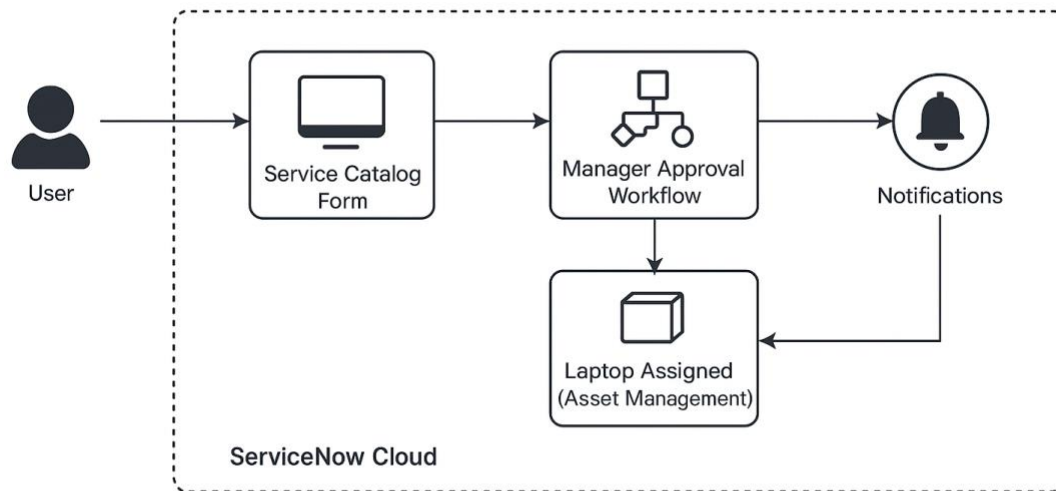Technology Stack (Architecture & Stack)

Team ID: NM2025TMID04287

Project Name: Laptop Request Catalog

Maximum Marks: 4 Marks

Technical Architecture:

The deliverable includes the architectural diagram and detailed information about the system components and technologies. The Laptop Request Catalog solution is designed using ServiceNow's platform capabilities to streamline laptop request management. It consists of modular layers for the user interface, business logic, and data management hosted on the ServiceNow Cloud.

Technical Architecture a Laptop Request Catalog

Guidelines:

• Include all the processes as application logic or technology blocks.

• Provide infrastructural demarcation (Local / Cloud).

• Indicate external interfaces (third-party APIs if any).

• Show data storage components / services.

• Indicate interface to machine learning models (if applicable).

Table-1: Components & Technologies:

S.No	Component Description	Technology
1	User Interface – Employees and Managers interact via ServiceNow Service Catalog.	ServiceNow Web UI
2	Application Logic-1 – Handles request creation, validation, and workflow routing.	Flow Designer, Catalog UI Policies
3	Application Logic-2 – Automates approval and asset assignment.	Workflow Editor, Script Includes
4	Application Logic-3 – Sends notifications upon approval or completion.	ServiceNow Notifications
5	Database – Stores catalog items, requests, and asset details.	ServiceNow CMDB, Asset Tables
6	Cloud Database – Managed by ServiceNow's cloud infrastructure.	ServiceNow Cloud Database
7	File Storage – Minimal; internal logs stored for audits.	System Logs in ServiceNow
8	External API – (Optional) Integrate HRMS or Procurement systems for validation.	REST API in ServiceNow
9	Infrastructure (Server / Cloud) – Hosted and managed on ServiceNow SaaS platform.	ServiceNow Cloud (SaaS)

Table-2: Application Characteristics:

S.No	Characteristics	Technology
1	Open-Source Frameworks	Not applicable (ServiceNow is proprietary).
2	Security Implementations	Role-based access, ACLs, and scoped applications.
3	Scalable Architecture	SaaS-based architecture supporting horizontal scalability.
4	Availability	High availability with load-balanced ServiceNow instances.
5	Performance	Optimized with background scripts and indexed tables.
6	Integration	Easily integrates with HR, ITSM, and Asset systems.