Date	31 OCTOBER 2025
Team ID	NM2025TMID00065
Project Name	Laptop Request Catalog Item.
Maximum Marks	4 Marks

Project Design Phase
Solution Architecture:

Goals of the Architecture:

- Provide a standardized, user-friendly self-service channel for all laptop requests.

- Automate the multi-stage approval workflow to enforce consistency and accountability.

- Ensure every request is tracked and automatically linked to the IT Asset Management (CMDB) system.

- Reduce manual processing time and eliminate email-based requests.

Key Components:

- **Service Catalog** (The user-facing portal and form interface).

- **Request Item (RITM)** and Catalog Tasks (The record types used for tracking and fulfillment).

- **Workflow Engine** (Logic for automated approvals and task generation).

- **Manager/User Data Tables** (Source for routing approval requests and user details).

- **IT Asset/Configuration Management Database (CMDB)** (The final destination for asset tracking).

Development Phases:

- Define standard laptop models and specifications.

- Build the Service Catalog Item and Request Form (variables).

- Design and implement the automated approval workflow (Manager $\rightarrow$ Fulfillment).

- Configure automated email notifications for the user and fulfillment teams.

- Integrate the final fulfillment task with asset creation/update logic in the CMDB.

- Perform comprehensive end-to-end user acceptance testing (UAT).

Solution Architecture Description:

The solution architecture is centered around creating a transparent and fully automated hardware procurement process. The core component is a new item within the **Service Catalog**, which provides a single, standardized entry point for employees to request a laptop.

When a user submits the request, a **Request Item (RITM)** is created, triggering a robust **Workflow Engine**. This workflow is designed to ensure compliance: it automatically routes an approval request to the user's **Manager** for budget sign-off. Once approved, the workflow generates a series of **Catalog Tasks** for the **IT Hardware Fulfillment Team**.

Crucially, the final task in the fulfillment process includes an automated step to create a new record or update an existing one in the **IT Asset Management/CMDB** table. This integration ensures that every laptop procured through this process is instantly and accurately tracked in the system, maintaining data consistency and promoting operational accountability for IT assets.

Example – Solution Architecture Diagram:

Top-level categories	Hardware	Software	. . . .	Office
Sub-level categories	Laptops	Desktops	. . . .	Phones
Catalog items	Dell Inspiron	Lenovo T470	. . . .	MacBook Pro