

Date	31 OCTOBER 2025
Team ID	NM2025TMID00034
Project Name	Laptop Request Catalog Item.
Maximum Marks	4 Marks

Project Design Phase

Solution Architecture

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:

1. Define standard laptop models and specifications.
2. Build the Service Catalog Item and Request Form (variables).

3. Design and implement the automated approval workflow (Manager \rightarrow Fulfillment).
1. Configure automated email notifications for the user and fulfillment teams.
2. Integrate the final fulfillment task with asset creation/update logic in the CMDB.
3. 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:



