

## Solution Architecture

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|--------------|-----------------------------|
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| Team id      | NM2025TMID02589             |
| Project name | Laptop Request Catalog Item |
| Maximum mark | 5 Marks                     |

This document outlines the high-level architecture for the **Laptop Request Catalog Item**. It shows the key components within the ServiceNow platform and how they interact to automate the request-to-fulfillment process.

### 1. Key Components

- **Service Portal:** The user-facing interface where an employee (requester) finds and submits the "Laptop Request" form.
- **Catalog Item (sc\_cat\_item):** The form itself. It is configured with:
  - **Variables:** To capture user input (e.g., *Laptop Model, Justification, Software Needed*).
  - **UI Policies / Client Scripts:** To control form behavior (e.g., make *Justification* mandatory, show laptop specs based on selection).
- **Flow Designer (Workflow Engine):** This is the core automation component. It is a no-code/low-code tool that executes the entire backend process, including approvals, tasks, and notifications.
- **ServiceNow Tables (Data Model):** The database layer that stores all records generated by the process. The key tables are:
  - sc\_request (Request)
  - sc\_req\_item (Requested Item)
  - sc\_task (Catalog Task)
  - sysapproval\_approver (Approval)
- **Notification Engine:** The built-in ServiceNow module that sends automated email notifications to the user and the manager at key stages.

### 2. Process Flow Diagram

This diagram shows the end-to-end flow of the solution, from user submission to fulfillment.

[Actor] (Interface) [Action] (System Component)

[Requester] -> (Service Portal) -> [Submits Laptop Form]

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(Flow Designer) ----> [1. Creates Request (REQ)]

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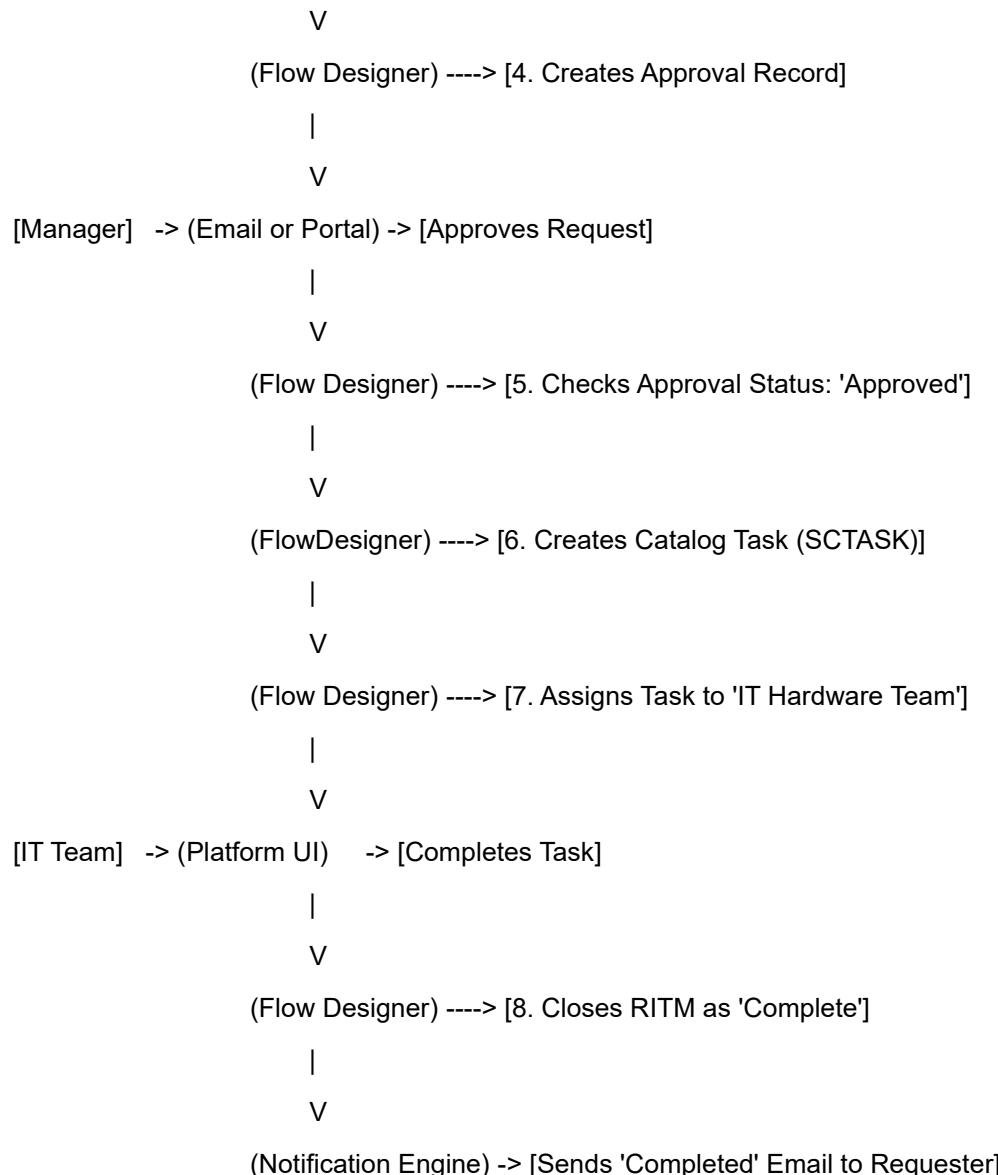
(Flow Designer) ----> [2. Creates Requested Item (RITM)]

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(Flow Designer) ----> [3. Looks up User's Manager]

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### 3. Data Model

The solution generates three primary records for each request, linked in a parent-child relationship:

1. **Request (sc\_request)**: The "wrapper" or "shopping cart" for the order. This record has a REQ number (e.g., REQ0010001).
2. **Requested Item (sc\_req\_item)**: This is the *actual* laptop request. It has an RITM number and stores all the data from the form variables (e.g., "MacBook Pro," "Business Justification..."). The workflow is attached to this record.
3. **Catalog Task (sc\_task)**: The "to-do" record for the IT Hardware team (e.g., "Prepare and provision MacBook Pro for User X"). It has an SCTASK number and is a child of the RITM.

**Relationship:** 1 (REQ) -> 1 (RITM) -> 1 (SCTASK)