

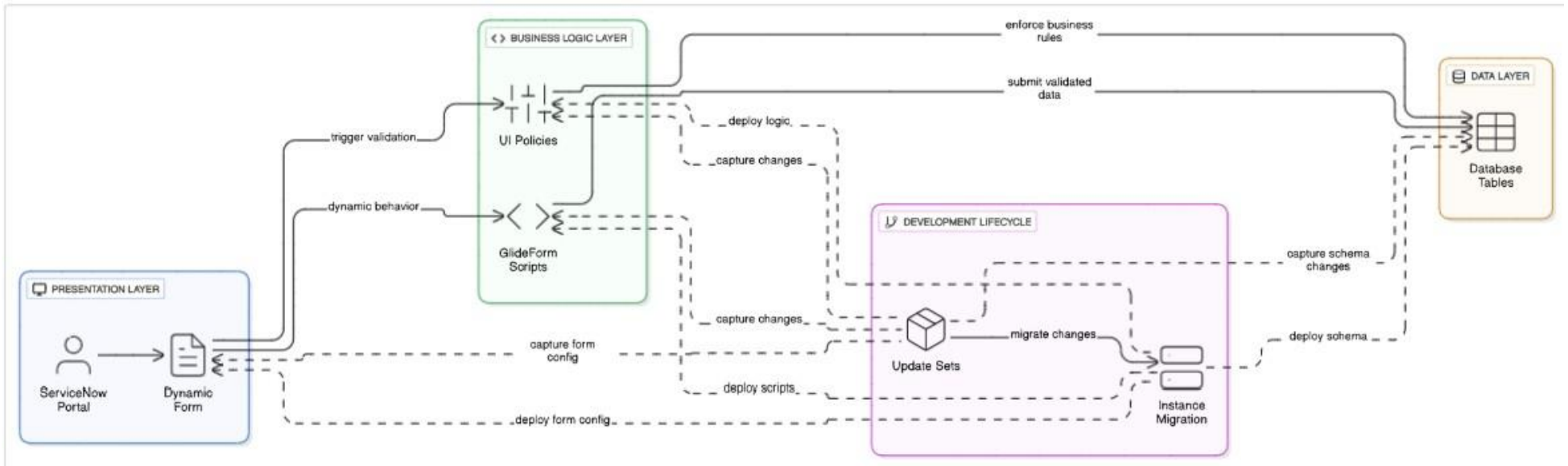
**Project Design Phase-II  
Technology Stack (Architecture & Stack)**


<b>DATE</b>	<b>AUGUST 11 , 2025</b>
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<b>PROJECT NAME</b>	<b>LAPTOP REQUEST CATALOG ITEM</b>
<b>COLLEGE</b>	<b>MVGR COLLEGE OF ENGINEERING</b>

**Technical Architecture**

This solution uses a layered architecture within the ServiceNow platform to automate the laptop request process, replacing inefficient manual workflows. The architecture ensures modularity, data integrity, and smooth integration across ServiceNow environments. The flow includes user interaction, field logic execution, data storage, and update set deployment.

A dynamic form built in the Service Catalog guides users through the request process with validations and conditional visibility. Backend configuration supports seamless tracking and management of all requests by the IT team.



 **Table-1: Components & Technologies**

S.No	Component	Description	Technology
1.	User Interface	Interface through which users interact with the catalog form on the ServiceNow portal	ServiceNow Catalog UI, HTML/CSS
2.	Application Logic-1	Logic for showing/hiding fields based on user inputs	ServiceNow UI Policies
3.	Application Logic-2	Client-side scripting for validation and reset functionality	GlideForm APIs, JavaScript
4.	Application Logic-3	Data flow and business rule handling (if extended)	Business Rules (ServiceNow)
5.	Database	Stores laptop request records with structured field mapping	ServiceNow Tables

6.	Cloud Database	Native ServiceNow cloud-hosted instance databases	ServiceNow Cloud Platform
7.	File Storage	Not applicable for this project (no file uploads)	N/A
8.	External API-1	Could be extended to fetch user info or device specs (optional)	REST API (ServiceNow if integrated)
9.	External API-2	Not used in current version	N/A
10.	Machine Learning Model	Not applicable, project is form-based, not AI-driven	N/A
11.	Infrastructure (Server)	Deployed and managed within ServiceNow instance	ServiceNow SaaS (Cloud-native)

 **Table-2: Application Characteristics**

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Not applicable – ServiceNow is a licensed enterprise platform	N/A
2.	Security Implementations	Role-based access control (RBAC), ACLs, and platform-level user authentication	ACLs, RBAC, SSO (ServiceNow Native)
3.	Scalable Architecture	Catalog items can be replicated for multiple hardware/software requests easily	Modular Catalog Design
4.	Availability	Highly available due to ServiceNow's cloud architecture with redundancy and failover	ServiceNow Cloud Infrastructure
5.	Performance	Optimized using client-side scripting, native platform caching, minimal load time, and logic-based rendering	GlideForm APIs, UI Policies