

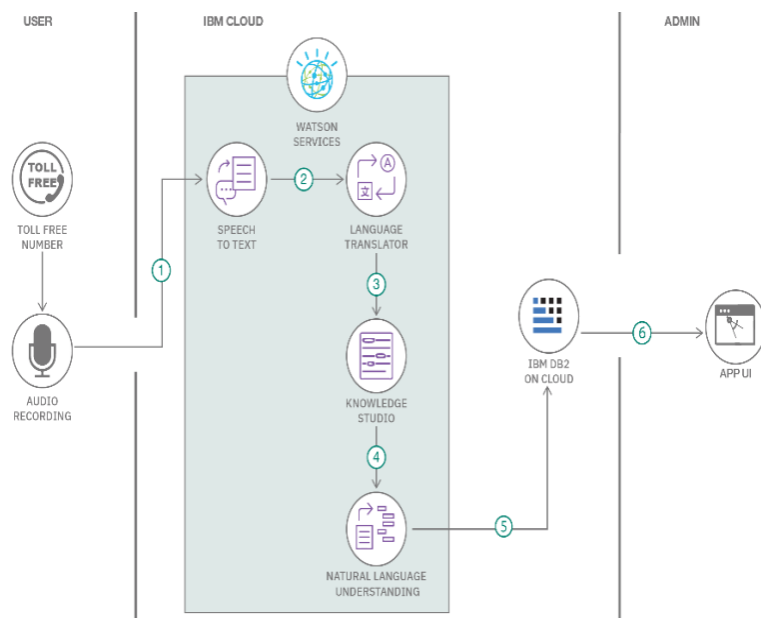
Project Design Phase-II Technology Stack (Architecture & Stack)

Date	NOVEMBER 06,2025
Team ID	NM2025TMIDO5285
Project Name	Medical Inventory Management System
Maximum Marks	4 Marks

Technical Architecture:

The **Medical Inventory Management System** ensures seamless tracking, validation, and control of medical stock by integrating ServiceNow's backend logic with rule-based automation. The architecture leverages **Business Rules**, **data relationships**, and **table dependencies** to maintain accurate, real-time updates across medical records, transactions, and users

Reference: <https://developer.ibm.com/patterns/ai-powered-backend-system-for-order-processing-during-pandemics/>



Guidelines:

- Include all the processes (As an application logic / Technology Block)
- Provide infrastructural demarcation (Local / Cloud)
- Indicate external interfaces (third party API's etc.)
- Indicate Data Storage components / services
- Indicate interface to machine learning models (if applicable)

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Admin interacts via Web dashboard in ServiceNow.	ServiceNow Web UI
2.	Application Logic-1	Checks if user is linked to an incident before allowing deletion	ServiceNow Flow Designer, Script
3.	Application Logic-2	Validates user status from incident table	GlideRecord in Server Script
4.	Application Logic-3	Sends notification if deletion is blocked.	ServiceNow Notifications
5.	Database	Stores user, incident, and assignment data	ServiceNow CMDB, Incident Tables
6.	Cloud Database	Managed by ServiceNow cloud backend.	ServiceNow Cloud Database
7.	File Storage	Minimal use; logs stored internally	ServiceNow system logs
8.	External API-1	(Optional) HRMS integration to verify user status	REST API in ServiceNow
9.	External API-2	Not applicable	-
10.	Machine Learning Model	Not applicable for current use case	-
11.	Infrastructure (Server / Cloud)	Hosted and managed on ServiceNow SaaS platform	ServiceNow Cloud (SaaS)

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Not applicable (ServiceNow is proprietary)	-
2.	Security Implementations	Role-based access control, ACLs, secure scripts	ACLs, Scoped Applications
3.	Scalable Architecture	SaaS-based, horizontally scalable via ServiceNow architecture	ServiceNow Cloud Architecture
4.	Availability	Highly available with ServiceNow cloud hosting	Load-balanced ServiceNow Instances
5.	Performance	Optimized via asynchronous flows and indexed tables	GlideRecord, Background Scripts