

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

Team ID	LTVIP2025TMID28803
Project Name	Calculating Family Expenses Using ServiceNow
Faculty Mentor Name	Dr.T.Tirupal
College Name	G Pullaiah College of Engineering and Technology

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

Example: Order processing during pandemics for offline mode

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)

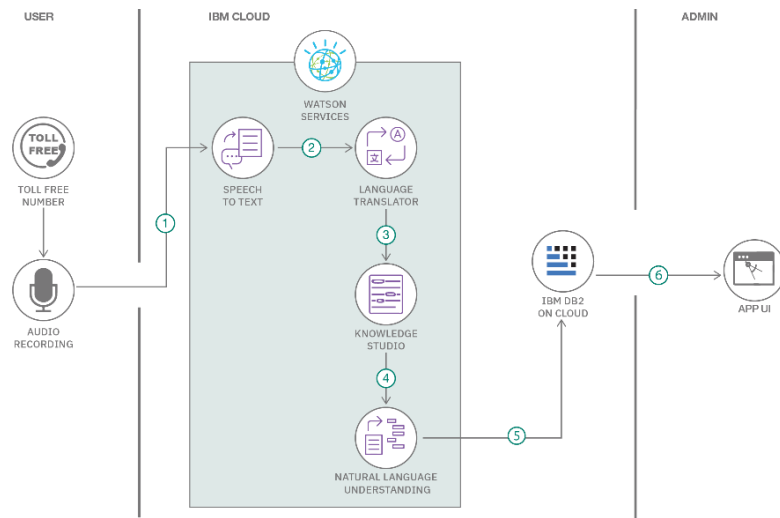


Table-1 : Components & Technologies:

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	Validated a user status from incident table	Glide record in server script
4.	Application Logic-3	Sends notification if deletion is blocked	ServiceNow notification
5.	Database	Stores users, incident and assignment date.	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 intergration to verify users 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, sercure scripts	ACLs, scooped application
3.	Scalable Architecture	Saas-based, horizontally scalable via serviceNow architecture	ServiceNow cloud architecture
S.No	Characteristics	Description	Technology
4.	Availability	Highly available with serviceNow cloud housing	Load-balanced serviceNow instances
5.	Performance	Optimized via asynchronous flow and indexed tables.	Glide record, background script

References:

<https://c4model.com/>

<https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/>

<https://www.ibm.com/cloud/architecture> <https://aws.amazon.com/architecture>

<https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d>