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

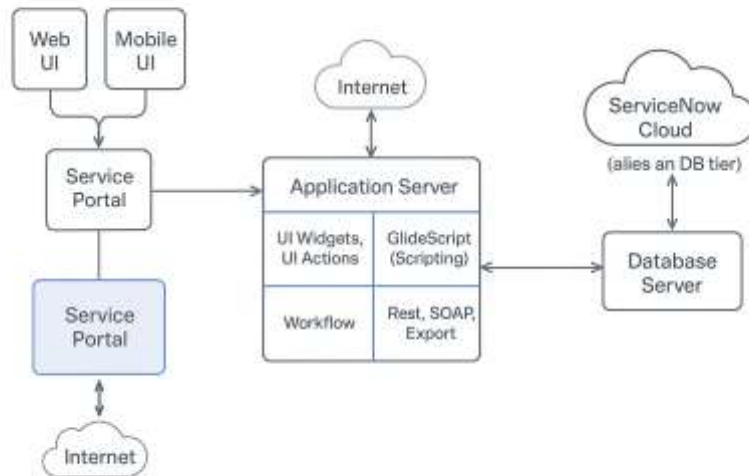|	
Date	28 June 2025
Team ID	LTVIP2025TMID30049
Project Name	Cafeteria Menu Display
Maximum Marks	4 Marks

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	Web UI using ServiceNow Portal.	HTML, CSS, JavaScript (ServiceNow Portal Widgets)
2.	Application Logic-1	Logic for adding/updating menus	GlideScript / JavaScript (ServiceNow backend)
3.	Application Logic-2	Logic for scheduling/publishing menus	Scheduled Jobs / Flow Designer
4.	Application Logic-3	Logic for menu display and filtering	Scheduled Jobs / Flow Designer
5.	Database	. Stores all menu details, feedback, scheduling info	. ServiceNow Tables (CMDB/Table)
6.	Cloud Database	Data is hosted in the ServiceNow cloud	ServiceNow (SaaS Cloud Platform)
7.	File Storage	Store meal images or special offer banners	ServiceNow Attachments / Cloud Storage
8.	External API-1	Pulling diet info or nutritional facts	. Food API / Edamam API
9.	External API-2	Sending notifications to users (menu reminder)	. Twilio / Email API / NotifyNow
10.	Machine Learning Model	(Not Applicable unless you plan AI feedback analysis)	. N/A
11.	Infrastructure (Server / Cloud)	Hosted on ServiceNow cloud	. SaaS - ServiceNow Cloud Platform

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	ServiceNow is not open-source, but uses web technologies (like JavaScript) internally	JavaScript, GlideScript (ServiceNow scripting language)
2.	Security Implementations	Role-Based Access Control (RBAC), ACLs, encrypted communication, session control	SHA-256, ACLs, HTTPS, OAuth 2.0 (ServiceNow Security Policies)

S.No	Characteristics	Description	Technology
3.	Scalable Architecture	Built on ServiceNow's cloud-native architecture that supports horizontal scaling	3-tier architecture (UI – Logic – DB), ServiceNow SaaS
4.	Availability	High availability via ServiceNow Cloud, which uses load balancers and redundant systems	ServiceNow SaaS Cloud Platform with 99.9% uptime SLA
5.	Performance	Quick loading of menu data, caching menus, asynchronous operations to reduce load	GlideAjax, Cache Tables, Service Portal Optimization Tools

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