

## PROJECT DESIGNING

### Solution Architecture

Date	28 June 2025
Team ID	LTVIP2025TMID20832
Project Name	Cafeteria Menu Display Using Service now
Maximum Marks	4 Marks

### Solution Architecture: Cafeteria Menu Display Using ServiceNow

#### Core Architectural Components in ServiceNow

Layer	Component
UI Layer	Service Portal / Workspace / Mobile App
Business Logic	Business Rules, Script Includes, Flow Designer, Scheduled Jobs
Data Layer	Custom Tables (e.g., Menu, Menu Item, Category, Allergen, Schedule)
Integration Layer	REST APIs (for screen clients), Scripted REST APIs, MID Server if needed
Presentation (Display)	External TV displays pulling data via REST API or iFrame to Service Portal
Authentication	Role-based ACLs, OAuth tokens for external devices

#### Data Model Design (Custom Tables) Table Name Purpose

u_menu	Stores daily/weekly menu entries
u_menu_item	Stores individual dish items linked to a menu
u_category	Breakfast, Lunch, Snacks, etc.
u_allergen_tag	Gluten-free, Vegan, etc.
u_schedule	Timings and recurrence rules for menu display

#### Relationships:

- u\_menu has many u\_menu\_items
- u\_menu\_item has many u\_allergen\_tags

#### Functional Flow (End-to-End)

1. Admin adds menus via:
  - Now Platform Form View

- Service Portal (custom page or catalog item)
  - Flow Designer can trigger approval if needed
2. Schedule-based Activation:
- Use Scheduled Jobs or Flow Designer Scheduled Triggers to activate menus based on the date/time.
3. Display Logic:
- Digital signage screen (e.g., Smart TV with browser) connects to:
    - ✦ Service Portal page showing current menu
    - ✦ Or uses Scripted REST API to fetch current menus in JSON format for a custom UI
4. Real-time Updates (Optional):
- Screens poll the API every few minutes (WebSockets not natively supported in SN)
  - Admin changes menu → Flow Designer or Business Rule updates related displays

### **UI Options for Menu Display**

Option	Notes
Service Portal Page dynamically	Custom page that auto-refreshes and shows current menu
HTML iFrame	
Embed	Display a simplified version of the portal in a full-screen browser
External Display App	Custom TV/Tablet app that uses SN REST APIs to fetch menu data
<b>Security &amp; Roles</b>	
• Roles:	
	○ menu_admin – Create/edit menus
	○ viewer – Read-only access (for screens)
• ACLs:	
	○ Only allow read access to menus via Scripted REST for viewer devices

## **Technologies & Tools in ServiceNow**

Area	Tool/Method
Forms & UI	Form Designer, Portal Widgets
Workflow Logic	Flow Designer, Business Rules
Schedules	Scheduled Jobs / Script Includes
APIs	Scripted REST APIs
External Display	Portal Page / API consumed by app
Security	ACLs, Roles, OAuth Token