

Project Design Phase-2
Technical Stack (Architecture & stack)

Date	02 NOVEMBER 2025
Team ID	NM2025TMID01749
Project Name	EDUCATIONAL ORGANISATION USING SERVICENOW
Maximum marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table 1 & 2

Example

ServiceNow Architecture for Educational Organizations

Unified Digital Campus Blueprint

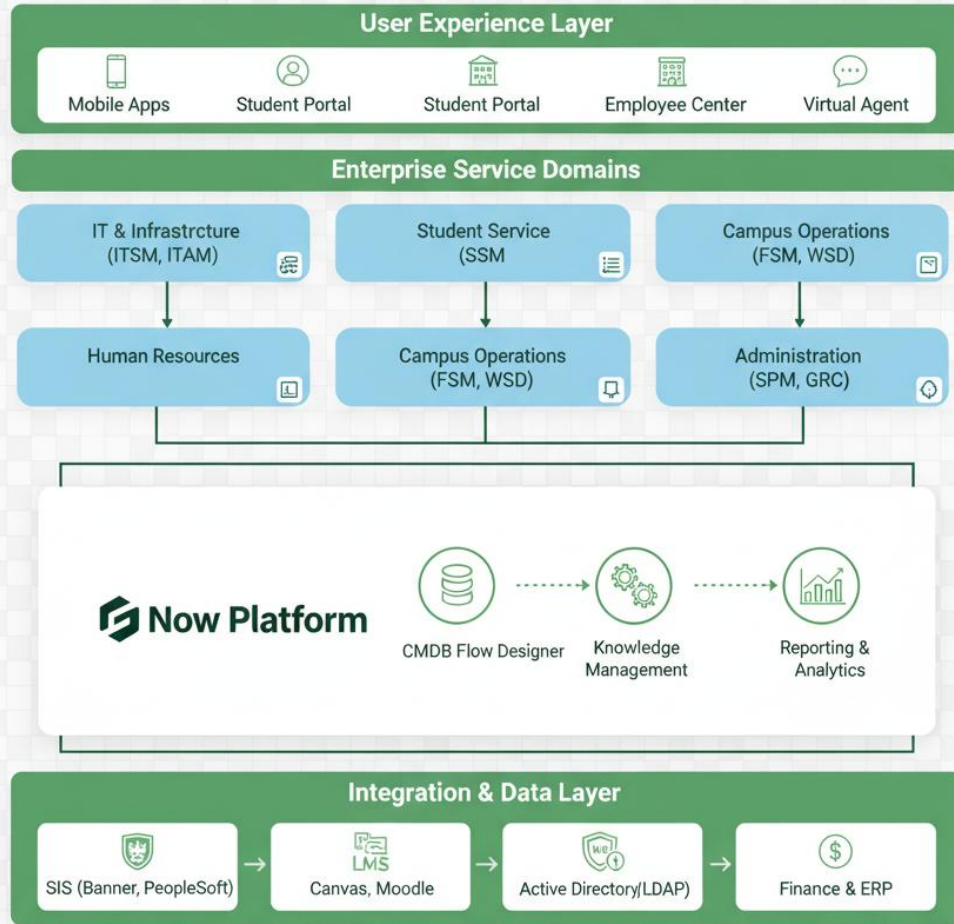


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Provides tailored, modern access for students, faculty, and administrative staff.	ServiceNow Service Portal (Custom UIs) & Employee Center
2.	Application Logic-1 (Onboarding)	Automates the creation of accounts, assignment of devices, and enrollment in	ServiceNow Flow Designer & HR Service

S.No	Component	Description	Technology
		HR/Compliance training for new faculty/staff.	Delivery (HRSD) Workflows
3.	Application Logic-2 (Offboarding Check)	Validates user status (e.g., graduating, resigning) against open cases or unreturned assets before deactivation.	GlideRecord in Server Script and Business Rules across tables
4.	Application Logic-3 (Case Routing)	Automatically routes student inquiries (e.g., financial aid, housing) to the correct departmental fulfillment group.	ServiceNow Advanced Work Assignment (AWA) or CSM Assignment Rules
5.	Database (Service Data)	Stores all service requests, fulfillment tasks, campus incidents, and asset assignments.	ServiceNow Task Tables (Incident, Request, Facilities Work Order)
6.	Cloud Database	Managed and hosted storage layer for the entire university instance data.	ServiceNow Cloud Database (Managed by the vendor)
7.	File Storage	Stores attached documents, such as student appeal forms, HR policy documents, or faculty hiring paperwork.	ServiceNow System Logs & Attachments (Stored internally)
8.	External API-1 (SIS Sync)	Connects to the Student Information System (SIS) to pull/sync student enrollment, status, and profile data.	REST API in ServiceNow Integration Hub (e.g., connecting to Banner/PeopleSoft)

S.No	Component	Description	Technology
9.	External API-2 (LMS/ERP)	Integrates with Learning Management Systems (LMS) for course provisioning or ERP for financial approvals.	SOAP/REST APIs & MID Server for on-premise connections
10.	Machine Learning Model	Provides intelligent self-service chat support and auto-categorization/routing of submitted requests.	ServiceNow Predictive Intelligence & Virtual Agent
11.	Infrastructure (Server / Cloud)	The underlying environment where the entire university platform is hosted, managed, and scaled.	ServiceNow Cloud (SaaS) platform

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Not applicable; ServiceNow is a proprietary, unified cloud platform (SaaS) built on its own framework.	-
2.	Security Implementations	Data separation and confidentiality for sensitive records (e.g., student PII, HR files) are enforced via strict access controls and roles.	Role-Based Access Control (RBAC), Access Control Lists (ACLs), Client & Server Scripts
3.	Scalable Architecture	The architecture is designed to handle high transaction volumes during peak periods, such as semester start, financial aid deadlines,	ServiceNow Cloud Architecture, Horizontal Scaling, Multi-Instance Cloud

S.No	Characteristics	Description	Technology
		or campus-wide incident responses.	
4.	Availability	Ensures high uptime and accessibility for students, faculty, and staff, crucial for 24/7 global campus operations and online learning.	Load-Balanced ServiceNow Instances, Failover Systems, Geographically Distributed Data Centers
5.	Performance	Optimized to handle large concurrent requests (e.g., during course registration or mass facility maintenance submissions) without degrading the user experience.	Asynchronous Business Rules & Flows, Background Scripts, Indexed Database Tables
6.	Customization	Allows the university to build specific applications (e.g., Research Grant Tracker, Course Scheduling Conflict Tool) without altering the core platform code.	ServiceNow App Engine, Studio, Delegated Development
7.	Integration	Enables seamless, bidirectional communication between ServiceNow and critical specialized campus systems.	ServiceNow Integration Hub (I-Hub), REST/SOAP APIs, MID Server