Project Design Phase

Solution Architecture

Date	
Team ID	NM2025TMID07723
Project Name	Educational Organization
Maximum Marks	4 Marks

🏁 Goals of the Architecture

To design a structured, scalable, and secure system for managing educational organization processes.

To enable seamless workflow automation across departments (admissions, exams, performance, etc.).

To ensure centralized data management and real-time reporting.

To enhance user experience through a unified ServiceNow portal.

□ Key Components

Component	Description
User Interface Layer	The front-end interface accessed by students, teachers, and administrators via the ServiceNow portal. Provides dashboards, forms, and notifications.
Application Layer (Logic Layer)	Core layer where automated workflows, approvals, and notifications are configured using Flow Designer, Business Rules, and Catalog Items.
Database Layer	Stores student, staff, and course-related data securely in ServiceNow tables with audit logs.
Integration Layer	Connects to external tools like LMS, email systems, and payment gateways through APIs.

Component	Description
Security Layer	Implements Role-Based Access Control (RBAC), encryption, and authentication to ensure data privacy.

🛠 Development Phases

Phase	Activity	Tools Used
Phase 1 – Planning	Define user needs, workflows, and access roles.	Documentation, ServiceNow Project Planning
Phase 2 – Design	Create data models, workflow diagrams, and UI layouts.	Flow Designer, Data Schema Designer
Phase 3 – Implementation	Build and configure workflows, dashboards, and forms.	ServiceNow Studio
Phase 4 – Testing	Conduct pilot testing for one department, fix errors.	Test Management Tool
Phase 5 – Deployment & Maintenance	Deploy organization-wide and monitor system health.	Performance Analytics, Reports

□ Solution Architecture Description

The ServiceNow-based Educational Management System follows a multi-layered architecture to manage academic and administrative tasks efficiently.

Each layer plays a vital role in the overall operation:

The User Interface Layer interacts with end users.

The Logic Layer processes tasks through automated workflows.

The Database Layer securely stores and retrieves institutional data.

The Integration Layer ensures connectivity with external platforms.

The Security Layer protects all data through encryption and controlled access.

This structure allows for modular expansion, real-time analytics, and smooth data flow across the system.

 Example Solution Architecture Diagram (Text View)