Project Design Phase-II

Technology Stack Template

Date	2 NOV 2025
Team ID	NM2025TMID05570
Project name	Educational Organization using ServiceNow
Maximum Marks	4 Marks

1. Technical Architecture:

The Technical Architecture of the Educational Organization System defines how the system's layers — front-end, back-end, database, and integration — interact within the ServiceNow platform.

It focuses on delivering automation, centralized data access, and secure workflow management for students, teachers, and administrators.

Key Objectives:

- Provide a centralized digital platform for managing all academic and administrative operations.
- Enable workflow automation using ServiceNow's Flow Designer.
- Maintain data consistency and security through ServiceNow CMDB.
- Ensure scalability and easy integration with external systems.

2. Example: ServiceNow-Based Architecture:

Example Scenario:

When a student registers for a course:

- ❖ Data is submitted via Service Portal (Front-end).
- ❖ Request is processed through Flow Designer (Workflow Automation).
- ❖ Data is stored in CMDB Tables (Database Layer).
- ❖ Admin receives a notification through Notification Service (Integration Layer).
- ❖ Reports are generated dynamically via Performance Analytics (Backend Module).

- This ensures end-to-end automation from user interaction to backend processing and reporting.

Layer	Component/Technology	Functionality
Front-End	HTML5, CSS3, JavaScript, Service Portal	Creates the interface for students, teachers, and admins.
Back-End	ServiceNow Business Rules, Script Includes, Flow Designer	Handles business logic, approvals, and automation.
Database Layer	ServiceNow CMDB, Tables, Relationships	Stores all academic, student, and staff data.
Integration Layer	REST APIs, IntegrationHub, Email Services	Enables communication with external tools.
Security Layer	Role-Based Access Control, Audit Logs, SSL Encryption	Enables communication with external tools.
Reporting Layer	Dashboards, Performance Analytics	Displays key performance indicators and reports.

Characteristics	Description
Platform Type	Cloud-based low-code/no-code application built on ServiceNow.
Accessibility	Web-based; accessible from desktop and mobile devices.
Scalability	Supports growing number of users and academic modules.
Automation	Uses Flow Designer and Workflows to reduce manual tasks.
Maintainability	Easy to update via ServiceNow Studio and Update Sets.
Security	Ensures data encryption, access control, and logging.
User Experience	Simplified, intuitive interface using Service Portal.