

# Project Design Phase-II

## Technology Stack Template

Date	
Team ID	NM2025TMID07723
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.

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

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