

## **EDUCATIONAL ORGANISATION USING SERVICENOW**

### **TEAM DETAILS:**

**Team ID:** NM2025TMID00843

**Team Size:** 4

**Team Leader:** Adlin Jenish J P

**Team Members:** Aravind S K, Aswin T V, Jijo V

### **Ideation Phase**

#### **Define the Problem Statement**

Date	11-09-2025
Team ID	NM2025TMID00843
Project Name	Educational Organization using service now
Maximum Marks	4 Marks

### **Problem Statement Template:**

The educational organization is currently grappling with significant hurdles in delivering fair access to high-quality learning experiences, maintaining consistent teaching standards, and leveraging technology effectively to improve learning outcomes. Numerous students still face obstacles like inadequate resources, uneven support, and disinterest in their education. Simultaneously, educators are often hindered by outdated teaching approaches and a lack of proper training. These challenges not only affect academic achievements but also impede skill development, underscoring the urgent need for innovative, data-driven, and student-focused solutions that foster inclusivity, enhance teaching effectiveness, and equip students for the challenges of an ever-changing world.

Student Problem Statement				
I am	I'm trying to	But	Because	Which makes me feel
 I am	 I'm trying to	 But	 Because	 Which makes me feel
a newly admitted student at a school using outdated manual processes.	register for classes and view my academic performance online.	there is no single place where I can find my subject marks or progress.	the institution doesn't have a centralized system for academic tracking.	confused, disconnected, and unsure about my academic standing.

Teacher Problem Statement				
I am	I'm trying to	But	Because	Which makes me feel
 I am	 I'm trying to	 But	 Because	 Which makes me feel
a class teacher responsible for entering student grades.	record marks and calculate total scores for multiple students	I have to do it manually using spreadsheets or paper.	there's no automated system integrated into the school's platform.	frustrated and overwhelmed during every exam cycle.

Parent Problem Statement				
I am	I'm trying to	But	Because	Which makes me feel
 I am	 I'm trying to	 But	 Because	 Which makes me feel
A parent wanting to stay informed about my child's progress	Monitor academic performance and receive updates	Results are only shared during meetings or in printed form	There is no self-service access or automated notification setup	Disconnected and uninformed about my child's academic journey

Admin Problem Statement				
I am	I'm trying to	But	Because	Which makes me feel
 I am	 I'm trying to	 But	 Because	 Which makes me feel
an administrator in charge of handling admissions and academic records.	track admission requests, student data, and generate performance dashboards.	I have to manage multiple files and approve everything manually.	our current process lacks workflow automation and dashboard visibility.	inefficient, overloaded, and unable to focus on improving outcomes.

<b>Problem Statement (PS)</b>	<b>I am</b>	<b>I'm trying to</b>	<b>But</b>	<b>Because</b>	<b>Which makes me feel</b>
PS-1	A newly admitted student	Register for classes and view my academic performance	There is no single place to find my subject marks or progress	The institution lacks a centralized academic tracking system	Confused, disconnected, and unsure about my performance
PS-2	A class teacher responsible for entering student marks	Record subject-wise marks and calculate totals easily	I have to do everything manually using paper or spreadsheets	There's no automated mark entry or result calculation system	Frustrated and overwhelmed during exam time
PS-3	A school administrator managing admissions and records	Track admission requests and monitor student performance	The data is scattered and approvals are completely manual	We lack a workflow system with live dashboards and status notifications	Inefficient, overloaded, and slow to respond
PS-4	A parent wanting to stay informed about my child's progress	Monitor academic performance and receive updates	Results are only shared during meetings or in printed form	There is no self-service access or automated notification setup	Disconnected and uninformed about my child's academic journey

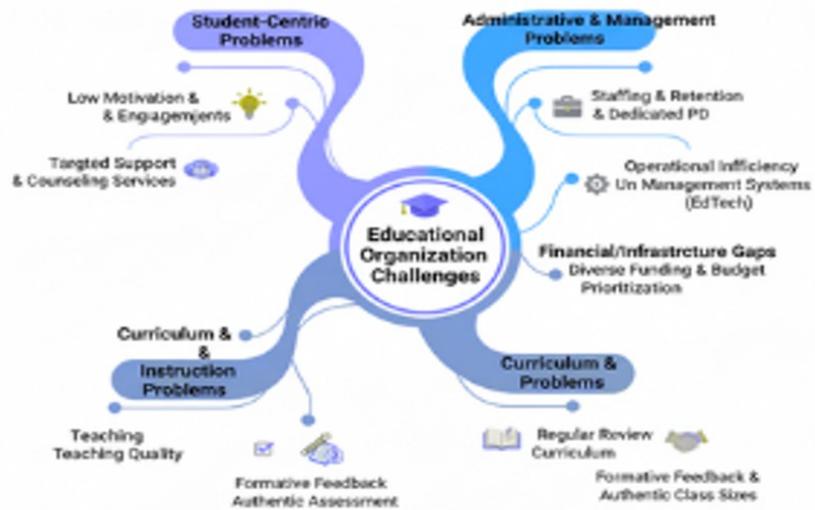
## Empathize & Discover

Date	15-09-2025
Team ID	NM2025TMID00843
Project Name	Educational Organization using ServiceNow
Maximum Marks	4 Marks

### Empathy Map Canvas:

The School Administrator is primarily concerned with maintaining educational standards and ensuring adequate district funding. They frequently state that student safety is their highest priority but often express frustration over the limited budget for essential staff. Their daily routine involves walking through school halls, resolving issues between staff and parents, and responding to emails late at night. Faced with challenges such as overcrowded classrooms, outdated facilities, and competing expectations from both the school board (“Test scores are down”) and staff (“The new policy increases paperwork”), the administrator experiences significant stress and dissatisfaction with bureaucratic inefficiencies. These pressures highlight the need for a more streamlined and centralized operational system that can reduce administrative workload and enable the administrator to focus more effectively on leadership and student achievement.

Example 1:

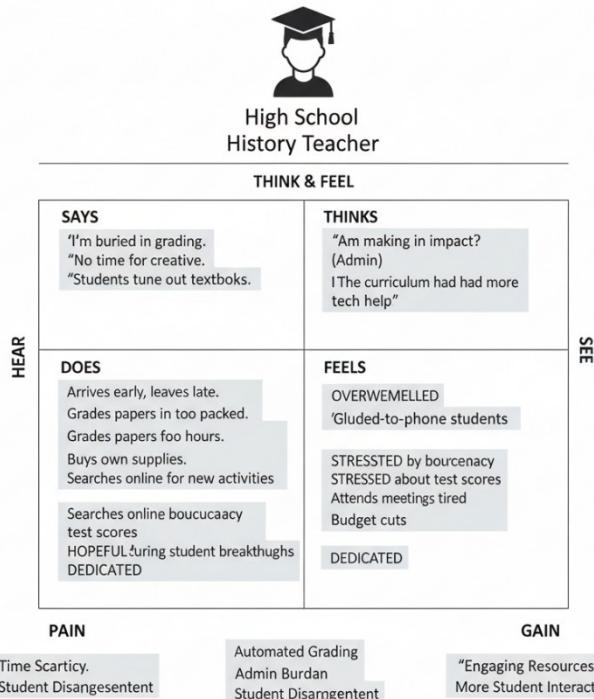


The main purpose of an Empathy Map is to enable teams to look beyond assumptions by visually depicting a stakeholder's overall experience—what they say, think, do, and feel—at a given point in time. By highlighting inconsistencies and identifying unspoken needs, this tool

encourages a shared, user-focused understanding that enhances the effectiveness of design and problem-solving processes.

Example 2:

**Empathy Map Canvas: High School History Teacher**



The High School History Teacher faces an ongoing internal conflict. Despite a strong dedication to delivering engaging lessons and preparing students for success, they often feel burdened by administrative tasks and a continual shortage of time. This frustration is intensified by witnessing colleagues leave the profession and by hearing conflicting expectations from students and administrators. Nevertheless, their actions reveal deep commitment—working late hours and personally purchasing classroom supplies. The core problem is not a lack of dedication but systemic inefficiencies, including time-consuming grading and limited access to relevant, diverse teaching materials. These issues emphasize the need for automated assessment systems and curated educational resources that help teachers focus more on meaningful instruction and student development.

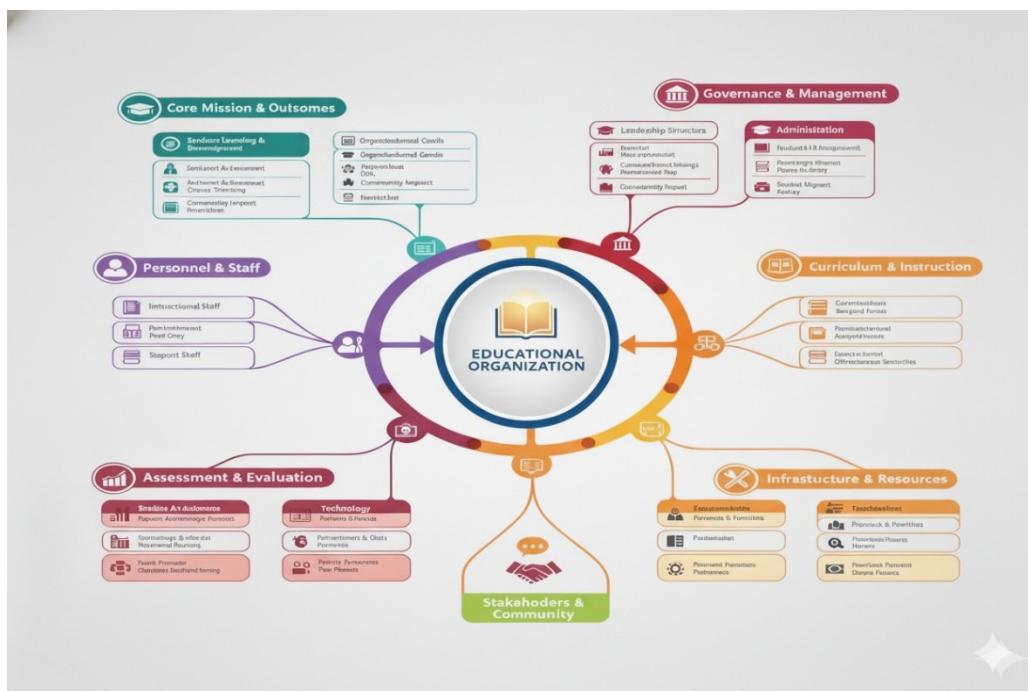
## Idea Prioritization Template

Date	18-09-2025
Team ID	NM2025TMID00843
Project Name	Educational Organization using Service
Maximum Marks	4 Marks

### **Educational Organization Template:**

Implementing ServiceNow within an educational organization begins with identifying opportunities to improve efficiency, collaboration, and service delivery across major departments, including IT, HR, Facilities, and Student Services. By involving students, faculty, and staff, common issues such as delayed requests and manual workflows can be effectively addressed through innovative solutions like a centralized student service portal, automated onboarding systems, digital maintenance requests, and AI-powered support tools. These proposed initiatives are then assessed based on their impact, feasibility, and alignment with institutional goals, leading to the prioritization of key digital transformation projects such as IT Service Management (ITSM) and HR Service Delivery (HRSD). Through ServiceNow's Innovation Management capabilities, the institution fosters a culture of continuous improvement and innovation, ensuring that technology enhances campus operations and enriches the overall experience for students, faculty, and staff.

### **Step:1 Concept Map of the Problem Statement**



The Concept Map illustrates the interconnected components that contribute to the success of an educational organization.

**Fundamental Purpose & Results** focus on achieving student success and fulfilling institutional goals, serving as the foundation for all other elements.

**Leadership & Administration** represent the governance framework and management structure that guide decision-making, policy development, and overall institutional direction.

**Faculty & Workforce** include teaching personnel and support teams who play a crucial role in delivering education, maintaining academic standards, and fostering a positive learning environment.

**Academic Programs & Teaching Methods** cover curriculum design and instructional strategies that ensure effective knowledge delivery and student engagement.

**Measurement & Review** involve processes such as student evaluations and program assessments to monitor progress, maintain quality, and inform continuous improvement.

**Facilities & Resources** refer to the infrastructure, technology, and financial resources necessary to support educational and operational activities.

**Community & Stakeholder Engagement** highlights collaboration with parents, families, and institutional partners to build strong relationships and enhance the educational experience.

## Step 2: List and Grouping

☒ Educational Organization Key Components		
Main Branch	Key Sub-Ideas (Sub-Banches)	Focus Area
I.  <b>Core Mission &amp; Outcomes</b>	<ul style="list-style-type: none"><li>• Student Learning &amp; Development,</li><li>• Critical Thinking, SEL, Innovation</li></ul>	<i>The Purpose of the organization</i>
II.  <b>Governance &amp; Management</b>	<ul style="list-style-type: none"><li>• Student Learning &amp; Academic Achievement,</li><li>• Critical Thinking,</li><li>• Organizational Goals</li></ul>	<i>The "Purpose</i>
A.  <b>Id *2 Personnel &amp; Staff</b>	<ul style="list-style-type: none"><li>• Student Learning &amp; Academic Achievement,</li><li>• Chankking, SEL,</li><li>• Organizational Goals</li></ul>	<i>Preeriction" the organization</i>
V.  <b>Curriculum &amp; Instruction</b>	<ul style="list-style-type: none"><li>• Malcal Doris &amp;</li><li>• Chamking, SEL,</li><li>• Character &amp; Values, Innovation</li></ul>	<i>INanges aord of the</i>
V.  <b>Infrassucture &amp; Resources</b>	<ul style="list-style-type: none"><li>• Student Learning &amp;</li><li>• Devdemic Achievement,</li><li>• Character &amp; Values, Innovation</li></ul>	<i>Uhe Kouse fforge</i>
VII.  <b>Stakeloters &amp; Community</b>	<ul style="list-style-type: none"><li>• Student Learning &amp; Antilemic Criticin,</li><li>• Organizational Goals, Innovation</li></ul>	<i>The "Ihe the organization</i>

## Explain the List and Grouping Image

The image presents a simplified, table-based representation of the “Educational Organization Key Components” mind map. It features seven main branches Core Mission & Outcomes, Governance & Management, Personnel & Staff, Curriculum & Instruction, Infrastructure & Resources, and Stakeholders & Community each differentiated by color and labeled with a combination of Roman numerals (I, II, V, VII) and a letter (A).

Each primary branch is accompanied by key sub-ideas listed in adjacent columns, outlining essential focus areas within the organization. However, several entries in the sub-idea and focus area columns are incomplete or distorted, suggesting that the image represents a low-resolution or partially corrupted version of the original mind map. As a result, some of the conceptual connections and detailed descriptions appear unclear or missing, indicating that the table may serve as an early draft or summary rather than a comprehensive depiction of the full educational organization framework.

## Step 3: Idea Assessment



## Explanation for the Idea Assessment:

This image provides a detailed visual representation of Idea Prioritization for Educational Organizations, illustrating three key frameworks designed to assess and select the most valuable initiatives.

The first framework, the Impact/Effort Matrix, categorizes ideas into four quadrants based on their potential impact and implementation effort. It highlights Quick Wins initiatives with high impact and low effort as the highest priority for immediate action.

The second framework, the Weighted Scoring Model, employs a data-driven approach by assigning weights to specific evaluation criteria, such as Student Learning Impact and Strategic Alignment. Each idea is scored against these criteria, and the combined weighted scores determine its overall priority level.

The third framework, the MoSCoW Method, applies a categorical approach to prioritize requirements by classifying them into Must Have, Should Have, Could Have, and Won't Have (This Time). This method helps clearly distinguish between essential, desirable, and non-essential initiatives.

Across all three frameworks, a common foundation of Key Educational Prioritization Criteria including Student Impact, Strategic Alignment, Feasibility, and Stakeholder Readiness ensures that decision-making remains consistent, transparent, and data-driven. Together, these frameworks enable educational organizations to systematically evaluate ideas and focus resources on initiatives that offer the greatest overall value and educational benefit.

## Project Planning Phase

Date	23-09-2025
Team ID	NM2025TMID00843
Project name	Educational Organization using ServiceNow
Maximum Marks	5 Marks

### Project Planning Phase – Educational Organization Using ServiceNow

The Project Planning Phase defines the roadmap for developing a cloud-based management system using ServiceNow to enhance academic and administrative operations within an educational institution. This phase ensures that project objectives, timelines, resources, and deliverables are clearly established prior to implementation. It also provides a structured framework for managing progress through iterative sprints using agile methodologies.

### Product Backlog, Sprint Schedule & Estimation Table

Sprint	Backlog ID	Feature / Task	Description	Priority	Story Points	Estimated Hours
1	PB01	User Authentication	Secure login for students, staff, and administrators	High	8	14
1	PB02	Requirement Analysis & Setup	Gather requirements and configure ServiceNow environment	High	7	12
2	PB03	Student Management Module	Manage student profiles, courses, and attendance	High	10	18
2	PB04	Staff Management Module	Manage staff details, departments, and roles	High	8	14
3	PB05	Course Management	Add, update, and delete course information	Medium	6	10

3	PB06	Event Scheduling	Create and manage institutional events	Medium	5	8
3	PB07	Workflow Automation	Automate approval and reporting processes	High	10	18
4	PB08	Reports & Analytics	Generate reports and dashboards for performance tracking	Medium	6	10
4	PB09	Notifications & Alerts	Send alerts for announcements and attendance updates	Low	4	6
4	PB10	Feedback & Documentation	Create feedback forms and project documentation	Medium	5	8

### Summary:

- Total Story Points:** 69
- Total Estimated Hours:** ≈ 118 hours
- Project Duration:** 4 weeks (4 Sprints)

### Project Tracker, Velocity & Burndown Chart

Sprint	Tasks / Modules	Planned Story Points	Completed Story Points	Velocity (Points per Sprint)	Work Completed (%)	Work Remaining (Story Points)
1	Requirement Analysis, Environment Setup, User Authentication	15	14	14	22%	55

2	Student & Staff Management Modules	18	16	16	46%	39
3	Course Management, Event Scheduling, Workflow Automation	21	18	18	73%	21
4	Reports, Notifications, Feedback, Documentation	15	—	—	100% (Expected)	0

### **Summary:**

- **Total Planned Story Points:** 69
- **Total Completed Story Points (as of Sprint 2):** 30
- **Average Velocity:** 15 story points per sprint
- **Estimated Completion:** End of Sprint 4
- **Project Tracker:** Monitors task completion, sprint progress, and time allocation
- **Velocity:** Measures average completion rate per sprint
- **Burndown:** Tracks remaining story points to visualize project progress

## **Project Design Phase**

### **Problem – Solution Fit Template**

Date	03-10-2025
Team ID	NM2025TMID00843
Project Name	Educational Organization using ServiceNow
Maximum Marks	4 Marks

### **Problem Solution Fit Template**

#### **About Problem Solution Fit**

The Problem Solution Fit stage ensures that the proposed system effectively addresses the actual challenges faced by users. It focuses on establishing a clear alignment between user needs and the system's capabilities. Before proceeding to full-scale development, this stage validates that the educational institution's key issues are well-defined and that the proposed ServiceNow-based solution provides meaningful, efficient, and sustainable improvements.

#### **Purpose**

The Problem Solution Fit Template aims to:

- Establish a clear connection between identified institutional challenges and their corresponding digital solutions.
- Ensure alignment between user requirements and system functionalities.
- Validate that the proposed solution is both practical and beneficial for the organization.
- Serve as a foundation for subsequent phases such as Project Design and Implementation.

#### **Problem Areas and Proposed Solutions**

The project addresses the inefficiencies and challenges faced by educational institutions in handling academic and administrative tasks. It focuses on:

**Manual Processes:** Replaces paper-based and time-consuming workflows with automated ServiceNow workflows.

**Data Management Issues:** Solves problems of scattered and inconsistent student or staff data by centralizing information in one platform.

**Delays and Inefficiency:** Reduces approval delays and communication gaps between students, teachers, and administrators.

**Lack of Performance Tracking:** Provides dashboards to monitor student performance and institutional progress in real time.

**Limited Transparency and Access:** Ensures better visibility and secure, role-based access to academic and administrative data.



Through this Problem Solution Fit stage, the project validates that the ServiceNow platform is an appropriate solution to the operational inefficiencies faced by educational institutions. By automating processes, improving data accuracy, and enhancing communication and visibility, the system supports better decision-making and contributes to overall institutional effectiveness.

## Solution Architecture

Date	09-10-2025
Team ID	NM2025TMID00843
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.
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

<b>Phase 2 – Design</b>	Create data models, workflow diagrams, and UI layouts.	Flow Designer, Data Schema Designer
<b>Phase 3 – Implementation</b>	Build and configure workflows, dashboards, and forms.	ServiceNow Studio
<b>Phase 4 – Testing</b>	Conduct pilot testing for one department, fix errors.	Test Management Tool
<b>Phase 5 – Deployment &amp; Maintenance</b>	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.

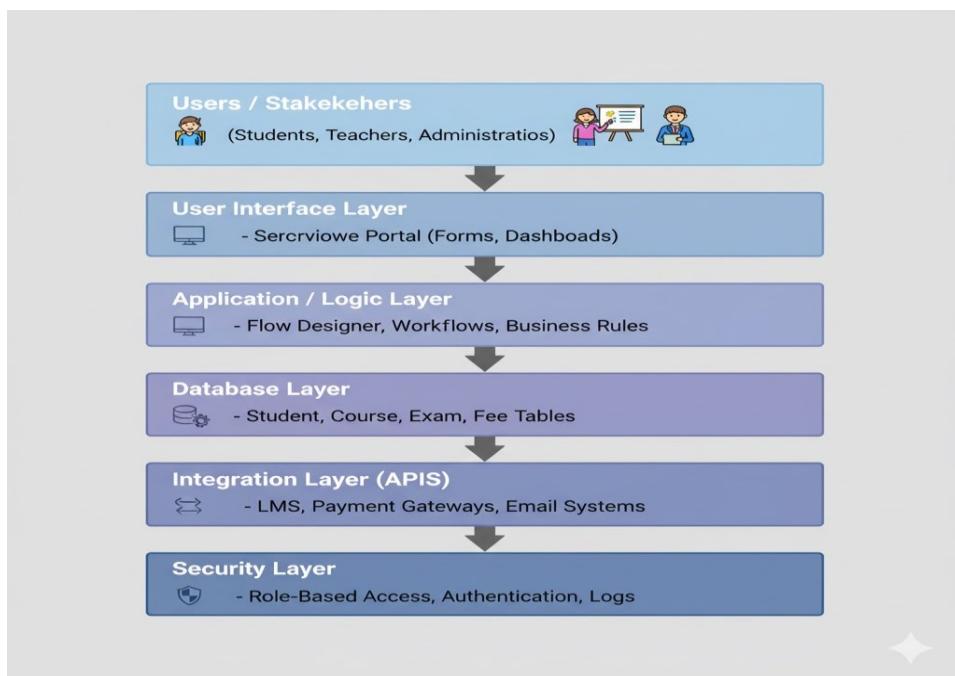
The Database Layer securely stores and retrieves institutional data.

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



## **Proposed Solution**

Date	13-10-2025
Team ID	NM2025TMID00843
Project Name	Educational Organization using ServiceNow
Maximum Marks	4 Marks

### **Solution Description**

The proposed solution involves the development of an Educational Organization Management System built on the ServiceNow platform. This digital system is designed to automate and streamline both academic and administrative processes within an educational institution. Its primary objective is to centralize institutional data, minimize manual tasks, and enhance transparency and operational efficiency.

Through customized ServiceNow workflows, the system will integrate key institutional functions, including student record management, staff information handling, performance monitoring, communication, and report generation, all within a unified portal.

### **Proposed Solution Template**

Parameter	Description
<b>Project Title</b>	Educational Organization Using ServiceNow
<b>Purpose</b>	To automate and digitalize academic and administrative workflows within an educational institution.
<b>Objective</b>	To enhance efficiency, data accuracy, and communication through a unified ServiceNow-based management system.
<b>Platform Used</b>	ServiceNow a workflow automation and service management platform.
<b>System Name</b>	Educational Organization Management System

### **Overview**

The Educational Organization Management System is a centralized platform built on ServiceNow that integrates student management, staff management, and performance tracking within a single system. It automates workflows, eliminates manual processes, and ensures

seamless communication among all institutional users including students, faculty, and administrators.

## Key Features

- **Student Management:** Handles admissions, attendance tracking, and academic results.
- **Staff Management:** Manages faculty details, schedules, and workload distribution.
- **Performance Module:** Monitors student progress and departmental performance metrics.
- **Finance Module:** Tracks fee payments, approvals, and financial workflows.
- **Communication & Alerts:** Sends automated notifications for exams, results, and fee reminders.
- **Dashboard & Reports:** Provides real-time analytics, visual summaries, and progress reports.

## Technology Stack

- **Frontend:** Service Portal (HTML, CSS, JavaScript)
- **Backend:** ServiceNow Workflows and Flow Designer
- **Database:** ServiceNow Data Tables
- **Security:** Role-Based Access Control (RBAC) and Data Encryption

## Expected Outcomes

- Significant reduction in manual processing and administrative workload.
- Improved transparency and faster institutional decision-making.
- Centralized and easily accessible data management.
- Real-time tracking of student and staff performance.

## Benefits

- Simplifies academic and administrative operations, improving overall productivity.
- Minimizes paperwork, redundancy, and human error.
- Strengthens communication between departments and stakeholders.

- Provides data-driven insights through real-time monitoring and analytics.

## **Target Users**

Students, Teachers, and Administrators of educational institutions.

## **Scope of Implementation**

The proposed system can be implemented across schools, colleges, and universities to manage diverse academic and administrative functions. Its scalable architecture allows easy customization to meet the unique needs of various educational organizations.

## Project Design Phase-II

### Technology Stack Template

Date	14-10-2025
Team ID	NM2025TMID00843
Project name	Educational Organization using ServiceNow
Maximum Marks	4 Marks

### **1. Technical Architecture**

The Technical Architecture of the Educational Organization Management System outlines how various system layer front-end, back-end, database, integration, security, and reporting interact within the ServiceNow platform. It is designed to deliver automation, centralized data access, and secure workflow management for students, teachers, and administrators.

#### **Key Objectives**

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

### **2. Example: ServiceNow-Based Architecture**

#### **Example Scenario: Course Registration Process**

When a student registers for a course, the system performs the following automated steps:

1. Data Submission: The student submits registration data through the Service Portal (Front-End).
2. Workflow Processing: The request is processed using Flow Designer for workflow automation.
3. Data Storage: All related data is securely stored in CMDB Tables (Database Layer).
4. Notification: The Administrator receives an automated notification through the Notification Service (Integration Layer).

- Reporting: Real-time reports are generated using Performance Analytics (Reporting Layer).

## System Layers and Components

Layer	Component / Technology	Functionality
<b>Front-End</b>	HTML5, CSS3, JavaScript, Service Portal	Provides the interface for students, teachers, and administrators to access system features and services.
<b>Back-End</b>	ServiceNow Business Rules, Script Includes, Flow Designer	Executes business logic, approval workflows, and automation of institutional processes.
<b>Database Layer</b>	ServiceNow CMDB, Tables, Relationships	Manages secure storage and retrieval of student, staff, and academic data.
<b>Integration Layer</b>	REST APIs, IntegrationHub, Email Services	Connects the system to external applications such as LMS, email, and payment services.
<b>Security Layer</b>	Role-Based Access Control (RBAC), Audit Logs, SSL Encryption	Protects system data, manages access permissions, and ensures data integrity.
<b>Reporting Layer</b>	Dashboards, Performance Analytics	Provides analytical insights, KPI visualization, and dynamic reporting.

## System Characteristics

Characteristics	Description
<b>Platform Type</b>	Cloud-based, low-code/no-code application built on the ServiceNow platform.
<b>Accessibility</b>	Web-based; accessible via both desktop and mobile devices.
<b>Scalability</b>	Supports an increasing number of users, departments, and academic modules.
<b>Automation</b>	Employs Flow Designer and Workflows to minimize manual intervention.
<b>Maintainability</b>	Easily maintained and updated through ServiceNow Studio and Update Sets.

<b>Security</b>	Ensures encryption, audit trails, and strict access control mechanisms.
<b>User Experience</b>	Provides an intuitive and user-friendly interface using the Service Portal.

This Technical Architecture establishes a robust foundation for the ServiceNow-based Educational Management System, ensuring reliability, scalability, and operational efficiency across all institutional processes.

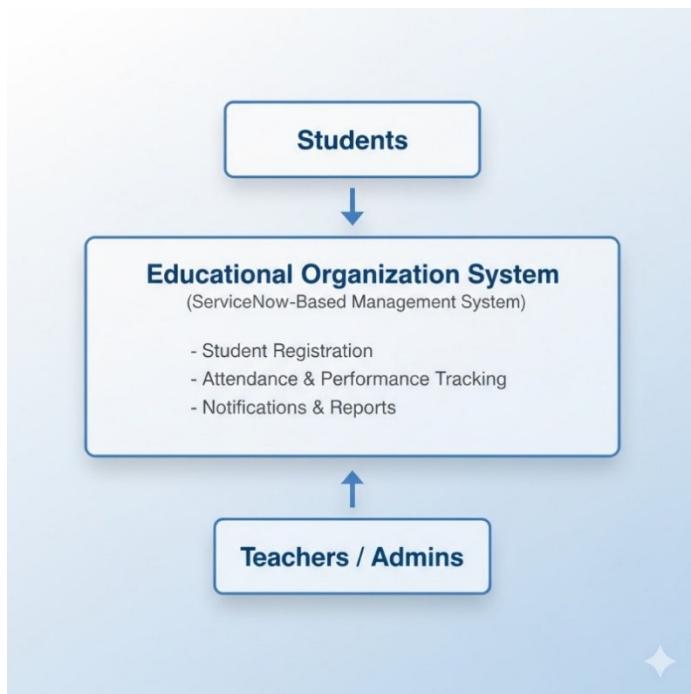
## Solution Requirements

Date	16-10-2025
Team ID	NM2025TMID00843
Project name	Educational Organization using ServiceNow
Maximum Marks	4 Marks

## Data Flow Diagram (DFD)

The Data Flow Diagram (DFD) represents the movement of information within the Educational Organization Management System. It visually illustrates how data is collected, processed, and distributed among different system entities, including students, teachers, and administrators.

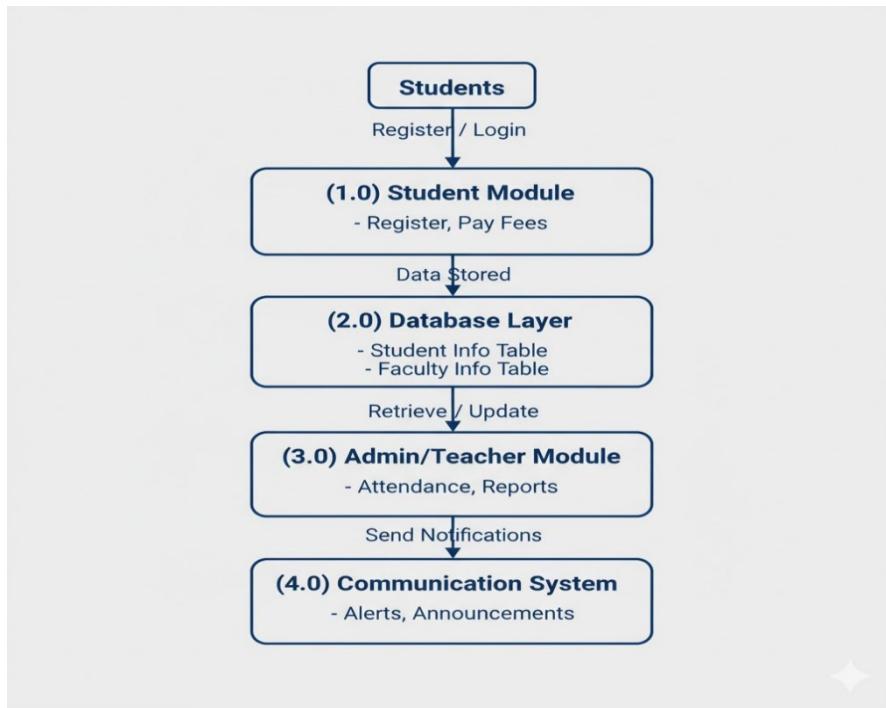
### Level 0 DFD (Context Diagram):



## **Explanation:**

Students and teachers interact with the ServiceNow system to input or retrieve information. The system processes this data and provides reports, notifications, and updates to users.

## **Level 1 DFD (Process Breakdown):**



## **Explanation:**

Data flows from students to the system for registration and payments, moves to the database for storage, then to teachers/admins for processing (attendance, performance), and finally to the communication module for output notifications.

## **User Story Table:**

User Story ID	As a....	I want to...	So that I can...	Acceptance Criteria
US1	Student	Register through the portal	Access academic resources easily	Registration form validates input and saves to database
US2	Admin	Approve new student registrations	Maintain verified student records	Admin approval workflow completes successfully

<b>US3</b>	Teacher	Record and update attendance	Monitor student participation	Attendance records are stored and viewable
<b>US4</b>	Teacher	Upload marks and generate performance reports	Track academic progress	Reports generate accurately by subject and term
<b>US5</b>	Admin	Send notifications and updates	Inform all users on time	Notifications delivered to correct user groups
<b>US6</b>	Admin	View analytics dashboard	Make informed decisions	Dashboard updates in real time with accurate data

## Outcome:

- DFDs define system data movement clearly.
- User Stories connect functional needs to real user goals.
- Together, they provide a solid foundation for system design and implementation in ServiceNow.

## Solution Requirements

Date	21-10-2025
Team ID	NM2025TMID00843
Project name	Educational Organization using ServiceNow
Maximum Marks	4 Marks

## Functional Requirements:

The following are the functional requirements of the proposed solution.

FR No.	Functional Requirement	Description
<b>FR1</b>	User Authentication	The system must allow students, teachers, and admins to log in securely using unique credentials
<b>FR2</b>	Student Registration	Students can register for courses and submit their details online.

<b>FR3</b>	Fee Management	The system should enable fee payment tracking and receipt generation.
<b>FR4</b>	Attendance Management	Teachers should be able to mark and update attendance.
<b>FR5</b>	Performance Tracking	The system should record and analyze student marks and grades.
<b>FR6</b>	Notifications and Alerts	Automated email/SMS alerts for deadlines, exams, and announcements.
<b>FR7</b>	Report Generation	Generate academic performance and attendance reports for each student.
<b>FR8</b>	Role-Based Access Control	Different user roles (Admin, Teacher, Student) must have distinct privileges.
<b>FR9</b>	Dashboard Visualization	Display analytics and summaries (e.g., attendance %, academic progress) on dashboards.
<b>FR10</b>	Data Backup & Restore	System must support data backup and easy recovery in case of failure.

## Non-Functional Requirements:

The following are the non-functional requirements of the proposed solution.

<b>NFR No.</b>	<b>Non-Functional Requirement</b>	<b>Description</b>
<b>NFR1</b>	Performance	The system should respond to user requests within 2 seconds under normal load.
<b>NFR2</b>	Scalability	It should handle increasing users and data without performance loss.
<b>NFR3</b>	Security	All user data must be encrypted; use role-based access for sensitive information.
<b>NFR4</b>	Reliability	Ensure 99% uptime and consistent service availability.
<b>NFR5</b>	Usability	The interface should be intuitive and easy to use for students and faculty.
<b>NFR6</b>	Maintainability	The system should allow easy updates and maintenance through ServiceNow platform tools.

<b>NFR7</b>	Portability	The application should be accessible on browsers and mobile devices.
<b>NFR8</b>	Data Integrity	Prevent unauthorized modification or deletion of records.
<b>NFR9</b>	Compliance	Must comply with institutional and educational data standards (like FERPA).
<b>NFR10</b>	Backup & Recovery	Automatic data backup daily and quick recovery in case of system failure.

## Performance Testing

Date	30-10-2025
Team ID	NM2025TMID00843
Project Name	Educational Organization using ServiceNow
Maximum Marks	4 Marks

## Setting up Instance

The screenshot shows a guided project interface. On the left, there's a sidebar with a tree view of project steps: 'Educational Organisation Using ServiceNow' (selected), 'Setting Up ServiceNow Instance' (selected), 'Creating A Update Set', 'Creating A Table', 'Form Layout', 'Form Design', 'Number Maintenance', 'Process Flow', 'Client Script', and 'Result'. The main area is a large box titled 'Setting Up ServiceNow Instance' containing the following text:

**Setting Up ServiceNow Instance**

1.Sign up for a developer account on the ServiceNow Developer site "https://developer.servicenow.com".  
2.Once logged in, navigate to the "Personal Developer Instance" section.  
3.Click on "Request Instance" to create a new ServiceNow instance.  
4.Fill out the required information and submit the request.  
5.You'll receive an email with the instance details once it's ready.  
6.Log in to your ServiceNow instance using the provided credentials.  
7.Now you will navigate to the ServiceNow.

## Creating a Update Set

The screenshot shows the ServiceNow App Engine Studio interface. At the top, there's a navigation bar with 'servicenow', 'All', 'Favorites', 'History', 'Workspaces', 'Admin', 'ServiceNow', 'Search', and other icons. The main area has a dark background with a rocket launching illustration. On the left, there's a search bar with 'local update sets' and a 'Let's Go' button. Below the search bar, there's a sidebar with 'FAVORITES' (No Results) and 'ALL RESULTS' (System Update Sets, Local Update Sets). The 'Local Update Sets' section is expanded, showing a sub-section for 'System Update Sets'. The central area displays the text: 'Build low-code apps quickly. Create from scratch or templates. Safely scale cross-enterprise experiences that users love. All on one platform.' and a 'Go Further' button at the bottom.

# Creating Tables

## Creating Salesforce Table:

The screenshot shows the ServiceNow interface for creating a new table. At the top, the navigation bar includes 'servicenow' and links for 'All', 'Favorites', 'History', 'Workspaces', and 'Admin'. The title bar says 'Table - New Record'. Below the title bar, there's a message: 'ServiceNow recommends creating custom tables in scoped applications. To learn more about creating scoped applications, click [here](#)'. A note below states: 'A table is a collection of records in the database. Each record corresponds to a row in a table, and each field on a record corresponds to a column on that table. Applications use tables and records to manage data and processes.' A 'More Info' link is provided.

The main form has fields for 'Label' (set to 'Table'), 'Name' (set to 'New record'), and 'Extends table' (set to 'Salesforce'). On the right, configuration options include 'Application' (set to 'Global'), 'Create module' (checked), 'Create mobile module' (checked), 'Add module to menu' (set to '-- Create new --'), 'New menu name' (empty), and 'Remote Table' (unchecked). Below the form is a table titled 'Dictionary Entries' with columns: 'Column label', 'Type', 'Reference', 'Max length', 'Default value', and 'Display'. The table contains one entry: 'Father Cell' (String, empty, 40, 40, false). Buttons at the bottom include 'Submit' and 'Cancel'.

## Create Admission Table:

The screenshot shows the ServiceNow interface for creating a new table named 'Admission'. The title bar says 'Tables'. The main form has fields for 'Label' (set to 'Admission'), 'Name' (set to 'u\_ux\_admission'), and 'Extends table' (set to 'Salesforce'). Configuration options on the right are identical to the previous screenshot: 'Application' (Global), 'Create module' (checked), 'Create mobile module' (checked), 'Add module to menu' (set to '-- Create new --'), 'New menu name' (empty), and 'Remote Table' (unchecked). Below the form is a table titled 'Dictionary Entries' with columns: 'Column label', 'Type', 'Reference', 'Max length', 'Default value', and 'Display'. The table contains five entries: 'Created by' (String, empty, 40, 40, false), 'Student Name' (String, empty, 40, 40, false), 'Created' (Date/Time, empty, 40, 40, false), and 'mother Cell' (String, empty, 40, 40, false). A 'New' button is visible at the bottom right of the table area.

## Create student Progress table:

The screenshot shows the ServiceNow Tables interface for creating a new table. The table is named "Student Progress" with the internal name "u\_student\_progress". The "Application" is set to "Global". Under "Create module", the "Create mobile module" checkbox is checked. The "Add module to menu" dropdown is set to "... Create new ...". The "New menu name" field is empty. The "Remote Table" checkbox is unchecked.

Column label	Type	Reference	Max length	Default value	Display
Created	Date/Time	(empty)	40		false
Telugu	String	(empty)	40		false
English	String	(empty)	40		false
Percentage	String	(empty)	40		false
Total	String	(empty)	40		false

## Form Layout

The screenshot shows the ServiceNow Form view and section configuration interface. In the "Available" list, fields like "Admission Number", "Created", "Created by", etc., are listed. In the "Selected" list, "Admission Number" is currently selected. Below this, the "Form view and section" section shows "View name: Default view" and "Section: New Section". The "Create new field" section allows creating a new string field named "New Section" with a length of "Small (40)".

## Form Design

## Creating Form Design for Salesforce Table:

The screenshot shows the ServiceNow Form Design interface for a table named "Salesforce [u\_salesforce]". The main area displays a 2-column grid of fields. The first column contains "Admin Number", "Admin Date", "Grade", and "Student Name". The second column contains "Father Name", "Mother Name", "Father Cell", and "mother Cell". On the left side, there is a sidebar with sections for "Fields" and "Field Types", and a "Formatters" section containing "Activities (filtered)", "Contextual Search Results", and "Ratings".

## Creating Form Design for Student progress Table:

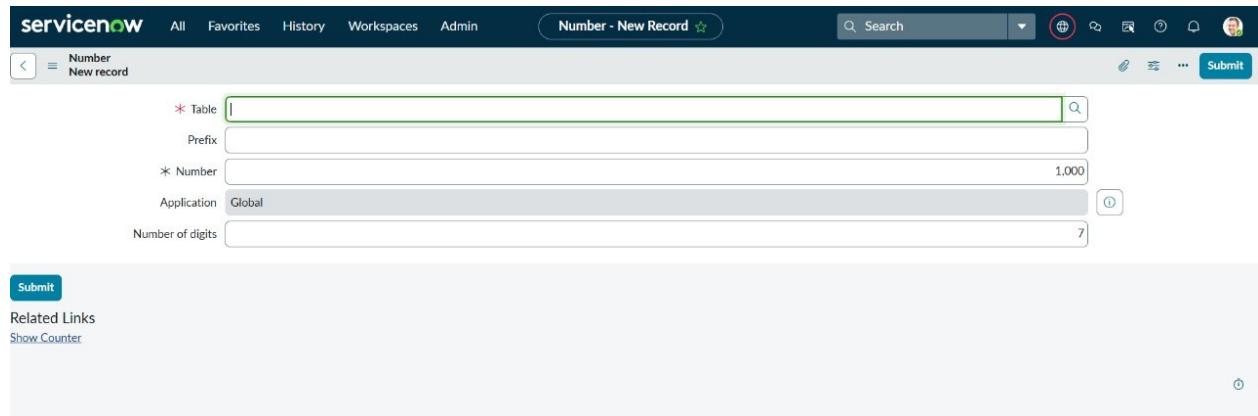
The screenshot shows the ServiceNow Form Design interface for a table named "Admission [x\_admission]". The main area displays a form with several sections: "Admission Details" (with fields like Admin Number, Admin Date, Grade, Purpose of Visit, Student Name, Father Name, Mother Name), "Comments", "School Details" (with field School), and "Address" (with fields Postcode, Model, House No). On the left side, there is a sidebar with sections for "Fields" and "Field Types", and a "Formatters" section containing "Activities (filtered)", "Contextual Search Results", and "Ratings".

## Creating Form Design for Student progress Table

The screenshot shows the ServiceNow Form Design interface for a table named "Student Progress [x\_studc]". The main area displays a form with sections: "New Sections" (containing "Admission Number"), "Admission Number" (with fields Grade, Student Name, Father Name, Mother Name, Father Cell, Mother Cell), and "Student Progress" (with fields Telugu, Hindi, English, Maths, Science, Total, Percentage, Result). On the left side, there is a sidebar with sections for "Fields" and "Field Types", and a "Formatters" section containing "Activities (filtered)", "Contextual Search Results", and "Ratings".

# Number Maintenance

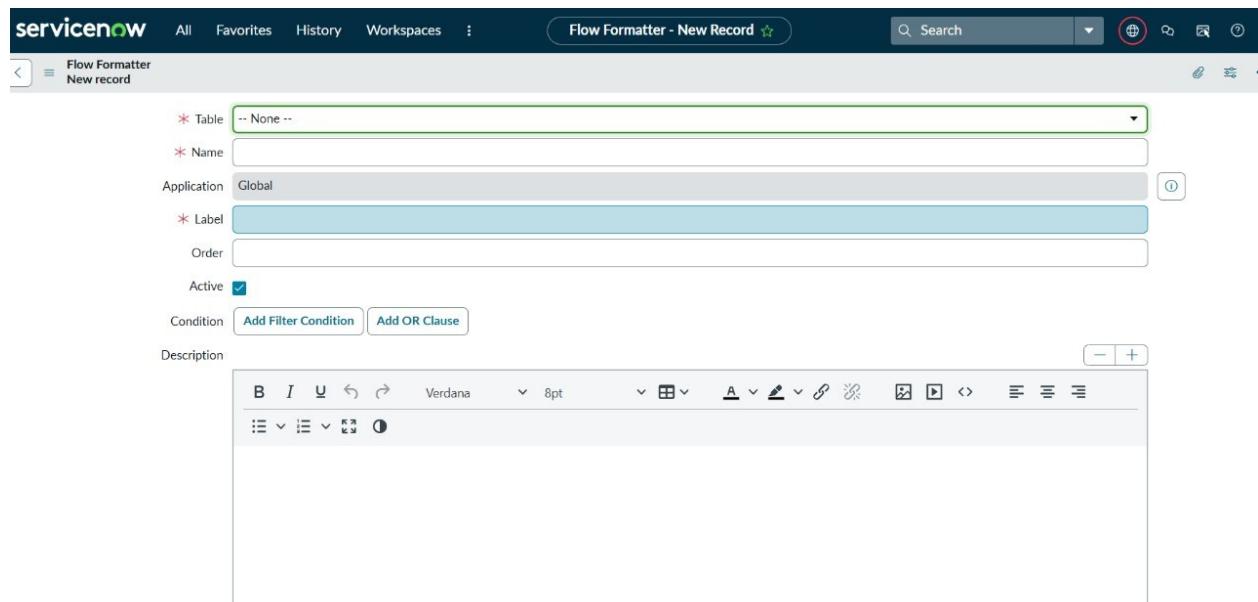
## Creating Number Maintenance for Admin Number



The screenshot shows the ServiceNow interface for creating a new number record. The top navigation bar includes 'All', 'Favorites', 'History', 'Workspaces', and 'Admin'. The title bar says 'Number - New Record'. The main form has fields for 'Table' (set to 'I'), 'Prefix' (empty), 'Number' (set to '1,000'), 'Application' (set to 'Global'), and 'Number of digits' (set to '7'). A 'Submit' button is at the bottom left, and a 'Related Links' section below it contains 'Show.Counter'.

# Process Flow

## Creating Process Flow for Admission Table



The screenshot shows the ServiceNow interface for creating a new flow formatter record. The top navigation bar includes 'All', 'Favorites', 'History', 'Workspaces', and 'Flow Formatters'. The title bar says 'Flow Formatter - New Record'. The main form has fields for 'Table' (set to '-- None --'), 'Name' (empty), 'Application' (set to 'Global'), 'Label' (highlighted in blue), 'Order' (empty), and 'Active' (checkbox checked). Below these are 'Condition' buttons for 'Add Filter Condition' and 'Add OR Clause'. A 'Description' section features a rich text editor toolbar and a large text area for entering text.

## Create Client Scripts

The screenshot shows the 'Client Script - Auto populate name with table name' configuration page in ServiceNow. The form includes fields for Name (S), Table (Template Permit Rule [sys\_app\_template...]), UI Type (All), Type (onChange), Field name (Table Name), Application (Global), Active (checked), Inherited (unchecked), Global (checked), Description (If Name is empty then auto populate it with Table Name), and a large Script editor containing the following code:

```

1 function onChange(control, oldValue, newValue, isLoading, isTemplate) {
2     if (isLoading || newValue === '') {
3         return;
4     }
5
6     if (g_form.getValue('name') === '') {
7         g_form.setValue('name', newValue);
8     }
9 }

```

## Result

The three screenshots demonstrate the outcome of the client script across different forms:

- Salesforce New record:** Shows fields for Admin Number (SAL0001004), Admin Date, Grade (prept), and Student Name. To the right, there are fields for Father Name, Mother Name, Father Cell, and Mother Cell. A 'Submit' button is at the bottom.
- Admission New record:** Shows fields for Admin Number (SAL0001003), purpose of join (40), Student Name, Father Name, and Mother Name. To the right, there are fields for Admin Date, Grade (None), Fee (INR 40.00), Father Cell, Mother Cell, and Admin Status. A 'Submit' button is at the bottom.
- New Section New record:** Shows fields for Admin Number, purpose of join (40), Student Name, Father Name, and Mother Name. To the right, there are fields for Maths, Hindi, Social, Science, Telugu, Percentage, Total, and Result. A 'Submit' button is at the bottom.