

Educational Organization Using ServiceNow

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Project Name	Educational Organization Using ServiceNow
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1. INTRODUCTION

1.1 Project Overview

The “Educational Organisation Using ServiceNow” project is designed to develop a centralized Educational Management System using the ServiceNow platform. The system aims to streamline administrative operations within an educational institution by digitizing student records, teacher management, admission processes, and academic tracking.

Educational institutions often manage large volumes of data manually or through disconnected systems, leading to inefficiencies, delays, and errors. This project leverages ServiceNow’s capabilities such as tables, forms, workflows, client scripts, and automation to create an integrated system that improves operational efficiency and data accuracy.

The platform enables administrators to manage student admissions, maintain academic records, assign faculty, track attendance, and monitor performance through automated workflows and structured database

1.2 Purpose

The purpose of this project is to:

- Digitize and centralize institutional data.
- Automate admission and approval workflows.
- Improve communication between administration, teachers, and students.
- Reduce manual paperwork and redundancy.
- Enhance transparency and accountability.
- Provide real-time tracking of academic and administrative processes.

2. IDEATION PHASE

2.1 Problem Statement

Educational institutions face multiple challenges in managing administrative and academic activities. Most institutions rely on manual documentation or fragmented systems for student enrolment, teacher assignment, and academic tracking. These systems often result in:

- Data redundancy and inconsistency.
- Delays in processing admissions.
- Lack of centralized student information.
- Difficulty in monitoring academic progress.
- Inefficient communication between departments.

There is a need for a unified, automated, and scalable system that integrates all administrative and academic functions in one platform. The proposed solution uses ServiceNow to address these challenges effectively.

2.2 Empathy Map Canvas

To better understand the stakeholders (students, teachers, administrators), an empathy map was created.

Students

- Think & Feel: Want quick admission confirmation and easy access to academic records.
- See: Complex paperwork and delayed responses.
- Say & Do: Frequently inquire about admission status and results.
- Pain Points: Delays, lack of updates, manual errors.
- Gains: Fast processing, transparency, online access.

Teachers

- Think & Feel: Need organized student data and workload clarity.
- See: Disorganized record systems.
- Say & Do: Request updated student information.
- Pain Points: Manual record handling.
- Gains: Automated tracking, easy access to student data.

Administrators

- Think & Feel: Want efficient management and reduced workload.
- See: High volume of paperwork.
- Say & Do: Approve admissions and manage records.

- Pain Points: Redundant data entry and inefficiency.
- Gains: Automated workflows and centralized control.

2.3 Brainstorming

During brainstorming, several ideas were discussed:

- Developing a web-based portal for admissions.
- Automating student ID generation using Number Maintenance.
- Creating separate tables for Students, Teachers, and Courses.
- Designing approval workflows for admission processes.
- Implementing client scripts for form validation.
- Generating automated notifications upon approval.

After evaluation, the idea of building the complete system within ServiceNow using tables, forms, workflows, and automation was finalized.

3. REQUIREMENT ANALYSIS

3.1 Customer Journey Map

1. Student submits admission form.
2. System validates required details.
3. Admission request is sent to administrator for approval.
4. Administrator reviews and approves/rejects.
5. Upon approval, student record is created automatically.
6. Student receives confirmation notification.

3.2 Solution Requirements

Functional Requirements

- Create student registration form.
- Store student details in a database table.
- Automate admission approval workflow.
- Generate unique student IDs.
- Maintain teacher and course records.
- Enable form validation using client scripts.

Non-Functional Requirements

- Secure data storage.
- Fast response time.
- User-friendly interface.
- Scalability for increasing student data.
- Role-based access control.

3.3 Data Flow Diagram (DFD)

- User submits admission form →
- Data stored in Student Table →
- Workflow triggers approval process →
- Admin reviews request →
- Approval updates database →
- Notification sent to student.

3.4 Technology Stack

- Platform: ServiceNow
- Database: ServiceNow Tables
- Scripting: Client Scripts (JavaScript)
- Workflow Automation: Process Flow / Flow Designer
- UI Components: Form Layout & Form Design
- Number Maintenance for ID generation

4. PROJECT DESIGN

4.1 Problem Solution Fit

The proposed ServiceNow-based system directly addresses administrative inefficiencies by centralizing and automating educational management tasks. It reduces manual errors, improves speed, and enhances transparency.

4.2 Proposed Solution

The system includes:

- Student Table
- Teacher Table

- Course Table
- Admission Form
- Automated Approval Workflow
- Unique ID Generation
- Notification System

The solution ensures smooth data flow between students and administrators.

4.3 Solution Architecture

1. User Interface Layer – Admission and management forms.
2. Application Layer – Client scripts and workflows.
3. Database Layer – Custom tables for storing records.
4. Automation Layer – Flow Designer for approvals and notifications.

5. PROJECT PLANNING & SCHEDULING

5.1 Project Planning

Phase1–RequirementAnalysis

Phase2–TableCreation

Phase3–FormDesign

Phase4–NumberMaintenanceSetup

Phase5–WorkflowDevelopment

Phase6–ClientScriptImplementation

Phase7–Testing

Phase 8 – Deployment

6. FUNCTIONAL AND PERFORMANCE TESTING

6.1 Performance Testing

- Verified form validation functionality.
- Tested approval workflow automation.
- Checked unique ID generation.
- Ensured database record creation accuracy.
- Tested notification delivery system.

The system performs efficiently without delays or data inconsistencies.

7. RESULTS

7.1 Output Screenshots

- Creation of New Update Set

The screenshot shows the 'Update Set - Educational Organisation' page in ServiceNow. The 'Name' field is set to 'Educational Organisation'. Other fields include 'State' (In progress), 'Parent' (empty), 'Release date' (empty), 'Install date' (empty), 'Installed from' (empty), 'Application' (Global), 'Created' (2025-06-21 22:48:59), 'Created by' (admin), and 'Merged to' (empty). A large 'Description' text area is present. At the bottom, there is a 'Related Links' section with links to 'Merge With Another Update Set' and 'Scan Update Set'. A blue 'Update' button is visible.

- Creation of Salesforce Table

The screenshot shows the 'Table - Salesforce' page in ServiceNow. The 'Label' field is set to 'Salesforce' and the 'Name' field is 'u_salesforce'. The 'Application' is Global. Below the table header, there is a 'Dictionary Entries' section showing various columns with their properties like Type, Reference, Max length, Default value, and Display. Columns listed include Mother Cell, Updated, Admin Number, Class, Created by, Father Name, Grade, Mother Name, Sys ID, Created, Father Cell, Student Name, Updates, Updated by, Admin date, and an 'Insert a new row...' option. A 'New' button is at the top right of the table view.

- Creating Admission Table

Table - Admission

Columns

Column label	Type	Reference	Max length	Default value	Display
Class	String	(empty)	40		false
Mandal	String	(empty)	40		false
House No	String	(empty)	40		false
Fee	Price	(empty)	20		false
Purpose of Join	Choice	(empty)	40		false
Pincode	Choice	(empty)	40		false
Area	String	(empty)	40		false
School	Choice	(empty)	40		false
Admission Number	Reference	Salesforce	32		false
Admin Status	Choice	(empty)	40		false
District	String	(empty)	40		false
School Area	Choice	(empty)	40		false
Sys ID	Sys ID (GUID)	(empty)	32		false
City	String	(empty)	40		false
Comments	String (Full UTF-8)	(empty)	255		false
Mother Cell	String	(empty)	40		false
Updated	Date/Time	(empty)	40		false
Admin Number	String	(empty)	40	isuserfirstlastNextOrThisNumberIsPacked40	true

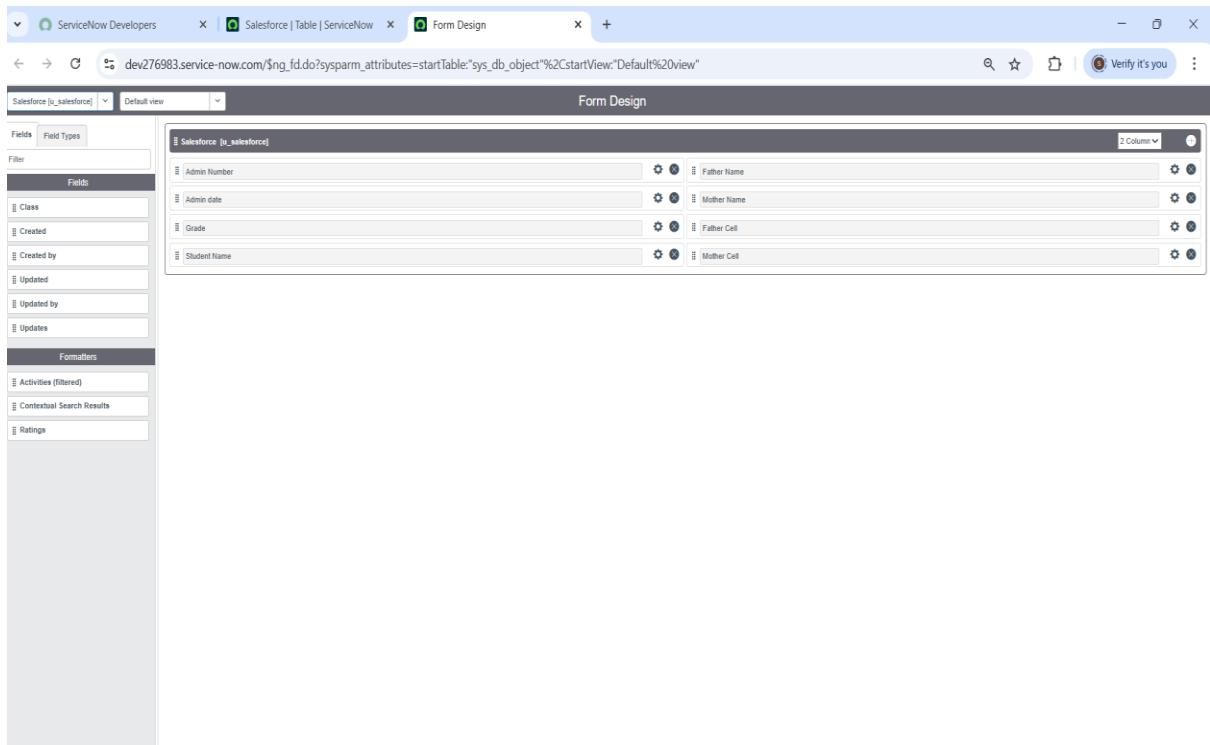
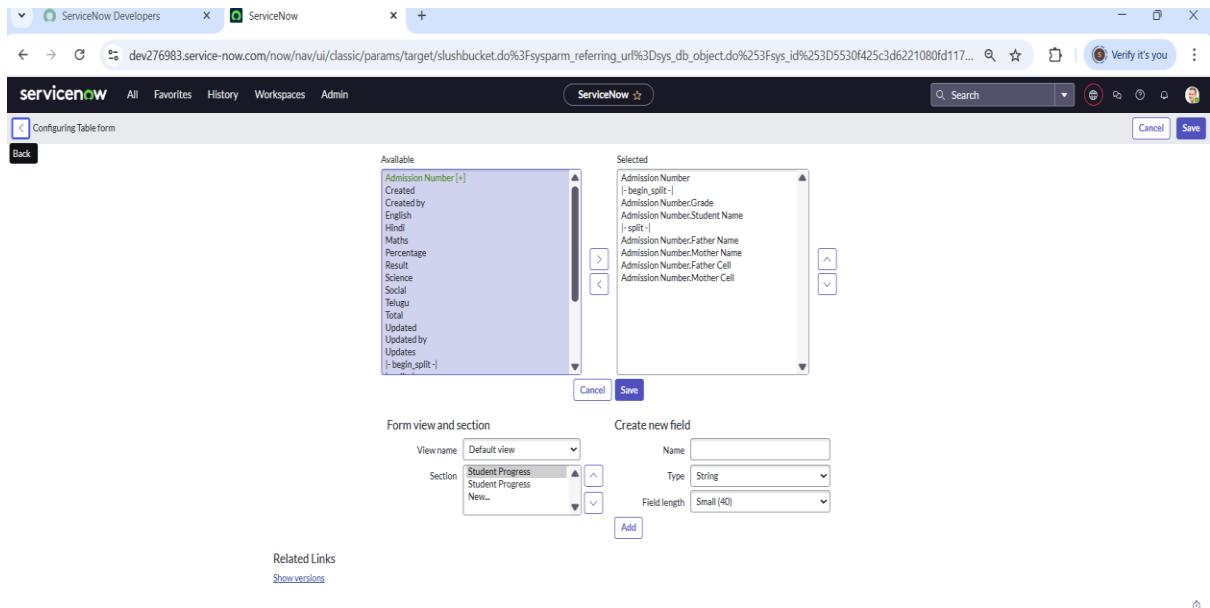
- Creating Student Progress Table

Table - Student Progress

Columns

Column label	Type	Reference	Max length	Default value	Display
Science	String	(empty)	40		false
Admision Number	Reference	Salesforce	32		false
Sys ID	Sys ID (GUID)	(empty)	32		false
Percentage	String	(empty)	40		false
Hindi	String	(empty)	40		false
Total	String	(empty)	40		false
Created	Date/Time	(empty)	40		false
Telugu	String	(empty)	40		false
Updated by	String	(empty)	40		false
Updates	Integer	(empty)	40		false
Maths	String	(empty)	40		false
Updated	Date/Time	(empty)	40		false
Created by	String	(empty)	40		false
Result	String	(empty)	40		false
Social	String	(empty)	40		false
English	String	(empty)	40		false

- Form Layout & Form Design



- Creating Number Maintenance for Admin Number

ServiceNow Developers

SAL | Number | ServiceNow

Form Design

Number - SAL

Number

Table: Salesforce

Prefix: SAL

Number: 1.000

Application: Global

Number of digits: 7

Update Delete

Related Links
Show Counter

- Process Flow

New Record | Flow Formatter

Flow Formatter - New Record

Admission [u_admission]

Name: New

Label: New

Order:

Active:

Condition: Add Filter Condition, Add "OR" Clause
-- choose field --, -- open --, -- value --

Description:

1
2
3
4
5
6

Submit

- Client Script

ServiceNow Developers > Auto populate | Client Script > Form Design

Client Script - Auto populate

Name: Auto populate

Table: Admission [u_admission]

UI Type: Mobile / Service Portal

Type: onChange

Field name: Admin Number

Description:

Messages:

Script:

```
function onChange(control, oldValue, newValue, isLoading, isTemplate) {  
    if (!isLoading || newValue === '') {  
        return;  
    }  
    //Type appropriate comment here, and begin script below  
    var a = g_form.getReference('u_admission_number');  
    g_form.setValue('u_admin_date',a.u_admin_date);  
    g_form.setValue('u_grade',a.u_grade);  
    g_form.setValue('u_student_name',a.u_student_name);  
    g_form.setValue('u_father_name',a.u_father_name);  
    g_form.setValue('u_mother_name',a.u_mother_name);  
}
```

Isolate script

- Result

Admission Table

ServiceNow Developers | Create SAL0001011 | Admission

New Section
New record

Admission - Create SAL0001011

Workflow Progress: New > In Progress > Joined > Rejected > Rejoined > Closed > Cancelled

Admission Number	<input type="text"/>	QL
Purpose of join	-- None --	
Student Name	<input type="text"/>	
Father Name	<input type="text"/>	
Mother Name	<input type="text"/>	
Comments	<input type="text"/>	
Admin date	<input type="text"/>	
Grade	-- None --	
Fee	\$ <input type="text"/> 0.00	
Father Cell	<input type="text"/>	
Mother Cell	<input type="text"/>	
Admin Status	-- None --	

School Details **Address**

School Area	-- None --	School	-- None --
-------------	------------	--------	------------

Submit

Salesforce Table

ServiceNow Developers | Create SAL0001013 | Salesforce

dev276983.service-now.com/nav/ui/classic/params/target/u_salesforce.do%3Fsys_id%3D-1%26sys_is_list%3Dtrue%26sys_target%3Du_salesforce%26sysparm_checked_items... Search School

Servicenow All Favorites History Workspaces Admin

Salesforce - Create SAL0001013

School

Admin Number	<input type="text" value="SAL0001013"/>	Father Name	<input type="text"/>
Admin date	<input type="text"/>	Mother Name	<input type="text"/>
Grade	<input type="text" value="-- None --"/>	Father Cell	<input type="text"/>
Student Name	<input type="text"/>	Mother Cell	<input type="text"/>

Student Progress Table

ServiceNow Developers | Create Created | Student Progr...

dev276983.service-now.com/nav/ui/classic/params/target/u_student_progress.do%3Fsys_id%3D-1%26sys_is_list%3Dtrue%26sys_target%3Du_student_progress%26sysparm_c...

Servicenow All Favorites History Workspaces Admin

Student Progress - Create Created

School

Admission Number	<input type="text"/>	Father Name	<input type="text"/>
Grade	<input type="text" value="-- None --"/>	Mother Name	<input type="text"/>
Student Name	<input type="text"/>	Father Cell	<input type="text"/>
		Mother Cell	<input type="text"/>

Student Progress

Telugu	<input type="text"/>	Total	<input type="text"/>
Hindi	<input type="text"/>	Percentage	<input type="text"/>
English	<input type="text"/>	Result	<input type="text"/>
Maths	<input type="text"/>		
Science	<input type="text"/>		
Social	<input type="text"/>		

8. ADVANTAGES & DISADVANTAGES

Advantages

- Centralized data management
- Automated workflows
- Reduced paperwork
- Improved efficiency
- Scalable system

Disadvantages

- Requires ServiceNow platform access
- Initial configuration complexity
- Needs user training

9. CONCLUSION

The Educational Organisation Using ServiceNow project successfully demonstrates how digital transformation can enhance institutional efficiency. By integrating automation, structured databases, and workflow management, the system reduces manual effort and improves accuracy. The platform provides a scalable and secure solution for managing educational operations effectively.

10. FUTURE SCOPE

- Integration with Payment Gateway for fee management
- Attendance tracking module
- Online examination system
- AI-based performance analytics
- Mobile application integration

11. APPENDIX

- Source Code: No external code; used ServiceNow platform
- Dataset Link: Not applicable
- GitHub
- Project Demo Link

Drive Link:

https://drive.google.com/drive/folders/1kIEPjlpk8_3MV1BezNBjM9AF9quod6iO?usp=sharing

GitHub Link:

<https://github.com/SaiGeethika12/Educational-Organisation-using-Servicenow>

Video Link:

https://drive.google.com/drive/folders/1A4u_usofVHqnOfOaxFvoheE26Vq32-bv

