Educational Organisation Using ServiceNow Project Report

Team Details

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1. INTRODUCTION

1.1 Project Overview

This project involves developing a **ServiceNow-based application** to manage key academic workflows within an educational organization. The project focuses on automating the student admission process and tracking academic performance through well-structured forms, custom tables, and client-side scripting.

1.2 Purpose

To replace manual, repetitive educational processes with a centralized, automated ServiceNow solution that enhances data accuracy, improves efficiency, and streamlines academic record handling using minimal code.

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2. Ideation Phase

2.1 Problem Statement

Educational institutions face significant delays and inaccuracies due to manual admissions and progress tracking. These inefficient systems lack automation, real-time updates, and structured form validations.

2.2 Empathy Map Canvas

- **Users**: Admission Officers, IT Admins, Students
- **Needs**: Fast form filling, automatic calculations, reliable data
- **Pain Points**: Manual entry errors, duplicated work, unclear workflows

2.3 Brainstorming

- Design three main tables for Admissions, Salesforce, and Progress
- Create custom forms using Form Designer
- Use client scripts for field calculations, validations, and data population
- Automate workflows with Flow Designer

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3. Requirement Analysis

3.1 Customer Journey Map

1. Admission form is filled
2. Data flows into Admission table
3. Academic scores are entered into Progress table
4. Client scripts auto-calculate results
5. Admin verifies and stores student records

3.2 Solution Requirement

- Custom tables
- Custom number maintenance
- Form design
- Client scripts
- Flow automation
- UI policies (optional)

3.3 Technology Stack

- **Platform**: ServiceNow
- **Tools Used**:
  - Table Designer
  - Form Designer
  - Flow Designer
  - Update Sets
  - Script Editor (Client Scripts)
- **Script Types**: onChange, onLoad

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4. Project Design Phase

4.1 Problem-Solution Fit

The application automates data population, validation, and result generation. It reduces manual steps while improving form reliability.

4.2 Proposed Solution

- Use of 3 custom tables: Admissions, Salesforce, Progress
- Custom forms for user interaction
- Automated field behavior using client scripts
- Flow Designer to automate student entry validation process

4.3 Solution Architecture

Architecture Flow:
Form Entry → Table Record Creation → Client Script Execution → Auto Calculations/Disabling Fields → Output Storage

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5. Project Planning Phase

5.1 Project Planning

Week	Task	Tools Used
1	Setup ServiceNow Instance	ServiceNow Personal Instance
2	Create Tables & Update Set	Table Designer
3	Form Layout and Number Maintenance	Form Designer
4	Write Client Scripts	Script Editor
5	Testing and Final Output Verification	Form UI, Script Logs

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6. Performance Testing

6.1 Performance Testing

- **Form Load Time**: Optimized and responsive
- **Script Execution**: Fast and accurate

- **Field Calculations**: Worked flawlessly on every input
- **Process Flow**: Triggered as expected under different scenarios

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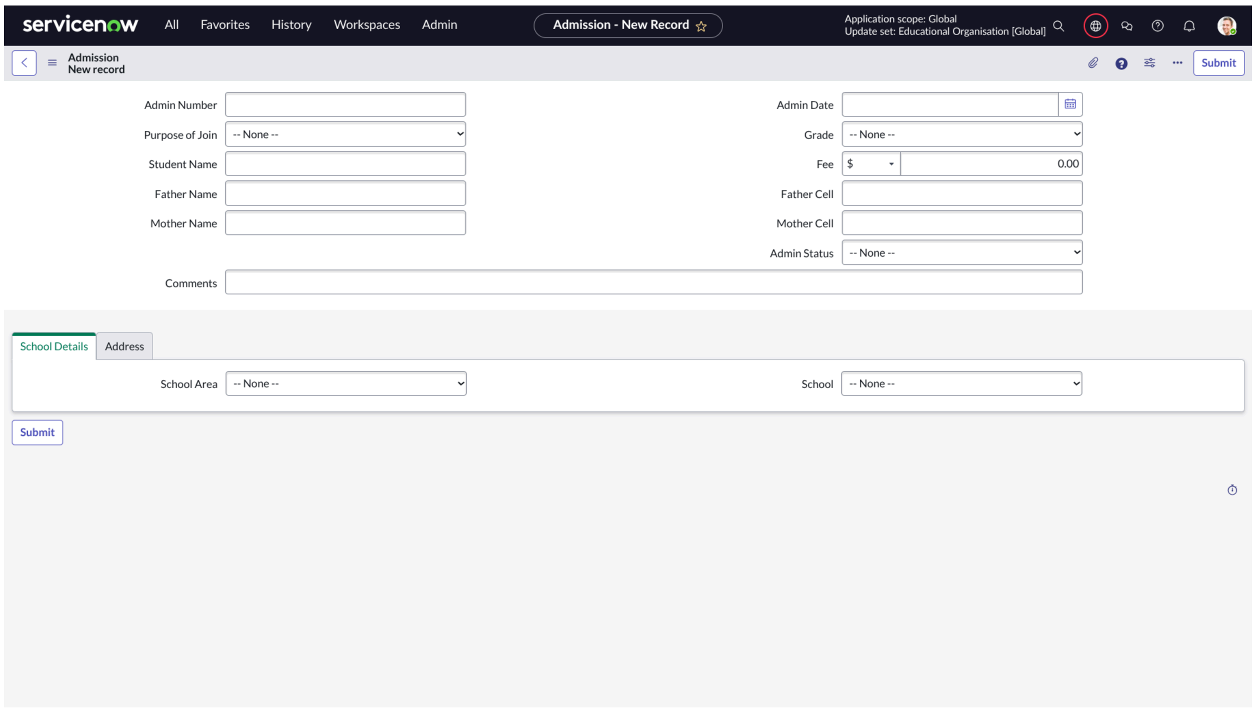
7. Results

7.1 Output Screenshots

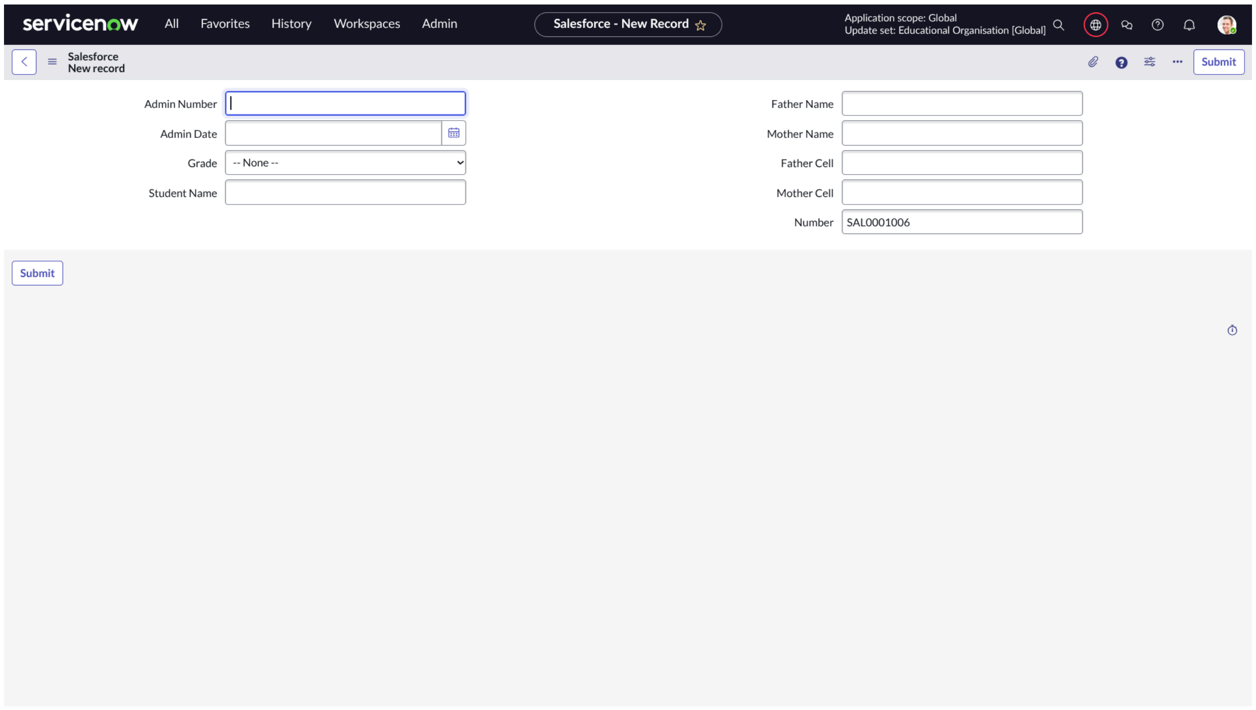
Screenshots

Admission Table Form:



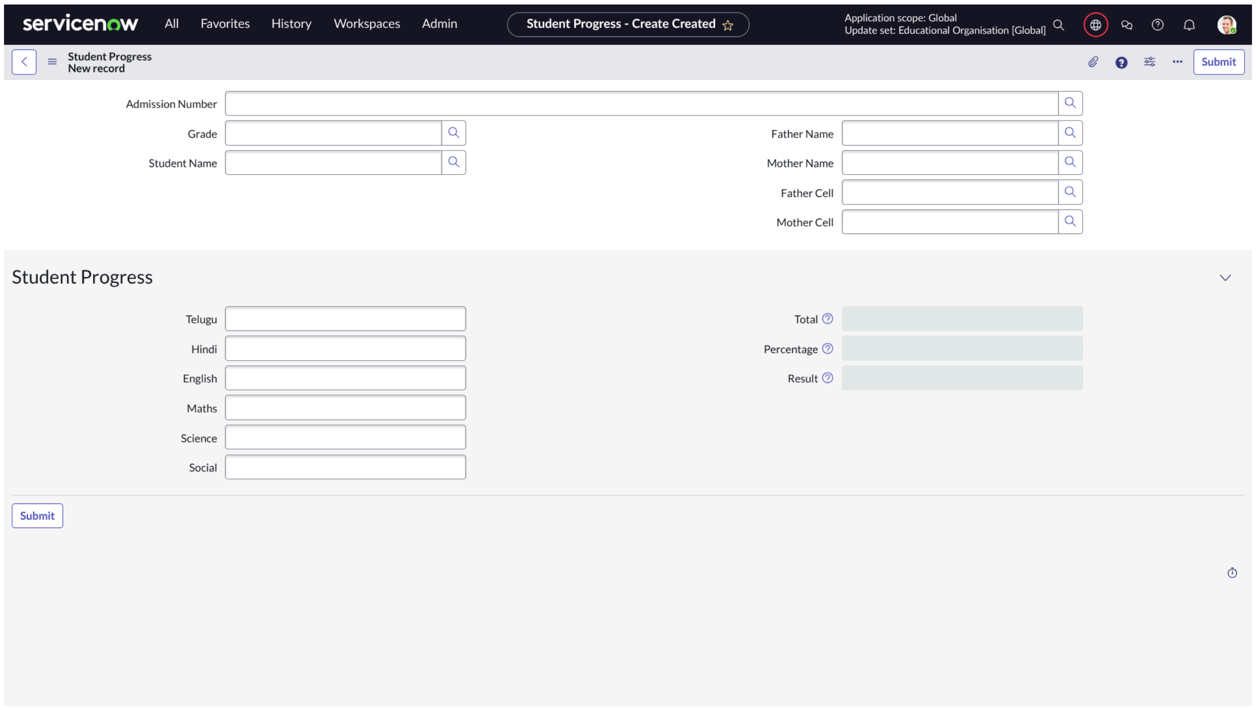
Admin Number		Admin Date	
Purpose of Join	-- None --	Grade	-- None --
Student Name		Fee	$ 0.00
Father Name		Father Cell	
Mother Name		Mother Cell	
		Admin Status	-- None --
Comments			
School Area	-- None --	School	-- None --

Saleforce Table Form:



Admin Number		Father Name	
Admin Date		Mother Name	
Grade	-- None --	Father Cell	
Student Name		Mother Cell	
		Number	SAL0001006

Student Progress Table Form:


servicenow
All
Favorites
History
Workspaces
Admin
Student Progress - Create Created
Application scope: Global
Update set: Educational Organisation [Global]
Student Progress
New record
Submit

Admission Number			
Grade		Father Name	
Student Name		Mother Name	
		Father Cell	
		Mother Cell	

Student Progress

Telugu		Total	
Hindi		Percentage	
English		Result	
Maths			
Science			
Social			

8. Advantages & Disadvantages

Advantages

- Low-code development
- High scalability and maintainability
- Real-time calculations
- Structured, clean UI

Disadvantages

- Steep learning curve for new users
- Limited by ServiceNow’s UI flexibility
- Complex logic may require JavaScript skills

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9. Conclusion

This project successfully demonstrates the capability of ServiceNow to digitize and automate educational workflows. With minimal scripting and smart configuration, the solution ensures better accuracy, speed, and user experience.

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10. Future Scope

- Add dashboards for analytics
- Enable role-based access controls
- Send automated notifications (email/SMS)
- Integration with external reporting tools

- Improve mobile accessibility via Service Portal

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11. APPENDIX

Client Scripts used are:

1. Auto Populate (Admission Table – onChange)

```
function onChange(control, oldValue, newValue, isLoading, isTemplate) {
   if (isLoading || newValue === '') return;
   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);
   g_form.setValue('u_father_cell', a.u_father_cell);
   g_form.setValue('u_mother_cell', a.u_mother_cell);
   g_form.setDisabled('u_admin_date', a.u_admin_date);
   g_form.setDisabled('u_grade', a.u_grade);
   g_form.setDisabled('u_student_name', a.u_student_name);
   g_form.setDisabled('u_father_name', a.u_father_name);
   g_form.setDisabled('u_mother_name', a.u_mother_name);
   g_form.setDisabled('u_father_cell', a.u_father_cell);
   g_form.setDisabled('u_mother_cell', a.u_mother_cell);
}
```

2. Pincode Update (Admission Table – onChange)

```
function onChange(control, oldValue, newValue, isLoading, isTemplate) {
   if (isLoading || newValue === '') return;
   var a = g_form.getValue('u_pincode');
   if (a == '509358') {
      g_form.setValue('u_mandal', 'kadthal');
      g_form.setValue('u_city', 'kadthal');
      g_form.setValue('u_district', 'RangaReddy');
   } else if (a == '500081') {
      g_form.setValue('u_mandal', 'karmanghat');
      g_form.setValue('u_city', 'karmanghat');
      g_form.setValue('u_district', 'RangaReddy');
   } else if (a == '500079') {
      g_form.setValue('u_mandal', 'Abids');
      g_form.setValue('u_city', 'AsifNagar');
      g_form.setValue('u_district', 'Hyderabad');
   }
}
```

3. Disable Fields (Student Progress Table – onLoad)

```
function onLoad() {
   g_form.setDisabled('u_total', true);
   g_form.setDisabled('u_percentage', true);
   g_form.setDisabled('u_result', true);
}
```

4. Total Update (Student Progress Table – onChange)

```
function onChange(control, oldValue, newValue, isLoading, isTemplate) {
   if (isLoading || newValue === '') return;
   if (newValue) {
      var a = parseInt(g_form.getValue('u_telugu'));
      var b = parseInt(g_form.getValue('u_hindi'));
      var c = parseInt(g_form.getValue('u_english'));
      var d = parseInt(g_form.getValue('u_maths'));
      var e = parseInt(g_form.getValue('u_science'));
      var f = parseInt(g_form.getValue('u_social'));
      var Total = parseInt(a + b + c + d + e + f);
      g_form.setValue('u_total', Total);
   }
}
```

5. Result Calculation (Student Progress Table – onChange)

```
function onChange(control, oldValue, newValue, isLoading, isTemplate) {
   if (isLoading || newValue === '') return;
   if (newValue) {
      var a = parseInt(g_form.getValue('u_percentage'));
      if (a >= 0 && a <= 59) {
         g_form.setValue('u_result', 'Fail');
      } else if (a >= 60 && a <= 100) {
         g_form.setValue('u_result', 'Pass');
      } else {
         g_form.addErrorMessage('Percentage should be between 0 and 100.');
         g_form.clearValue('u_result');
      }
   }
}
```

6. Percentage Calculation (Student Progress Table – onChange)

```
function onChange(control, oldValue, newValue, isLoading, isTemplate) {
   if (isLoading || newValue === '') return;
   var Total = g_form.getValue('u_total');
   var Percentage = (Total / 600) * 100;
   g_form.setValue('u_percentage', Percentage + '%');
}
```