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TITLE: EDUCATIONAL ORGANISATION USING SERVICENOW

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Educational Organization Using ServiceNow

Abstract

This project focuses on developing a ServiceNow-based educational organization management system to automate various administrative and student-related operations. The main goal is to create a centralized platform that simplifies data management, reduces manual errors, and enhances process efficiency. Using ServiceNow modules like table creation, form design, client scripting, and workflow automation, this project establishes a structured system for managing student admissions, progress tracking, and institutional operations efficiently.

Introduction

Background

Most educational institutions rely on manual processes for maintaining admission data, student progress records, and departmental tasks. These processes are time-consuming and prone to inconsistencies. To overcome this, the ServiceNow platform is used to create a digital workflow-based solution for automating routine educational management tasks.

Why ServiceNow

ServiceNow was chosen because it offers:

- A low-code/no-code platform for quick customization.
- A centralized database for all institutional data.
- Workflow automation to reduce delays in approvals and record updates.
- Client scripts and UI policies for better form control and user experience.

Objectives

- To create a customized ServiceNow application for educational operations.
- To automate admission, student progress, and record maintenance processes.
- To design dynamic client scripts for form automation.
- To enhance data accuracy and transparency within the system.

Problem Statement

Manual record-keeping and disconnected systems often lead to:

- Errors in admission data entry.
- Delays in tracking student progress.
- Lack of visibility in institutional performance.
- Duplication of data across departments.

This project addresses these inefficiencies by building a ServiceNow application that integrates tables, forms, and automated scripts into a unified management system.

Methodology / System Design

Design Approach

The project follows a structured modular design, implemented through:

- ServiceNow Studio for creating the application.
- Update Sets for version control and migration.
- Custom Tables for storing educational data.
- Form Layouts for structured data input.
- Client Scripts for dynamic automation.
- Workflows for managing request and approval processes.

System Architecture

The architecture includes:

- 1. Frontend: Form layouts for user interaction (Admission, Student Progress, Salesforce).
- 2. Backend: Custom tables, scripts, and workflows to handle logic and data flow.
- 3. Automation Layer: Client scripts for auto-calculations, validations, and updates.
- 4. **Result Generation:** Automated progress calculation and result display.

User Interface (UI) and User Experience (UX)

- **Form Layout:** Designed forms for Salesforce, Admission, and Student Progress tables with clean field organization.
- Form Design: Enhanced with auto-populate and field validation scripts.
- Process Flow: Clear workflow for admissions and student progress evaluation.
- Client Scripts: Automated form behaviors to improve usability and reduce errors.

Implementation Details

Platform Setup

- Created a ServiceNow Developer Instance.
- Configured the environment and created roles for admin and faculty users.
- Set up Update Sets to track project changes.

Development and Customization

1. Table Creation

- Salesforce Table: Stores staff and institutional data.
- Admission Table: Maintains student admission records.
- Student Progress Table: Tracks student performance and results.

2. Form Layout

Configured table forms for easy data input, especially the Student Progress Table, ensuring all fields are properly aligned and accessible.

3. Form Design

- Designed custom forms for each table:
 - Salesforce Table
 - Admission Table
 - Student Progress Table

4. Number Maintenance

• Created number maintenance for generating unique Admin Numbers automatically.

5. Process Flow

• Implemented workflow for Admission Table to automate admission process approvals and progress tracking.

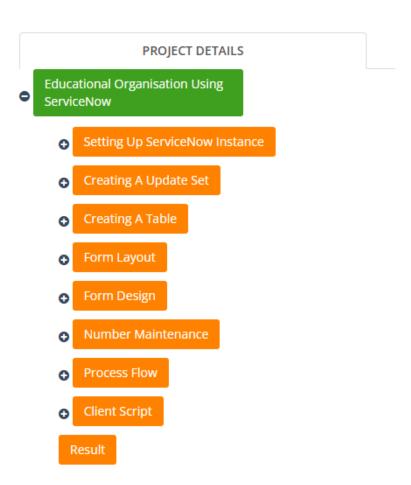
6. Client Scripts

Created and tested multiple client scripts for automation:

- **Auto Populate Script** Automatically fills related fields in the Admission table.
- **Pincode Update Script** Auto-updates postal area details.
- **Disable Fields Script** Locks fields in Student Progress table post-submission.
- Total Update Script Calculates total marks dynamically.
- **Result Script** Displays Pass/Fail status based on total.
- **Percentage Script** Calculates percentage automatically.

Screenshots

1. **Project Structure Overview** – Shows ServiceNow module hierarchy.



Setting up ServiceNow Instance

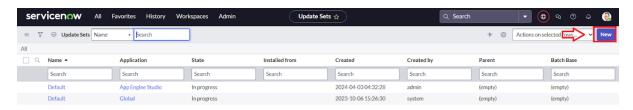
- 1.Sign up for a developer account on the ServiceNow Developer site "https://developer.servicenow.com".
- 2.Once logged in, navigate to the "Personal Developer Instance" section.
- 3.Click on "Request Instance" to create a new ServiceNow instance.
- 4. Fill out the required information and submit the 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

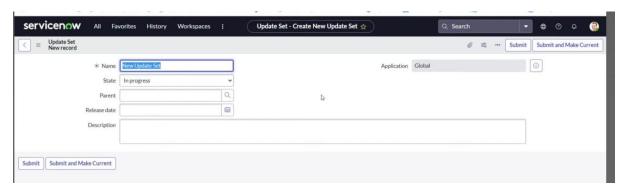
1.Click on All >> Local update sets.



2.Click on new



3.Enter the Details Name: Educational Organisation >> Click on Submit and make Current.



2. **Table Creation Page** – Displays Salesforce, Admission, and Progress tables.

Creating Salesforce Table

All >> Tables.

Click on new

Enter the Label(Anything you want): Salesforce >> Click on Name it will Automatically generate Api name.

Create columns as given below, Double Click on Column label and Enter the Column labels and click on the tick mark >> Give Type as given.

X

For "Admin Number" Give Display as True and right click on the toggle bar on top >> save.

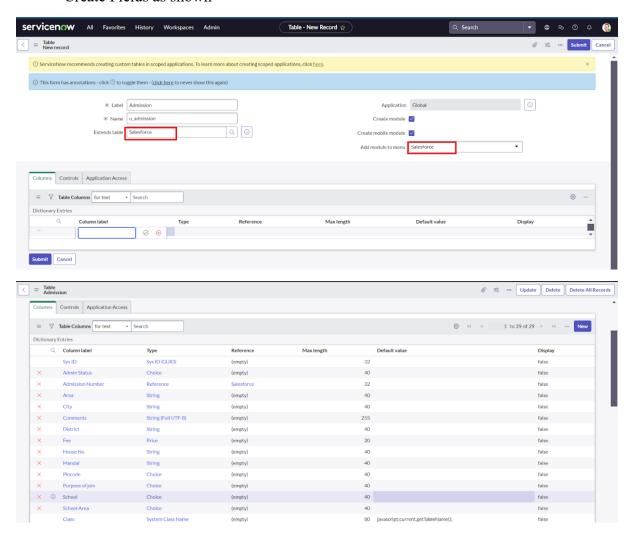
Click on controls >> Enable Extensible.

Click on "Admin Number" column, In Related Links Click on Advanced View >> Default View (Enable Use dynamic default) >> select Get Next Padded Number in Dynamic default value >> Update.

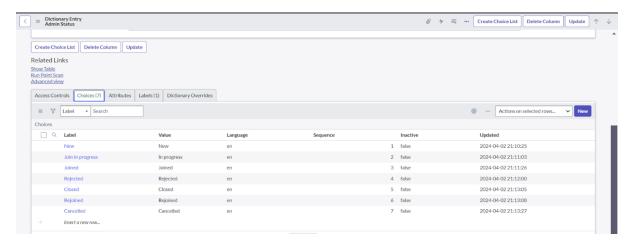
Click on "Grade" Column >> Click on Choices and give Label, Value and Sequence as given below.

Creating Admission Table

- Create an Admission Table with Columns given.
- Select Extends Table >> Salesforce and also Select Add module to menu >> Salesforce.
- Create Fields as shown



• Create choice for Admin Status as:



• Create choice for Pincode as:



• Create choice for Purpose of Join as:



• Create choice for School as:



• Create choice for School Area as:



Creating Student Progress Table

- Create a Student Progress Table with Columns given.
- Select Add module to menu >> Salesforce.
- Create Fields as shown:



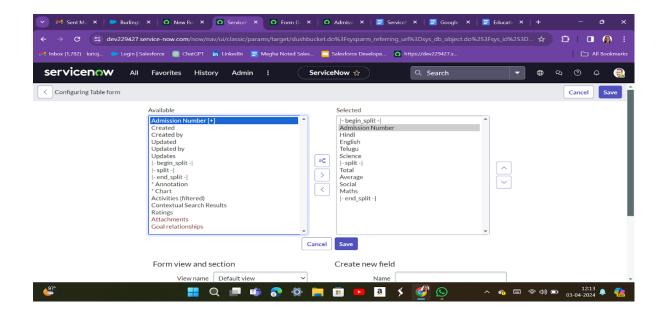
3. **Form Design Interface** – Admission and Progress table layouts.

Configuring Table form for Student Progress Table

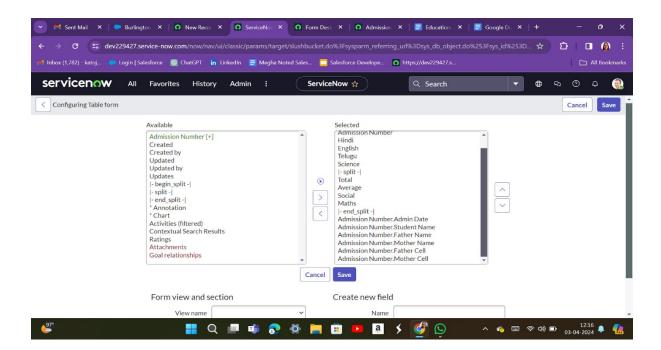
• In the Student Progress Table Page, Click on Layout form.



Click on Admission Number [+].



 Select below Admission Number fields in Available side and send it to selected side as below
 save.



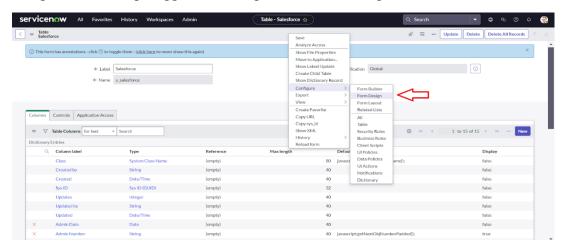
Creating Form Design for Salesforce Table

1.All >> System Definition >> Tables.

2.In Label Search for Salesforce and open .



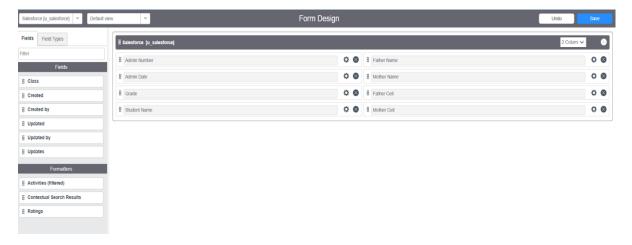
3.Right Click on top Toggle >> Configure >> Form Design.



4.In drop down select Salesforce(u salesforce).



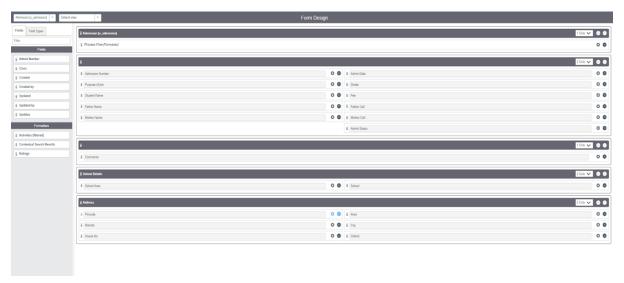
5.Drag and drop the fields to the left side as below.



6.Save.

Creating Form Design for Admission Table

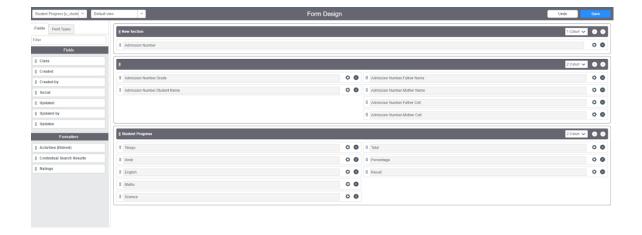
Follow the same steps as Activity1, Configure the fields as below and Save.



Creating Form Design for Student progress Table

Follow the same steps as Activity

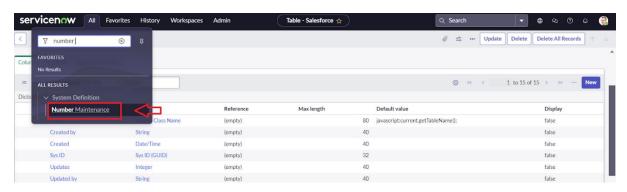
1, Configure the fields as below and Save.



4. Workflow Editor – Admission process flow configuration.

Creating Number Maintenance for Admin Number

• All >> Number Maintenance >> New

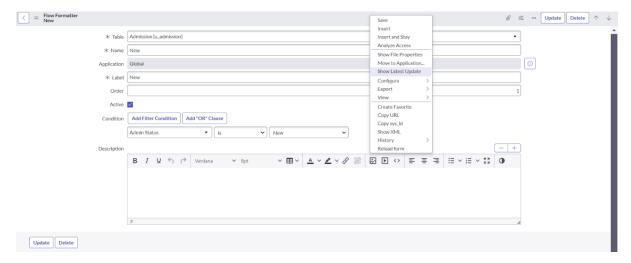


• Fill the details >> Submit.

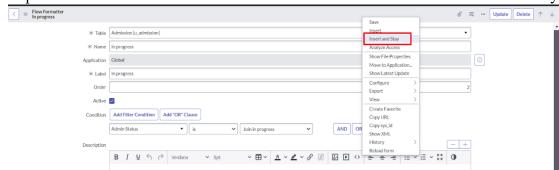


Creating Process Flow for Admission Table

- All >> Process Flow>> New.
- Fill the Details as given Below



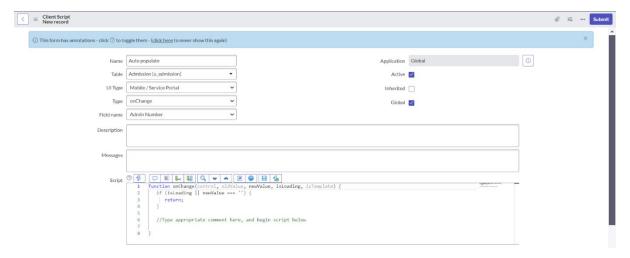
- Right Click on toggle and click on the save .
- Replace the Name and Label as below and click on Insert on stay.



- Replace the Name and Label in order and click on Insert on stay.
 - Joined >> Rejected >> Rejoined >> Closed >> Cancelled.
- Order should be New >> InProgress >> Joined >> Rejected >> Rejoined >> Closed >> Cancelled.
- 5. Client Script Section List of automation scripts created.

Creating "Auto populate" Client Scripts for Admission Table

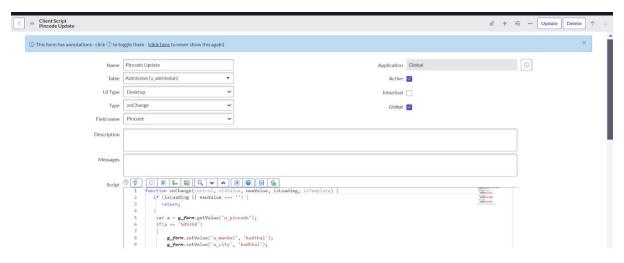
- All >> Client Scripts >> New.
- Fill the Details as given.



```
function on Change (control, old Value, new Value, is Loading, is Template) {
 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);
 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); }
```

Creating "Pincode Update" Client Scripts for Admission Table

• Fill the Details as given.



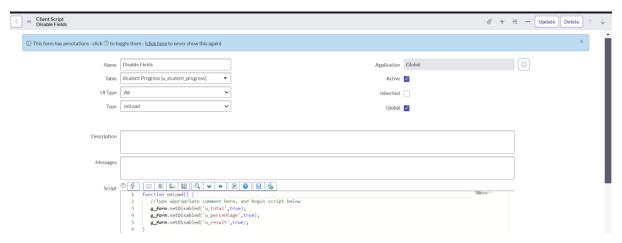
```
function onChange(control, oldValue, newValue, isLoading, isTemplate) {
    if (isLoading || newValue === ") {
        return;
    }
        var a = g_form.getValue('u_pincode');
    if(a == '509358')
    {
        g_form.setValue('u_mandal', 'kadthal');
        g_form.setValue('u_city', 'kadthal');
        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');
}

//Type appropriate comment here, and begin script below
}
```

Creating "Disable Fields" Client Scripts for Student progress Table

• Fill the Details as given.



• Write the Code as below, Enable Isolate script and Save.

```
function onLoad() {

//Type appropriate comment here, and begin script below

g_form.setDisabled('u_total',true);

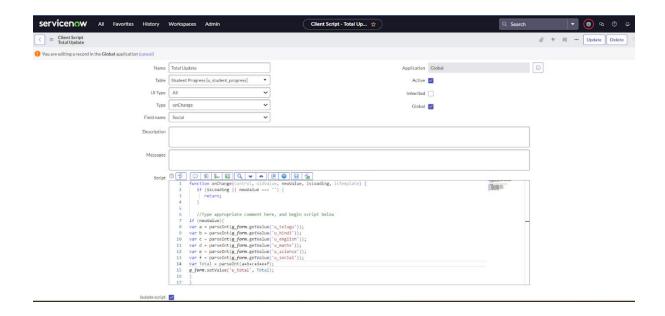
g_form.setDisabled('u_percentage',true);

g_form.setDisabled('u_result',true);

}
```

Creating "Total Update" Client Scripts for Student progress Table

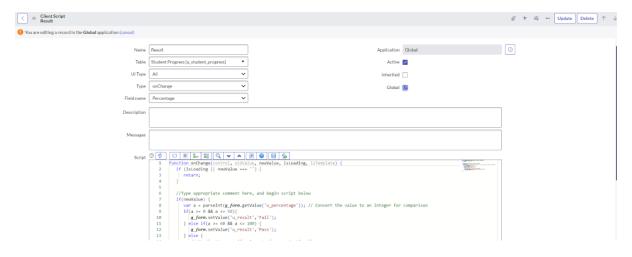
• Fill the Details as given.



```
function onChange(control, oldValue, newValue, isLoading, isTemplate) {
    if (isLoading || newValue === ") {
        return;
    }
    //Type appropriate comment here, and begin script below
    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 Total = parseInt(a+b+c+d+e+f);
        g_form.setValue('u_total', Total);
    }
}
```

Creating "Result" Client Scripts for Student progress Table

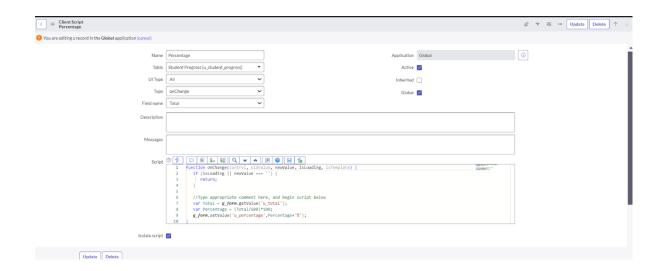
• Fill the Details as given.



```
function on Change (control, old Value, new Value, is Loading, is Template) {
 if (isLoading | newValue === ") {
   return;
  }
 //Type appropriate comment here, and begin script below
 if(newValue) {
   var a = parseInt(g form.getValue('u percentage')); // Convert the value to an integer for
comparison
   if(a \ge 0 \&\& a \le 59)
     g form.setValue('u result','Fail');
   else if(a >= 60 \&\& a <= 100) {
     g form.setValue('u result','Pass');
   } else {
     // Handle the case if a is out of range (optional)
     g form.addErrorMessage('Percentage should be between 0 and 100.');
     g form.clearValue('u result');
   }
  } }
```

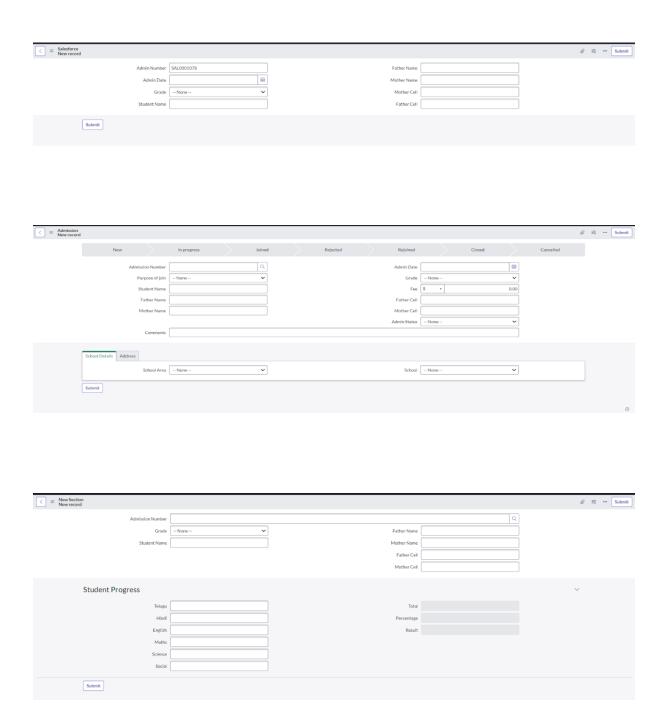
Creating "Percentage" Client Scripts for Student progress Table

• Fill the Details as given.



```
function onChange(control, oldValue, newValue, isLoading, isTemplate) {
  if (isLoading || newValue === ") {
    return;
  }
  //Type appropriate comment here, and begin script below
  var Total = g_form.getValue('u_total');
  var Percentage = (Total/600)*100;
  g_form.setValue('u_percentage',Percentage+'%');
}
```

6. **Result Page** – Final student result auto-calculated via scripts.



Conclusion and Future Scope Conclusion The Educational Organization Using ServiceNow project successfully demonstrates how ServiceNow can automate and streamline educational data management. The system simplifies operations such as admissions and performance tracking, reducing manual intervention and improving data accuracy. Automated scripts and workflows make the process efficient, userfriendly, and scalable. **Future Scope** Integrating the system with Student Information Systems (SIS) and LMS platforms. Implementing reporting dashboards for analytics on admissions and performance. Adding **notification systems** for automated communication with students. Expanding workflow automation for exam scheduling, attendance, and grading.