

Educational Organisation Using ServiceNow

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Team Members:

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Problem Statement :

The project ~~Edugyan~~ was developed as part of the Naan Mudhalvan initiative, focuses on modernizing and digitalizing student admission and academic progress management using ServiceNow platform.

Educational institutions often face challenges in managing student admissions and academic progress due to manual record-keeping, slow admission processes, and scattered student data across different systems. These inefficiencies lead to delays, errors, and difficulties in tracking student performance effectively.

Objectives :

- ▶ To configure a ServiceNow instance for managing educational information.
- ▶ To design custom tables for handling Admissions and Student Progress.
- ▶ To automate data entry field updates using Client Scripts.
- ▶ To implement workflows for managing admission status processes.
- ▶ To improve data accuracy through validation, choice fields, and automated updates.

Tools and Technologies :

- ▶ Platform: ServiceNow (Developer Instance)
- ▶ Modules Used: Tables, Forms, Update Sets, Client Scripts, Process Flows
- ▶ Languages: JavaScript (for client scripts)

Skills Used:

- ▶ ServiceNow Tables
- ▶ Forms & Form Design
- ▶ Update Sets
- ▶ Client Scripts (JavaScript)
- ▶ Process Flow / Workflow

Milestone 1: ServiceNow instance setup

- Sign up at the ServiceNow Developer Site.
- Request a Personal Developer Instance and submit the details.
- Use the credentials sent via email to log in and start navigating ServiceNow.

Milestone 2: Creating a Update Set

- Navigate to All → **Local Update Sets**.
- Click New to a new update set.
- Enter Name: Educational Organisation.
- Submit and mark it as Current.

The screenshot shows a ServiceNow application window titled "Update Set - Create Educational Org...". The top navigation bar includes links for "All", "Favorites", "History", and a search bar. The main form has the following fields:

- * Name: Educational Organization
- State: In progress
- Parent: (empty field with a search icon)
- Release date: (empty field with a calendar icon)
- Description: (large text area)

At the bottom of the form are two buttons: "Submit" and "Submit and Make Current". The status bar at the bottom right shows the current user's profile picture.

Milestone 3: Creating a Table

Activity 1: Creating Salesforce Table

- Go to All → **Tables** and click **New**.
- Enter **Label: Salesforce** → API name is generated automatically.

The screenshot shows the ServiceNow 'Table - New Record' page. At the top, there are tabs for 'All', 'Favorites', 'History', and 'Workspaces'. The main title is 'Table - New Record'. Below the title, there is a message: '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 also present. The form fields include:

- Label:** Salesforce
- Name:** u_salesforce
- Extends table:** (empty)
- Application:** Global
- Create module:**
- Create mobile module:**
- Add module to menu:** -- Create new --
- New menu name:** Salesforce

The bottom section contains tabs for 'Columns', 'Controls', and 'Application Access'. The 'Columns' tab is selected, showing a table with columns for 'Column label', 'Type', 'Reference', 'Max length', 'Default value', and 'Display'. A note says 'Insert a new row...'.

- Add the required columns by double-clicking the column label, entering details, and assigning the proper type.
- For **Admin Number**:
 - o Set **Display = True** and save.
 - o Under **Controls**, enable **Extensible**.
 - o Open the **Admin Number** column → go to **Advanced View** → **Default View**.
 - o Enable **Use Dynamic Default** and select **Get Padded Number**.
- For **Grade** column define choices with **Label**, **Value**, and **Sequence**.

The screenshot shows the ServiceNow interface for configuring a table named "Salesforce". The top navigation bar includes "All", "Favorites", "History", "Workspaces", and a search bar. Below the header, there's a toolbar with "Delete", "Update", and "Delete All Records" buttons. The main area displays a table with columns: "Column label", "Type", "Reference", "Max length", "Default value", and "Display". Fields listed include Grade (Choice), Admin Date (Date), Updated (Date/Time), Created (Date/Time), Updates (Integer), Updated by (String), Mother Cell (String), Admin Number (String) with a default value of "javascript:getNextObjNumberPadded()", Student Name (String), Created by (String), Mother Name (String), Father Name (String), Father Cell (String), Sys ID (Sys ID (GUID)), and Class (System Class Name) with a default value of "javascript:current.getTableName();". A note at the bottom says "Insert a new row...".

Activity 2: Admission Table

- Create a new table named **Admission**.
- Set **Extends Table = Salesforce** and select **Add Module to Menu = Salesforce**.

The screenshot shows the "Table - New Record" configuration screen. At the top, it says "Table - New Record" and has "Search" and other toolbar buttons. The main form includes fields for "Label" (Admission), "Name" (u_admission), "Extends table" (Salesforce), and "Application" (Global). It also has checkboxes for "Create module" (checked), "Create mobile module" (checked), and dropdowns for "Add module to menu" (set to "-- Create new --") and "New menu name" (Admission). Below the form is a table with columns: "Columns", "Controls", and "Application Access". The "Table Columns" section shows a table with columns: "Column label", "Type", "Reference", "Max length", "Default value", and "Display". A note at the bottom says "Insert a new row...".

- Add the required fields for capturing admission details.
- Configure choice fields for:

- o **Admin Status** (New, In Progress, Joined, Rejected, Rejoined, Closed, Cancelled).
- o **Pincode** (mapped to Mandal, City, District).
- o **Purpose of Join** (add multiple options as needed).

- o **School** (list of schools).
- o **School Area** (geographical areas).

The screenshot shows the ServiceNow interface for the 'Table - Admission' module. The table lists various fields with their types, descriptions, lengths, and validation rules. Key fields include 'Purpose of join' (Choice), 'Pincode' (Choice), 'School Area' (Choice), 'School' (Choice), 'Grade' (Choice), 'Admin Status' (Choice), 'Admin Date' (Date), 'Updated' (Date/Time), 'Created' (Date/Time), 'Updates' (Integer), 'Fee' (Price), 'Admission Number' (Reference to Salesforce), 'Updated by' (String), 'Mother Cell' (String), 'Admin Number' (String with a JavaScript validation rule), 'House No' (String), 'Student Name' (String), and 'Area' (String). Most fields have a length of 40, except for 'Admission Number' (32) and 'Admin Number' (40).

x	Purpose of join	Choice	(empty)	40		false
x	Pincode	Choice	(empty)	40		false
x	School Area	Choice	(empty)	40		false
x	School	Choice	(empty)	40		false
x	Grade	Choice	(empty)	40		false
x	Admin Status	Choice	(empty)	40		false
x	Admin Date	Date	(empty)	40		false
	Updated	Date/Time	(empty)	40		false
	Created	Date/Time	(empty)	40		false
	Updates	Integer	(empty)	40		false
x	Fee	Price	(empty)	20		false
x	Admission Number	Reference	Salesforce	32		false
	Updated by	String	(empty)	40		false
x	Mother Cell	String	(empty)	40		false
x	Admin Number	String	(empty)	40	javascript:getNextObjNumberPadded();	true
x	House No	String	(empty)	40		false
x	Student Name	String	(empty)	40		false
x	Area	String	(empty)	40		false

Activity 3: Student Progress Table

The screenshot shows the ServiceNow interface for creating a new table. The 'Table - New Record' screen has the following details:

- Label:** Student Progress
- Name:** u_student_progress
- Extends table:** (empty)
- Application:** Global
- Create module:** checked
- Create mobile module:** checked
- Add module to menu:** Salesforce

The main area shows the 'Table Columns' configuration with tabs for 'Columns', 'Controls', and 'Application Access'. The 'Columns' tab displays a table with columns for 'Column label', 'Type', 'Reference', 'Max length', 'Default value', and 'Display'. A note says 'Insert a new row...'. At the bottom are 'Submit' and 'Cancel' buttons.

- Add subject fields: **Telugu, Hindi, English, Maths, Science, Social.**

- Create calculated fields for **Total Marks**, **Percentage**, and **Result**.

The screenshot shows the ServiceNow interface for the 'Student Progress' table. The top navigation bar includes 'servicenow', 'All', 'Favorites', 'History', 'Admin', and a search bar labeled 'Search'. Below the header is a table with columns for field name, type, description, length, and a boolean column. Fields listed include Grade (Choice), Created (Date/Time), Updated (Date/Time), Updates (Integer), Admission Number (Reference), Telugu (String), Mother Name (String), Percentage (String), Hindi (String), Student Name (String), Father Cell (String), Updated by (String), Mother Cell (String), Science (String), English (String), Result (String), Total (String), and Maths (String). Most fields have a length of 40, except for 'Admission Number' which is 32, and 'Mother Cell' which is 40.

Table - Student Progress				
			Search	Delete
x	Grade	Choice	(empty)	40
x	Created	Date/Time	(empty)	40
x	Updated	Date/Time	(empty)	40
x	Updates	Integer	(empty)	40
x	Admission Number	Reference	Salesforce	32
x	Telugu	String	(empty)	40
x	Mother Name	String	(empty)	40
x	Percentage	String	(empty)	40
x	Hindi	String	(empty)	40
x	Student Name	String	(empty)	40
x	Father Cell	String	(empty)	40
x	Updated by	String	(empty)	40
x	Mother Cell	String	(empty)	40
x	Science	String	(empty)	40
x	English	String	(empty)	40
x	Result	String	(empty)	40
x	Total	String	(empty)	40
x	Maths	String	(empty)	40

Milestone 4: Configuring Table Layout

- Open the **Student Progress Table** and go to Layout Form.
- Select **Admission Number [+]**.
- Move the required Admission Number fields from the **Available** list to the **Selected** list.
- Save the layout.

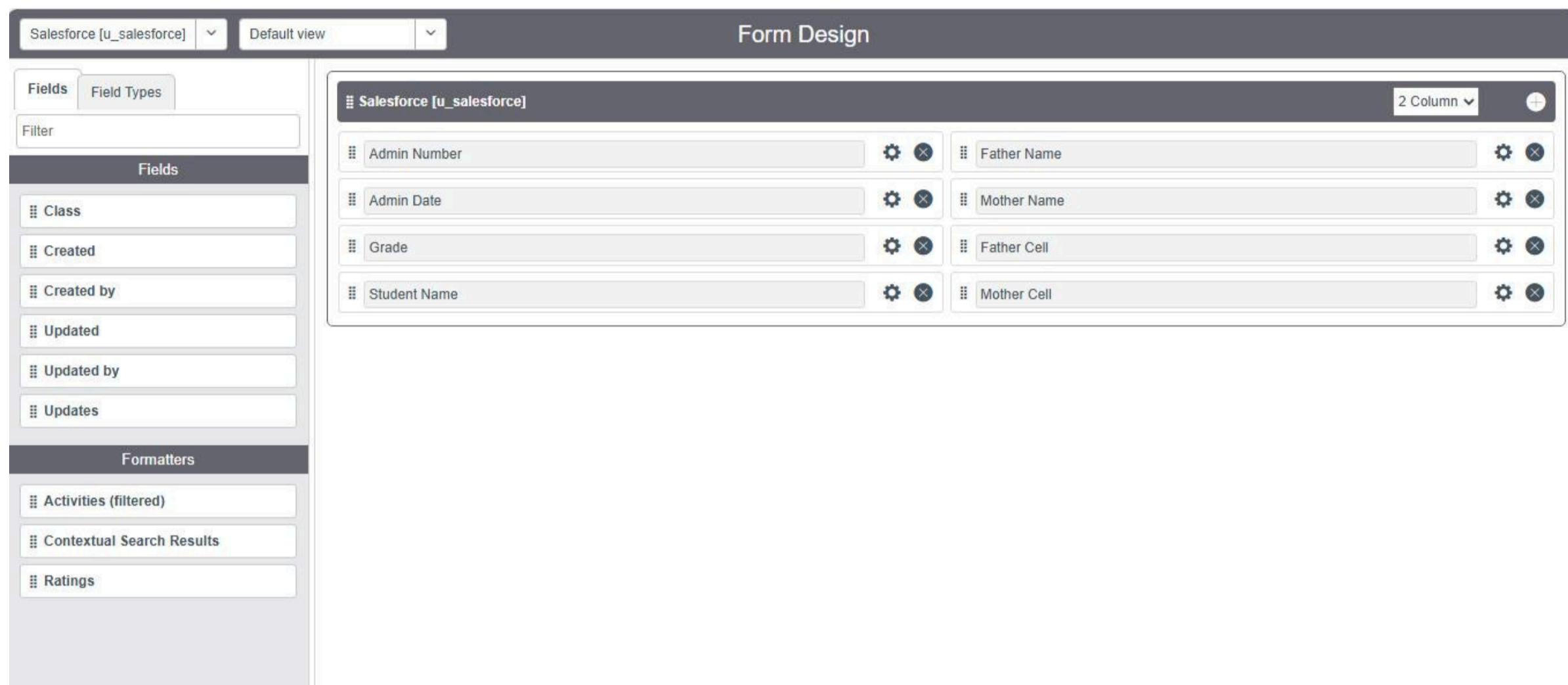
The screenshot shows the 'Configuring Table form' in ServiceNow. The top navigation bar includes 'servicenow', 'All', 'Favorites', 'History', 'Workspaces', and a search bar labeled 'Search'. The main area contains two lists: 'Available' and 'Selected'. The 'Available' list contains fields like 'Admission Number [+]', 'Created', 'Created by', 'Result', 'Updated', 'Updated by', 'Updates', 'Grade', 'Student Name', 'Father Name', 'Mother Name', 'Father Cell', 'Mother Cell', 'Hindi', 'Maths', 'English', 'Telugu', 'Science', 'Social', 'Total', and 'Percentage'. The 'Selected' list currently only contains 'Grade', 'Student Name', 'Father Name', 'Mother Name', 'Father Cell', 'Mother Cell', 'Hindi', 'Maths', 'English', 'Telugu', 'Science', 'Social', 'Total', and 'Percentage'. At the bottom are 'Cancel' and 'Save' buttons.

Milestone 5: Form Design

Activity 1: Salesforce Table

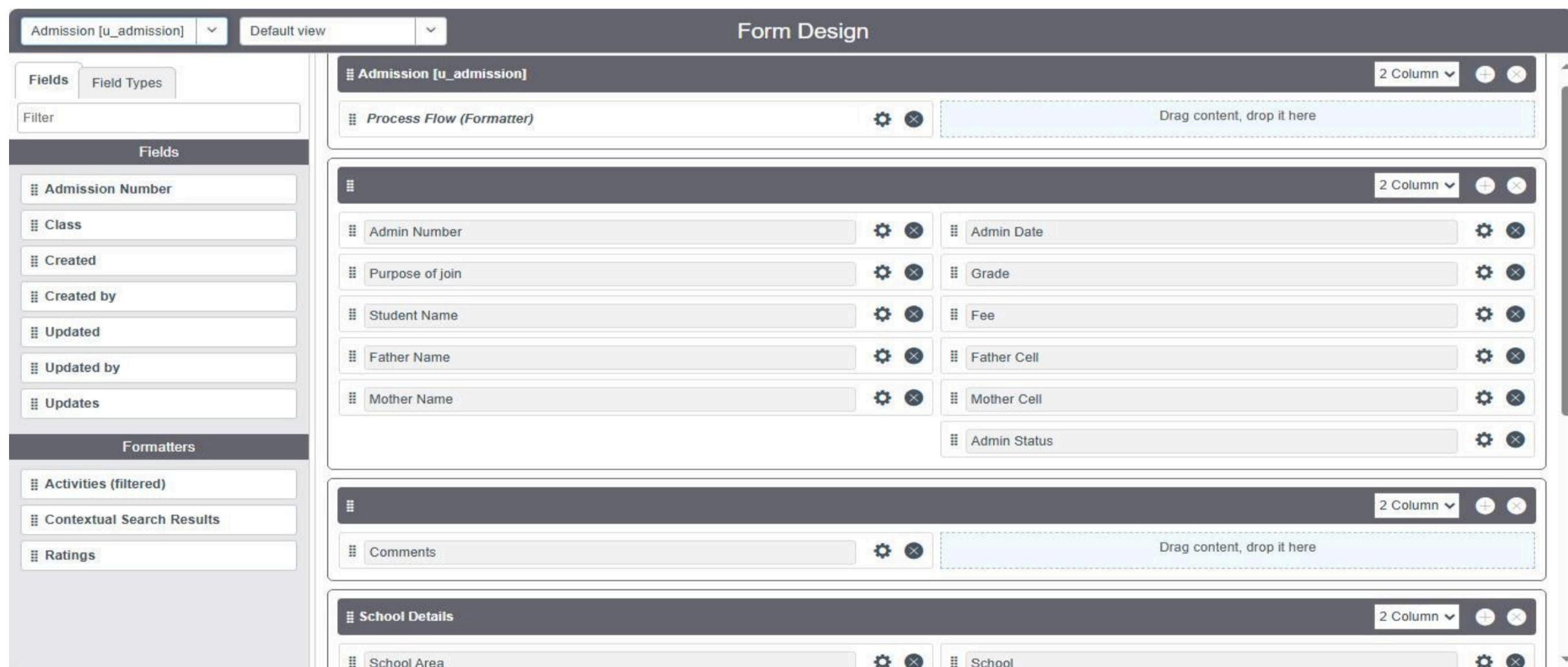
- Navigate to **All** → **System Definition** → **Tables**.
- Search for **Salesforce** and open it.

- Right-click the toggle at the top and choose **Configure** → **Form Design**.
- From the dropdown, select **Salesforce (u_salesforce)**.
- Drag and drop the required fields into the layout.
- Save the form design.



Activity 2: Admission Table

- Repeat the same steps as Salesforce Table design.
- Configure the required fields and save.



Activity 3: Student Progress Table

- Follow the same steps as above.

- Configure the required fields for Student Progress and save.

The screenshot shows the ServiceNow Form Design interface for a 'Student Progress' record. The form is divided into several sections:

- New Section:** Contains the 'Admission Number' field.
- Section:** Contains 'Grade', 'Student Name', 'Father Name', 'Mother Name', 'Father Cell', and 'Mother Cell' fields.
- Student Progress:** Contains fields for 'Telugu', 'Hindi', 'English', 'Maths', 'Science', 'Social', 'Total', 'Percentage', and 'Result'.

The left sidebar lists available fields and formatters.

Milestone 6: Number Maintenance

- Navigate to **All** → **Number Maintenance** → **New**.
- Fill the details for the **Admin Number**.
- Click **Submit**.

The screenshot shows the 'Number - New Record' screen in ServiceNow:

- Table:** Salesforce
- Prefix:** SAL
- Number:** 1,000
- Application:** Global
- Number of digits:** 7

At the bottom, there is a 'Submit' button and a 'Related Links' section with a 'Show Counter' link.

Milestone 7: Process Flow

- Navigate to **All** → **Process Flow** → **New**.
- Enter the required details and click **Save**.

- Replace the **Name** and **Label** with the correct values and choose **Insert and Stay**.
- Arrange the admission statuses in the following order:
 - New → In Progress → Joined → Rejected → Closed → Cancelled.

The screenshot shows the ServiceNow Flow Formatters interface with the following details:

- Header:** All, Favorites, History, Workspaces, Flow Formatters, Search, Actions on selected rows..., New.
- Table Title:** All > Table >= u_Admission
- Table Headers:** Name, Active, Condition, Description, Label, Order ▲, Table.
- Table Data:**

Name	Active	Condition	Description	Label	Order	Table
New	true	u_admin_status=New^EQ		New	1	Admission [u_admission]
In Progress	true	u_admin_status=New^EQ		In Progress	2	Admission [u_admission]
Joined	true	u_admin_status=New^EQ		Joined	3	Admission [u_admission]
Rejected	true	u_admin_status=New^EQ		Rejected	4	Admission [u_admission]
Rejoined	true	u_admin_status=New^EQ		Rejoined	5	Admission [u_admission]
Closed	true	u_admin_status=New^EQ		Closed	6	Admission [u_admission]
Cancelled	true	u_admin_status=New^EQ		Cancelled	7	Admission [u_admission]

Milestone 8: Client Script

Activity 1: Create “ Auto Populate” Client Script for Admission Table

- Go to All → Client Scripts → New.
- Fill in the details for the script.
- Add the JavaScript code to auto-fill admission details (date, grade, student name, parents details, contact info).
- Enable Isolate Script and Save.
- Note: Enable that the field names in the script match the ones created in the Admission Table.

Name: Auto populate

Table: Admission [u_admission]

UI Type: Mobile / Service Portal

Type: onChange

Field name: Admin Number

Description:

Messages:

Script:

```

1  function onChange(control, oldValue, newValue, isLoading, isTemplate) {
2
3    if (isLoading || newValue === '') {
4
5      return;
6

```

Activity 2: Create “ Pincode Update” Client Script for Admission Table

- Go to All → Client Scripts → New.
- Fill in the Script details.
- Add the JavaScript code to auto-fill Mandal, City, and District based on the entered Pincode.
- Enable Isolate Script and Save.
- Example:
 - 509358 → Kadthal, RangaReddy
 - 500081 → Karmanghat,RangaReddy
 - 500079 → Abids, Hyderabad

Name: Pincode Update

Table: Admission [u_admission]

UI Type: Desktop

Type: onChange

Field name: Pincode

Description:

Messages:

Script:

```

1  function onChange(control, oldValue, newValue, isLoading, isTemplate) {
2
3    if (isLoading || newValue === '') {
4
5      return;
6

```

Activity 3: Create “ Disable Fields” Client Script for Student Progress Table.

- Go to All → Client Scripts → New.
- Fill in the script details.
- Add the JavaScript code to disable Total, Percentage, and Result fields so they cannot be edited manually.
- Enable Isolate Script and Save.

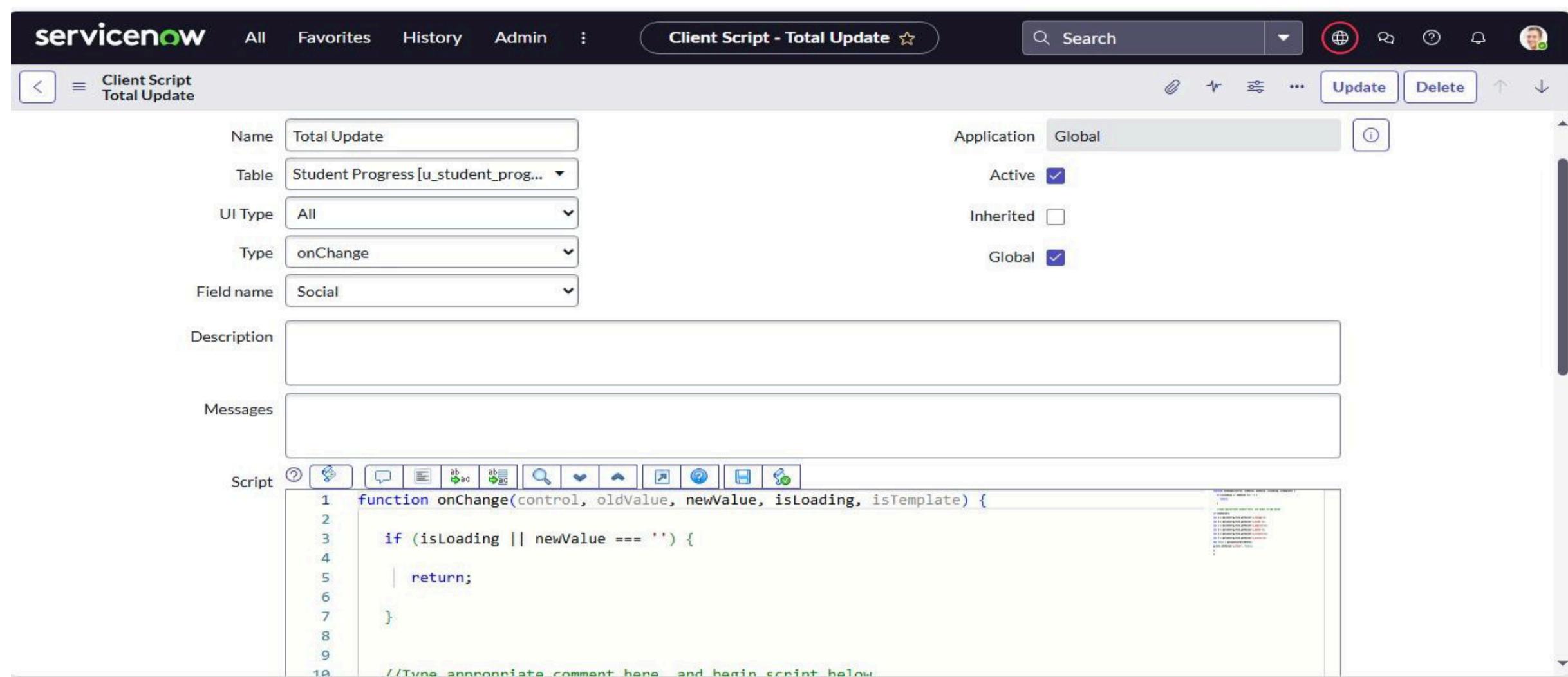
The screenshot shows the ServiceNow client script configuration interface. The top navigation bar includes 'servicenow', 'All', 'Favorites', 'History', 'Admin', and a search bar labeled 'Client Script - Disable Fields'. Below the header, there's a message about strict mode and direct DOM access being disabled. The main form has the following fields:

- Name:** Disable Fields
- Table:** Student Progress [u_student_prog...]
- UI Type:** All
- Type:** onLoad
- Application:** Global
- Active:** checked
- Inherited:** unchecked
- Global:** checked

Below these settings, there are sections for 'Description' and 'Messages', both of which are currently empty. The 'Script' section contains the following code:function onLoad() {
 //Type appropriate comment here, and begin script below
 g_form.setDisabled('u_total',true);
}

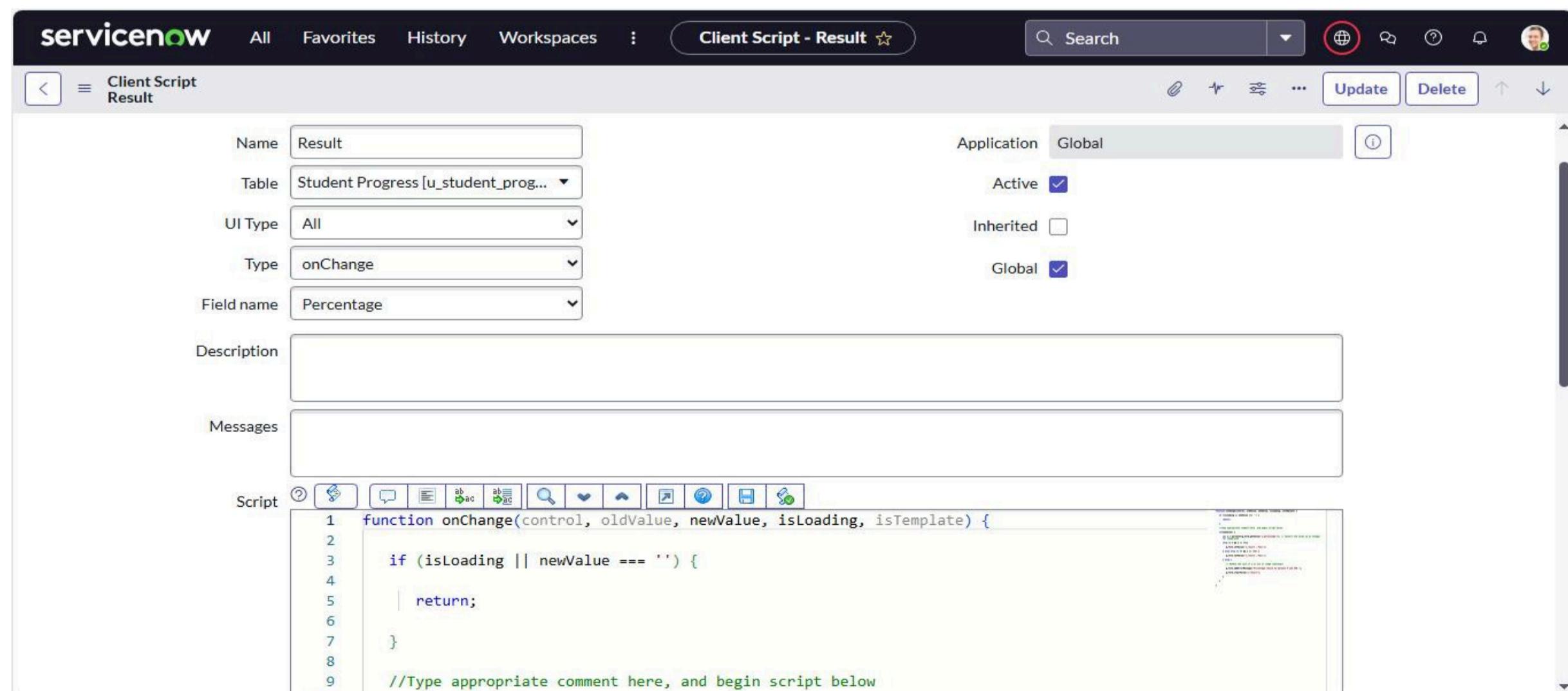
Activity 4: Create “ Total Update” Client Script for Student Progress Table

- Go to All → Client Scripts → New.
- Fill in the details for the script.
- Add the JavaScript code to calculate the Total marks automatically from subject field (Telugu, Hindi, English, Maths, Science, Social).
- The Script sets the value of Total based on the sum of all subjects.
- Enable Isolate Script and Save.



Activity 5: Create “Result” Client Script for Student Progress Table

- Go to All → Client Scripts → New.
- Fill in the details for the script.
- Add the JavaScript code to set the Result field automatically based on Percentage
 - 0-59 → Fail
 - 60-100 → Pass
 - Outside range → show error message



Activity 6: Create “ Percentage” Client Script for Student Progress Table

- Go to All → Client Scripts → New.
- Fill in the script details.
- Add the JavaScript code to calculate Percentage from the Total marks.
 - Formula: $(\text{Total} \div 600) \times 100$
 - Sets the value in the Percentage field automatically.
- Enable Isolate Script and Save.

The screenshot shows the ServiceNow Client Script - Percentage configuration page. The top navigation bar includes links for All, Favorites, History, Admin, and a search bar. The main form has the following fields:

- Name: Percentage
- Table: Student Progress [u_student_prog...]
- UI Type: All
- Type: onChange
- Field name: Total
- Description: (Optional)
- Messages: (Optional)
- Script: A code editor containing the following JavaScript function:

```
function onChange(control, oldValue, newValue, isLoading, isTemplate) {  
    if (isLoading || newValue === '') {  
        return;  
    }  
    var percentage = (newValue / 600) * 100;  
    control.setValue(percentage);  
}
```

Milestone 9: Result

Salesforce Table

servicenow All Favorites History Admin : Salesforce - Create SAL0001028 ☆

Search

Salesforce
New record

Admin Number: SAL0001028

Admin Date:

Grade: -- None --

Student Name:

Father Name:

Mother Name:

Father Cell:

Mother Cell:

Admission Table

Student Progress Table

servicenow All Favorites History Admin :

Student Progress - Create Created ☆

Search

< Student Progress
New record ... Submit

Admission Number	<input type="text"/>	Father name	<input type="text"/>
Grade	-- 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"/>		

Conclusion :

The project “ Educational Organisation using ServiceNow” automated the admission and student progress process. By creating custom tables, forms, workflows, and client scripts, the system reduced manual work, improved accuracy, and made data management faster. This shows how ServiceNow can be used not only for IT services but also in the education sector.