GOVERNMENT COLLEGE OF ENGINEERING

SENGIPATTI, THANJAVUR – 613402

Subject Name : ServiceNow Administrator (NM1051)

Project Title : Educational Organisation Using ServiceNow

TEAM ID - NM2025TMID01251

TEAM MEMBERS

AHMED THAMEEM M - 822722104001

ANDREW GODWIN J – 822722104003

DEEPA PRABHA R – 822722104010

DHAYANITHI S - 822722104011

Educational Organisation Using ServiceNow

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1. Objective

The goal of this project is to create an Educational Management System on the ServiceNow platform that automates and optimizes essential administrative tasks within educational institutions. This system is designed to improve efficiency by handling student and faculty information, simplifying the admission process, and tracking academic performance through a unified and intuitive interface..

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2. Introduction

●Educational institutions frequently struggle with managing extensive student and staff data, processing admissions efficiently, and monitoring performance accurately. Traditional manual methods often result in errors, duplicated records, and reduced operational efficiency.

● This project presents an Educational Management System developed on the ServiceNow platform, utilizing its robust automation and workflow management features. The system ensures smooth data integration, real-time information updates, and secure access to academic records. Furthermore, the incorporation of TensorFlow empowers the platform with data-driven insights and predictive analytics, enabling improved decision-making and performance evaluation.

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3. Project Scope

The scope of this project includes the development and deployment of a digital management system for educational organizations with the following modules:

- **Student Information Management:** Securely store, update, and access student details.
- **Teacher Management:** Maintain records of faculty members, schedules, and teaching activities.
- **Admission Management:** Simplify and automate the admission and enrollment process.
- **Academic Progress Monitoring:** Track student grades, attendance, and performance trends.
- **Notifications & Reporting:** Automate alerts and generate performance reports.
- **Analytics Module (TensorFlow):** Implement AI-based analysis for predicting student outcomes and optimizing learning strategies.

The project will be implemented within the ServiceNow environment, ensuring scalability, reliability, and role-based access control.

4. Tools and Technologies Used

1) ServiceNow Platform
2) Update Set
3) Tables
4) Forms
5) Client Scripts

5. System Requirements

Hardware Requirements

- Processor: Intel Core i5 or above
- RAM: Minimum 4 GB
- Hard Disk: 500 GB or higher
- Network: Stable Internet connection

Software Requirements

- Operating System: Windows 10 / Linux / macOS
- Web Browser: Google Chrome / Mozilla Firefox
- ServiceNow Developer Instance
- ServiceNow Account & Studio

6. Project Implementation Steps

Step 1: 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.

Step 2: Creating a Update Set
1. Click on All >> Local update sets
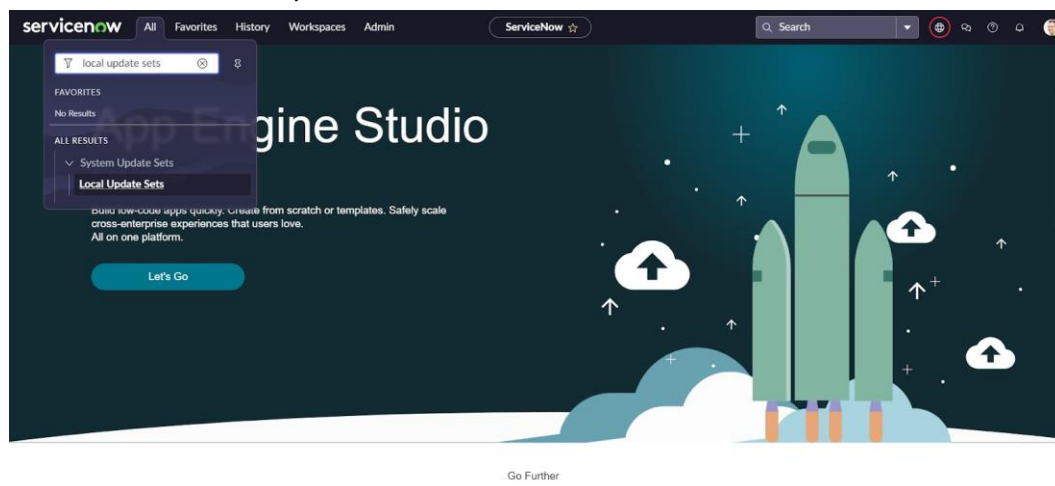
2. Click on new
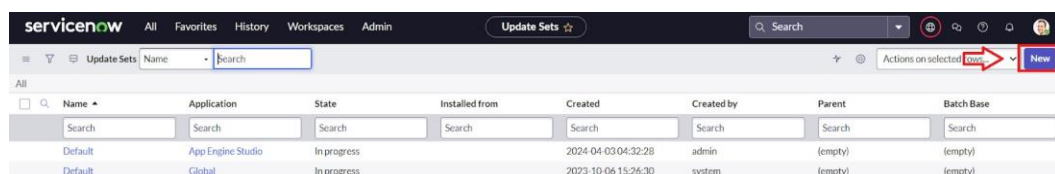
3. Enter the Details Name: Educational Organisation >> Click on Submit and make Current.
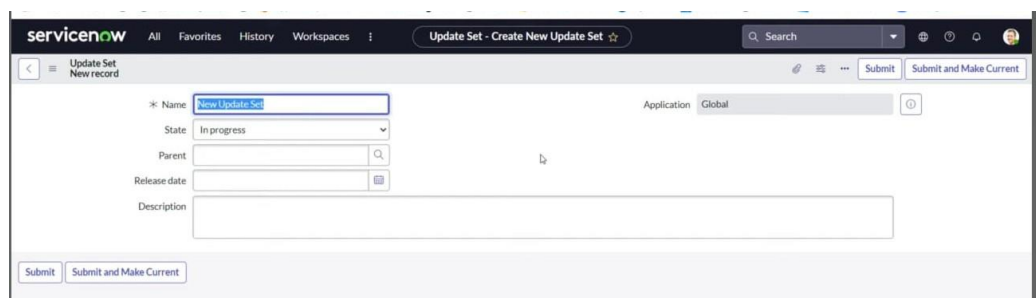
Step 3: Creating Salesforce Table

1. All >> Tables.
2. Click on new
3. Enter the Label(Anything you want): Salesforce >> Click on Name it will Automatically generate Api name.
4. 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 .
5. For "Admin Number" Give Display as True and right click on the toggle bar on top >> save.
6. Click on controls >> Enable Extensible.
7. 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 .
8. Click on "Grade" Column >> Click on Choices and give Label,Value and Sequence as given below.

Step 4: 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:

Step 5: Creating Student Progress Table

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

×	Admission Number	Reference	Salesforce	32	false
×	English	String	(empty)	40	false
×	Hindi	String	(empty)	40	false
×	Maths	String	(empty)	40	false
×	Percentage	String	(empty)	40	false
×	Result	String	(empty)	40	false
×	Science	String	(empty)	40	false
×	Social	String	(empty)	40	false
×	Telugu	String	(empty)	40	false
×	Total	String	(empty)	40	false
	Insert a new row...				

Step 6: 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.
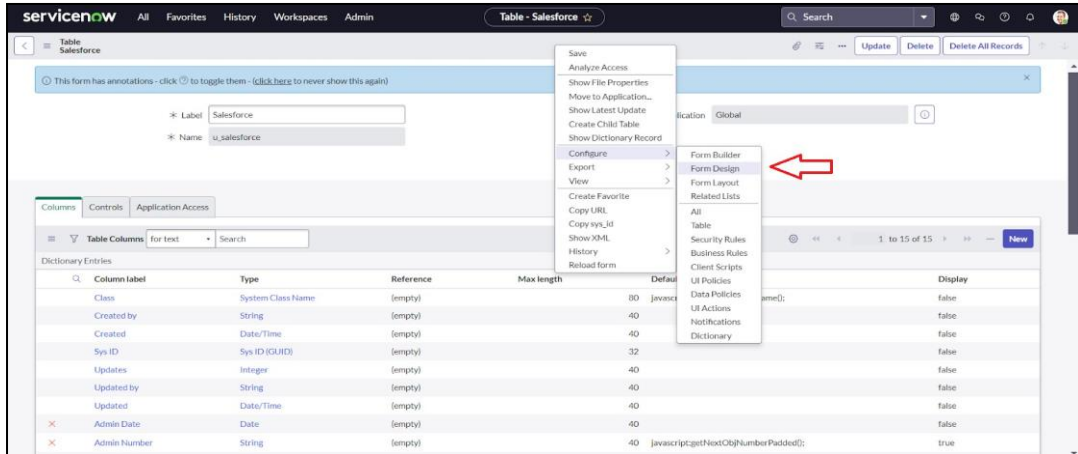
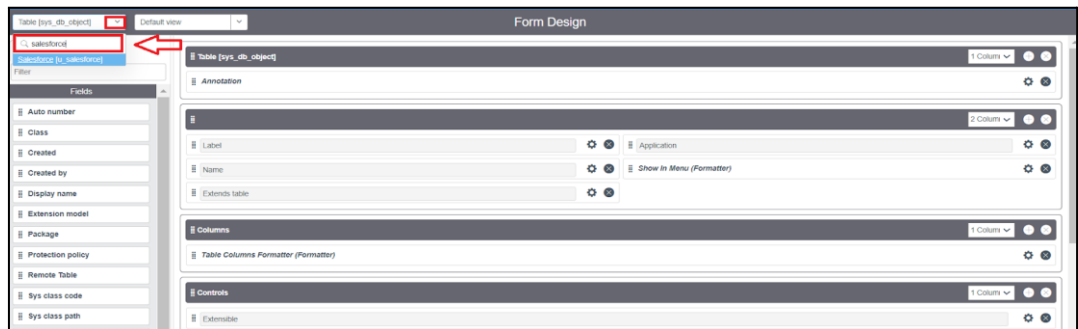# Step 7: Creating Form Design for Salesforce Table

1. All >> System Definition >> Tables .
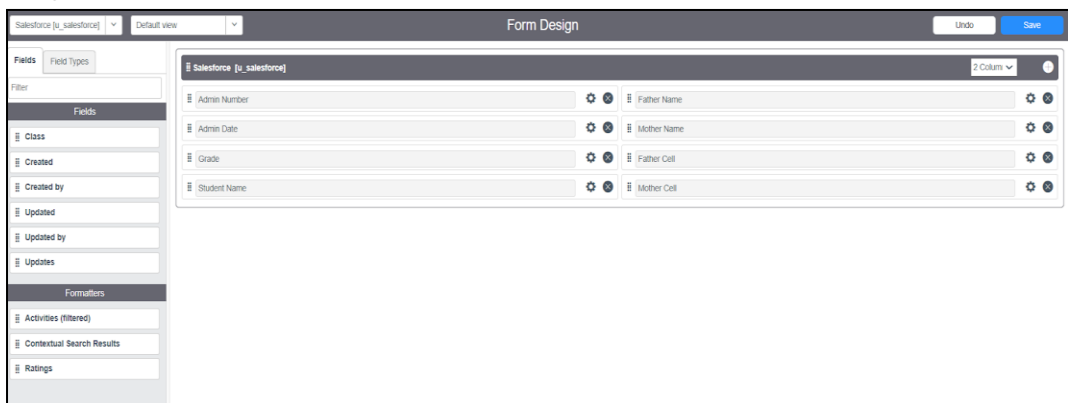2. In Label Search for Salesforce and open .
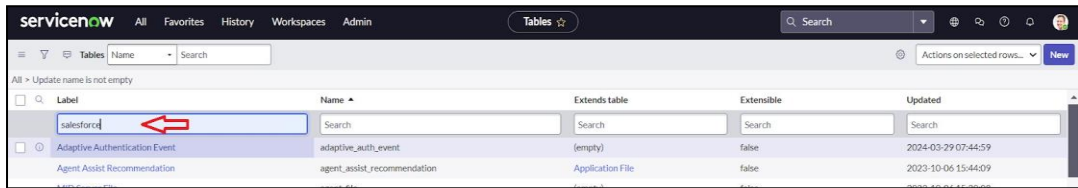
3. Right Click on top Toggle >> Configure >> Form Design.

4. In drop down select Salesforce(u_salesforce).

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

6. Save

Step 8: Creating Form Design for Admission Table

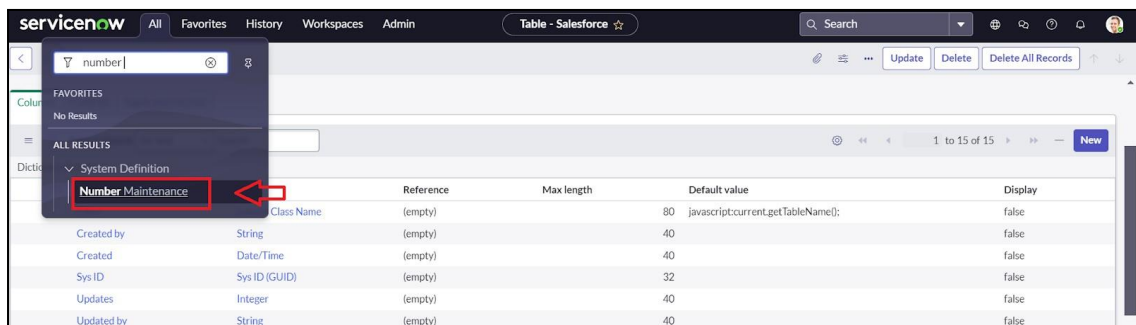- Follow the same Step s as Activity1,Configure the fields as below and Save.

Step 9: Creating Form Design for Student progress Table

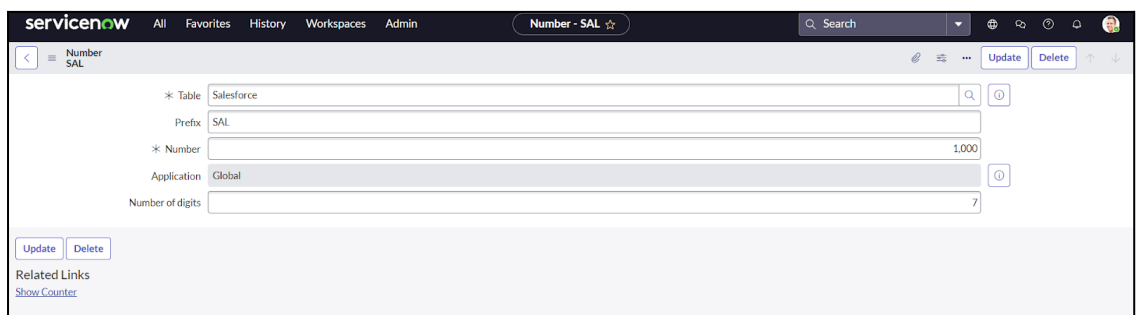- Follow the same steps as Activity1,Configure the fields as below and Save.

Step 10: Creating Number Maintenance for Admin Number
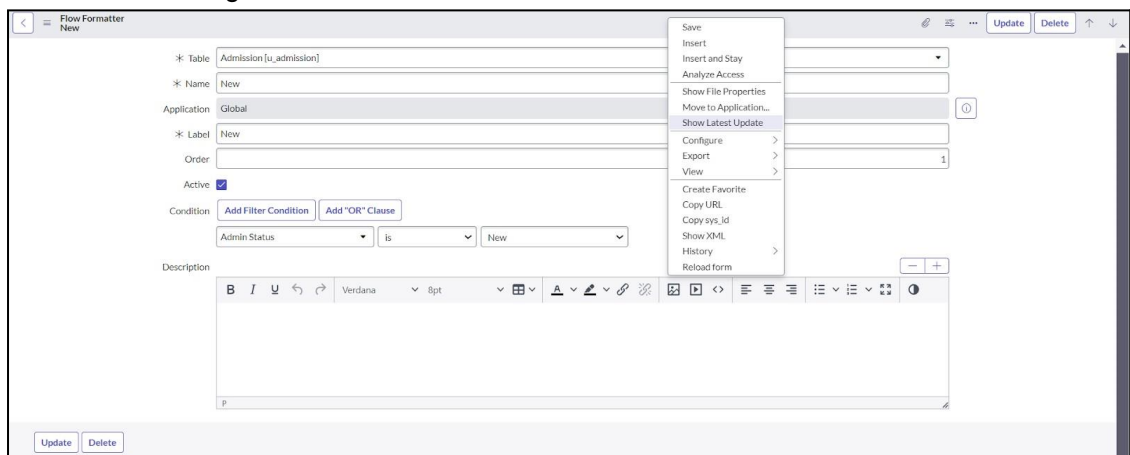
- All >> Number Maintenance >> New
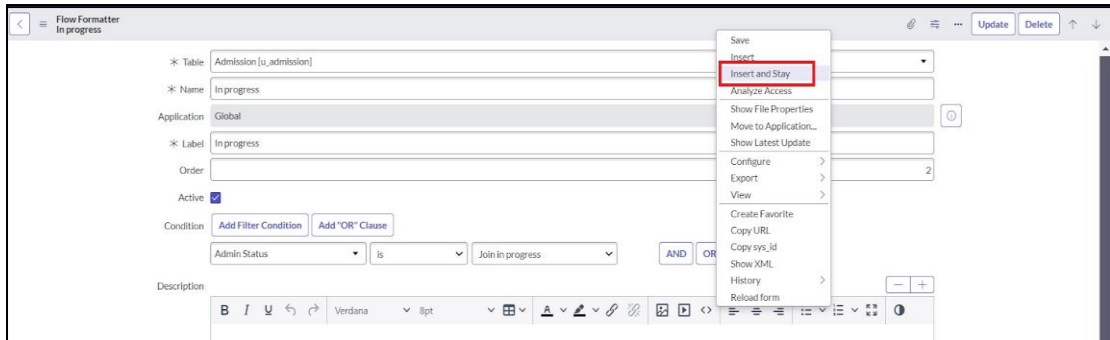

- Fill the details >> Submit.

Step 11: 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.

Step 12: Creating "Auto populate" Client Scripts for Admission Table

- All >> Client Scripts >> New.
- Fill the Details as given.
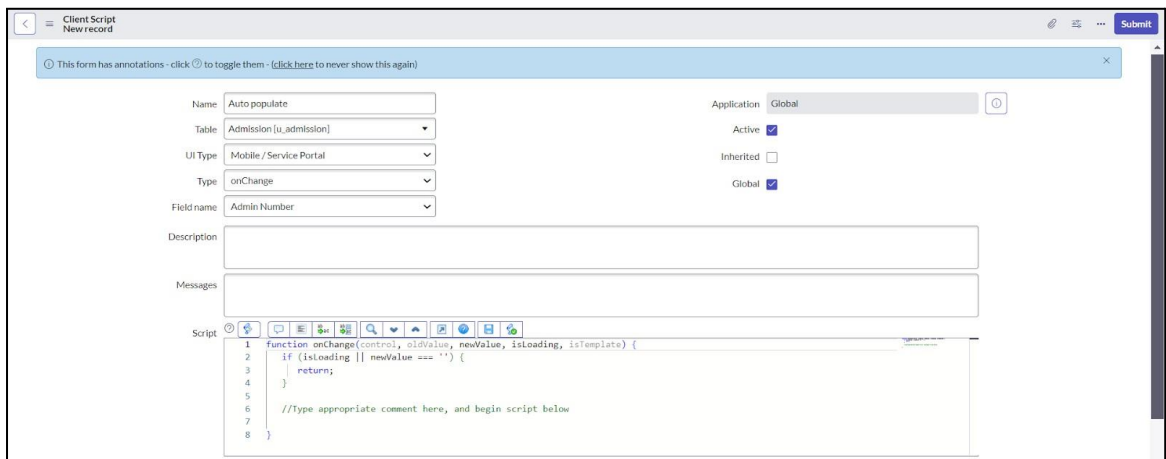
- Write the Code as below, Enable Isolate script and Save.

```
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);
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);
}
```
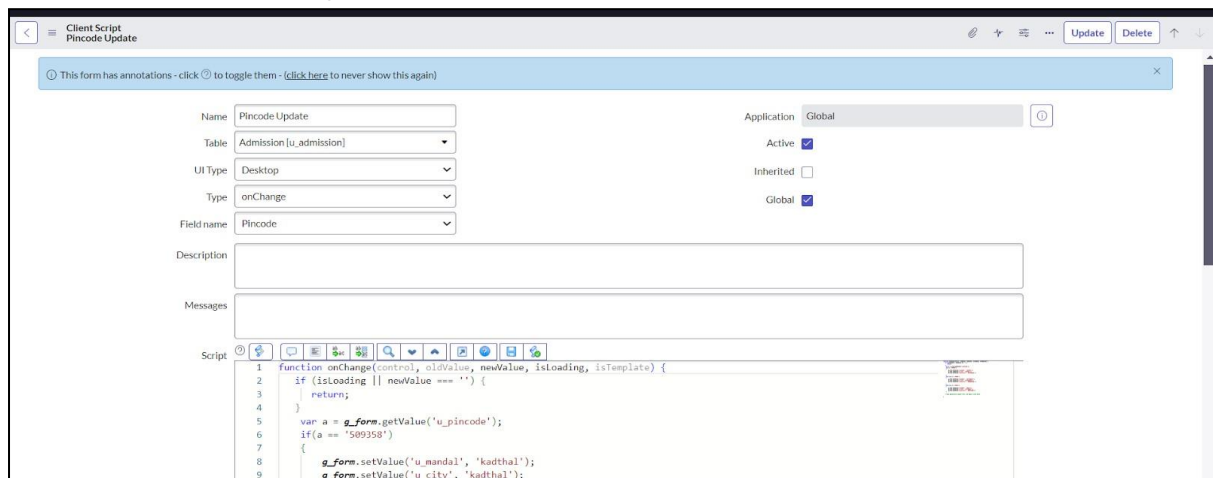
Note: Make sure the Field names should be the same as you created .

Step 13: Creating "Pincode Update" Client Scripts for Admission Table

- Fill the Details as given.

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

```
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

}
```

Step 14: 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);
}
```

Step 15: Creating "Total Update" Client Scripts for Student progress Table

- Fill the Details as given.

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

```javascript
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 f = parseInt(g_form.getValue('u_social'));
var Total = parseInt(a+b+c+d+e+f);
g_form.setValue('u_total', Total);
}
}
```

Step 16: Creating "Result" Client Scripts for Student progress Table

- Fill the Details as given.

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

```javascript
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_percentage')); // Convert the value to an integer for comparison
    if(a >= 0 && a <= 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');
    }
  }
}
```

Step 17: Creating "Percentage" Client Scripts for Student progress Table

- Fill the Details as given.

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

```
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+'%');
}
```

7. Conclusion:

The Educational Organisation Using ServiceNow project efficiently automates and optimizes major administrative operations within educational institutions. Through the integration of ServiceNow for workflow automation and TensorFlow for advanced data analytics, the system enables effective management of student and faculty information, seamless admission processes, and data-driven decision-making. In essence, it offers a dependable and scalable solution for modern educational administration.

8. Result: