



**DEPARTMENT OF COMPUTER SCIENCE AND  
ENGINEERING**

**NM1051- SERVICENOW ADMINISTRATORS**

**REGULATION 2021**



# ARUNACHALA

## HITECH ENGINEERING COLLEGE

(Approved By AICTE, New Delhi & Affiliated to Anna University, Chennai)

### LABORATORY REORD

This is to certify that this is a bonafide record of the work done by  
Ms/Mr..... Register  
Number..... in the .....  
Laboratory in the ..... semester.

**Staff-in-charge**

**Head of the Department**

Submitted for the University Examination held on  
.....

**Internal Examiner**

**External Examiner**

## **EDUCATIONAL ORGANIZATION USING SERVICENOW**

### **OBJECTIVE:**

The main objective of this project is to understand and implement how ServiceNow can be used to manage and automate processes in an educational organisation. The project focuses on creating a custom application in ServiceNow that helps streamline record management, form design, and workflow automation for educational purposes.

### **INTRODUCTION:**

ServiceNow is a cloud-based platform that provides IT service management and process and the automation solutions. Educational institutions can use ServiceNow to manage student data, staff information, requests, and other administrative processes efficiently. In this project, we develop a simple application to simulate how an educational organisation can use the ServiceNow to manage and automate its operations

### **MODULES/ STEPS INVOLVED:**

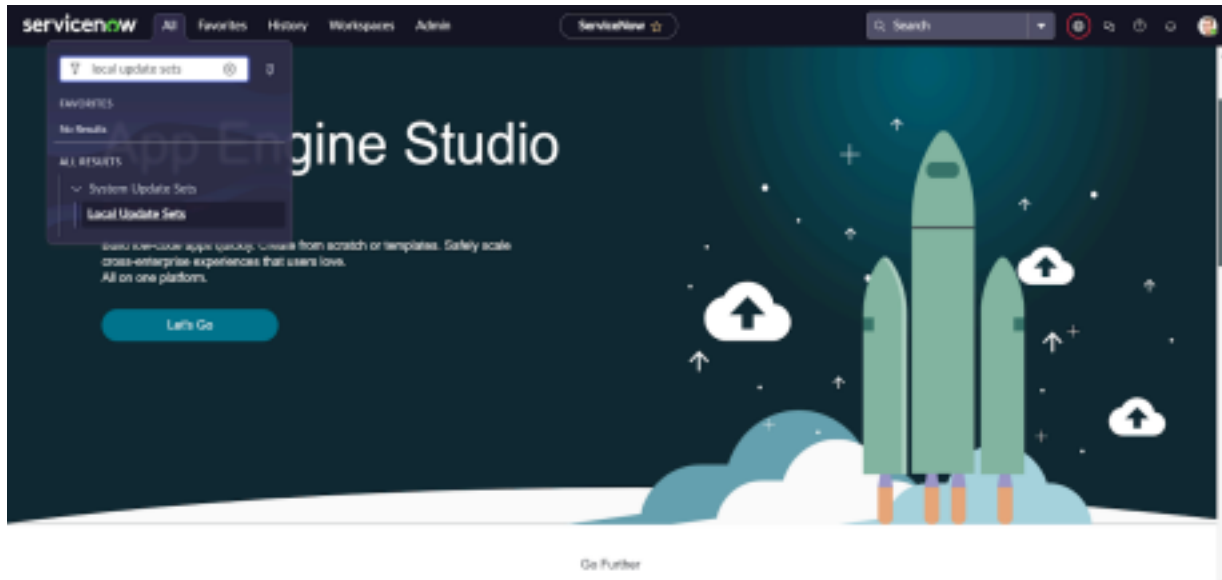
- Setting Up ServiceNow Instance
- Creating an Update Set
- Creating a Table
- Form Layout
- Form Design
- Number Maintenance
- Process Flow
- Client Script
- ResultResult

### **Setting Up ServiceNow Instance:**

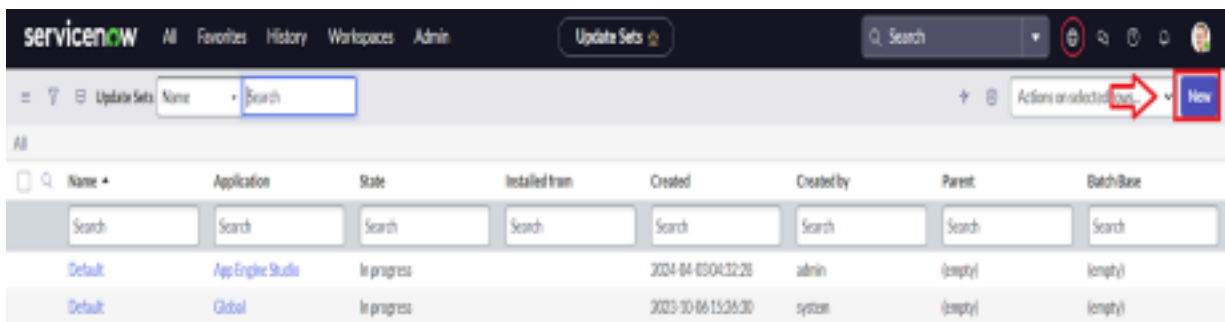
1. Sign up for a developer account on the ServiceNow Developer site  
“<https://developer.servicenow.com>”.
2. Once logged in, navigate to the "Personal Developer Instance" section.
3. Click on "Request Instance" to create a new ServiceNow instance.
4. Fill out the required information and submit the request.
5. You'll receive an email with the instance details once it's ready.

## Creating a Update Set:

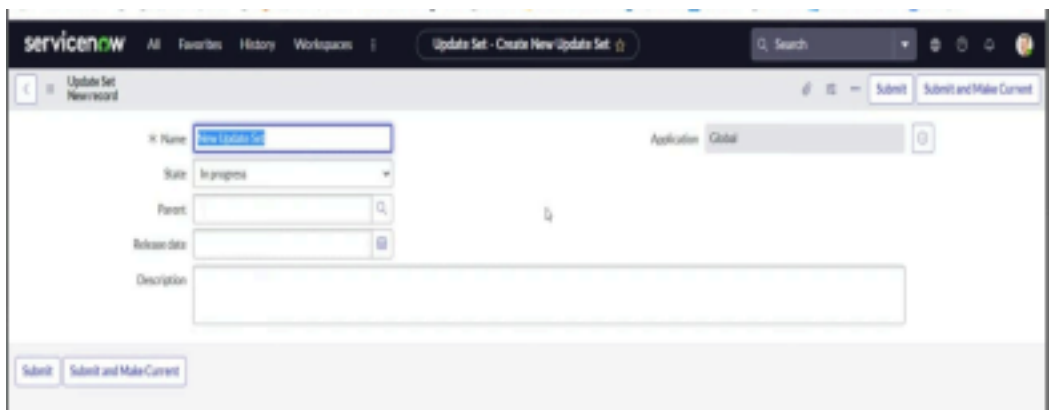
1. Click on All >> Local update sets .



2. Click on new



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



## Creating a Table:

- Creating Salesforce Table
- Creating Admission Table
- Creating Student Progress Table

## 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 .

## Creating Admission Table:

- 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

The screenshot shows the ServiceNow 'Table - New Record' form. The 'Label' field is set to 'Admission' and the 'Table Name' field is set to 'Admission'. The 'Extends' dropdown is set to 'Salesforce' and the 'Add module to menu' dropdown is set to 'Salesforce'. The 'Columns' section shows a table with columns: 'Field Name', 'Type', 'Mandatory', 'Max Length', 'Default Value', and 'Display'. The 'Field Name' column has a value of 'Admin Number'.

- Create choice for Admin Status as:

Table Administration

Columns | Controls | Application Icons

Table Columns for test Search 1 to 29 of 29 Save

Dictionary Entries

Column Name	Type	Reference	Max Length	Default value	Display
SynID	SynID (GUID)	length	32		None
AdminStatus	Choice	length	40		None
AdmissionNumber	Reference	Admission	32		None
Area	String	length	40		None
City	String	length	40		None
CountryCode	String (Full ISO-3166)	length	253		None
District	String	length	40		None
Fax	Phone	length	20		None
HouseNo	String	length	40		None
Mailing	String	length	40		None
Pincode	Choice	length	40		None
PurposeofJoin	Choice	length	40		None
School	Choice	length	40		None
SchoolArea	Choice	length	40		None
Class	System Class Name	length	30 (javascript:alert('Max length'))		None

- Create choice for Pincode as:

Table Administration

Choice | Controls | Attributes | Labels | Dictionary Overrides

Label Search Actions on selected rows... New

Choice

Label	Value	Language	Sequence	Inactive	Updated
00000	00000	en	1	False	2024-04-02 21:21:19
00001	00001	en	2	False	2024-04-02 21:21:46
00002	00002	en	3	False	2024-04-02 21:24:05

+ Insert new rows...

- Create choice for Purpose of Join as:

Table Administration

Choice | Controls | Attributes | Labels | Dictionary Overrides

Label Search Actions on selected rows... New

Choice

Label	Value	Language	Sequence	Inactive	Updated
Tutor	Tutor	en	1	False	2024-04-02 21:27:09
Coaching	Coaching	en	2	False	2024-04-02 21:27:21
Teacher	Teacher	en	3	False	2024-04-02 21:27:31

+ Insert new rows...

- Create choice for School Area as:

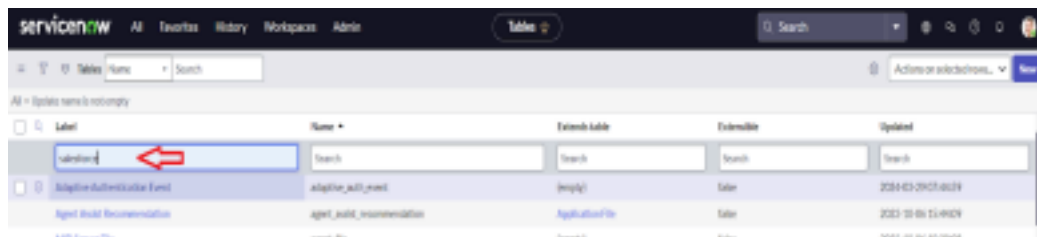


## Form Design:

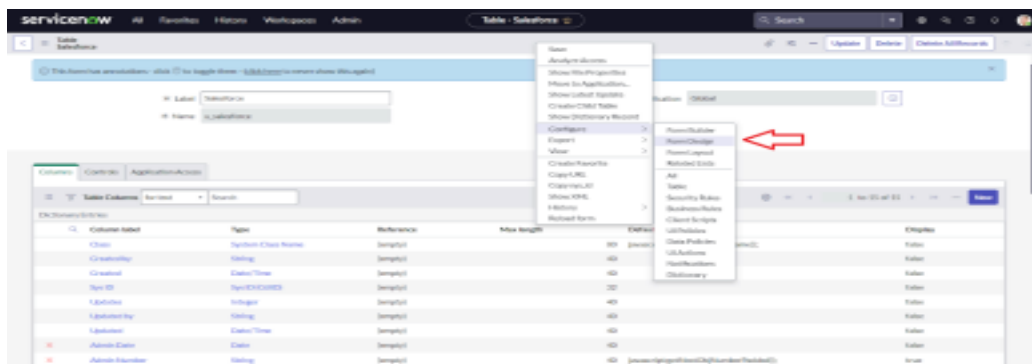
- Creating Form Design for Salesforce Table
- Creating Form Design for Admission Table
- Creating Form Design for Student progress Table

## 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. In drop down select Salesforce(u\_salesforce).



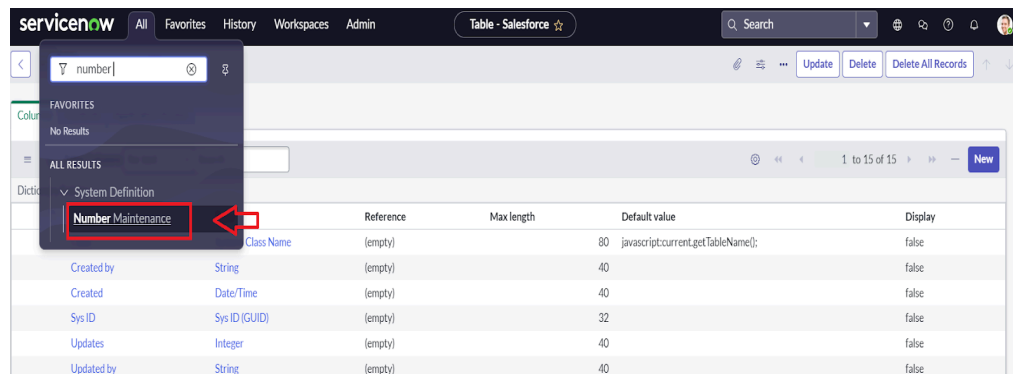
4. Drag and drop the fields to the left side as below.





## Number Maintenance:

1. All >> Number Maintenance >>



2. NewFill the details >> Submit.

## Process Flow:

- All >> Process Flow>> New.
- Fill the Details as given BelowRight Click on toggle and click on the save.



- Replace the Name and Label as below and click on Insert on stay.



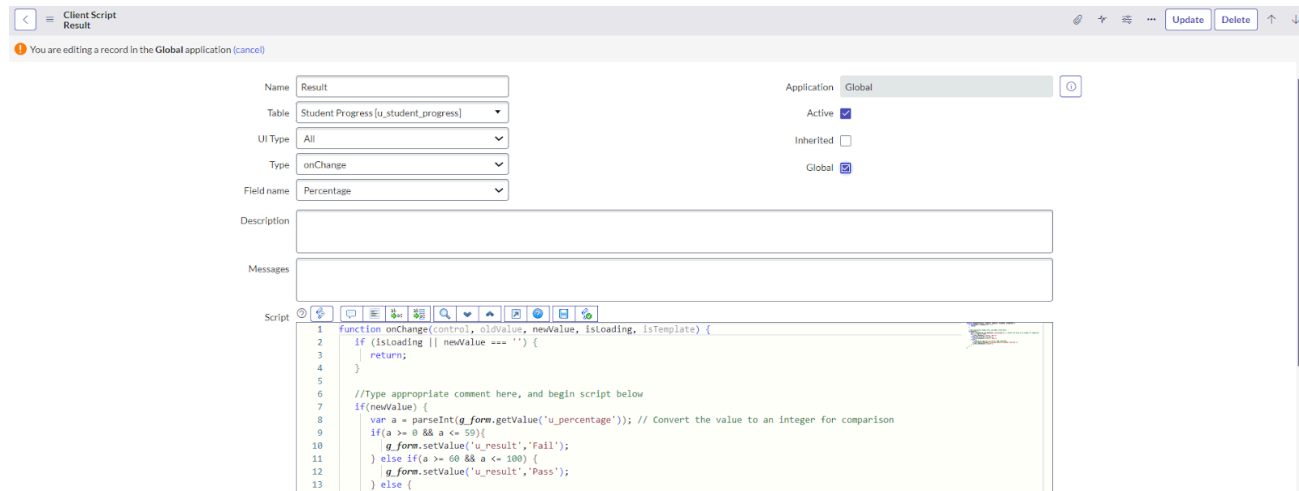
- Joined >> Rejected >> Rejoined >> Closed >> Cancelled.
- Order should be New >> InProgress >> Joined >> Rejected >> Rejoined >> Closed >> Cancelled.

#### **Client Script:**

- Creating “Auto populate” Client Scripts for Admission Table
- Creating “Pincode Update” Client Scripts for Admission Table
- Creating “Disable Fields” Client Scripts for Student progress Table
- Creating “Percentage” Client Scripts for Student progress Table

#### **Creating “Auto populate” Client Scripts for Admission Table**

1. All >> Client Scripts >> New.
2. Fill the Details as given.



3. 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);

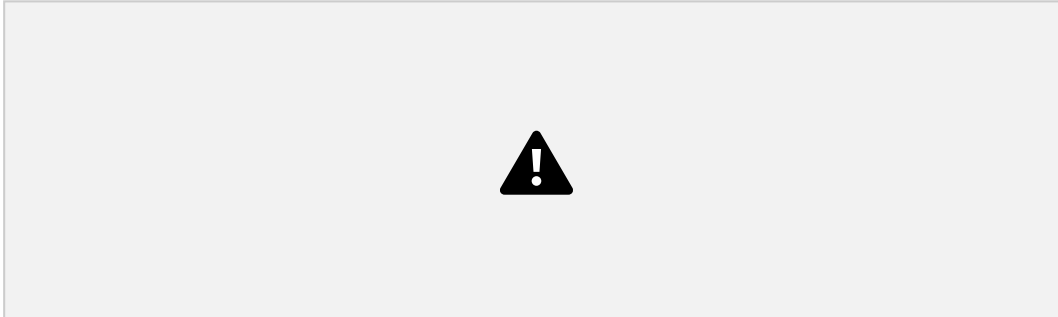
g_form.setDisabled('u_mother_cell',a.u_mother_cell);

}

```

### Creating “Pincode Update” Client ScriptsforAdmission 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;
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.

The screenshot shows the 'Client Script' configuration window in Salesforce. The window title is 'Client Script' and the subtitle is 'New Record'. A message at the top states: 'This form has annotations - click ⓘ to toggle them - click here to never show this again:'. The configuration details are as follows:

- Name:** Auto populate
- Table:** Admissions (u\_admissions)
- UI Type:** Mobile / Service Portal
- Type:** onChange
- Field name:** Admits Number
- Application:** Global
- Active:** ☒
- Interrupted:** ☐
- Global:** ☒

The 'Description' field is empty. The 'Messages' field is empty. The 'Script' field contains the following code:

```

1  function autoPopulate() {
2      if (isLoaded) {
3          return;
4      }
5      //Type appropriate comment here, and begin script below
6  }

```

- 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 give.

Client Script configuration window showing details for a script named 'Auto populate' associated with the 'Admission [u\_admission]' table. The script is configured to run on the 'Mobile / Service Portal' UI type, triggered by the 'onChange' event on the 'Admin Number' field. The script is set to be 'Active' and 'Global'.

- Write the Code as below, Enable Isolate script and Save.  
function  
onChange(control, oldValue, newValue, isLoading, isTemplate) {  
if (isLoading || newValue === ""){

```
}
```

```
//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);
```

```
}
```

```
}
```

## Creating “Result” Client Scripts for Student progress Table:

- Fill the Details as given.

The screenshot shows the 'Client Script' configuration window for a table named 'Result'. The window is titled 'Client Script Result' and has a subtitle 'You are editing a record in the Global application [cancel]'. The configuration fields are as follows:

- Name: Result
- Table: Student Progress (u\_student\_progress)
- UI Type: All
- Type: onChange
- Field name: Percentage
- Application: Global
- Active: ☒
- Inherited: ☐
- Global: ☒

The Description and Messages fields are empty. The Script field contains the following JavaScript code:

```
1 function onChange(control, oldValue, newValue, isLoading, isTemplate) {  
2   if (!isLoading || newValue === '') {  
3     return;  
4   }  
5  
6   //Type appropriate comment here, and begin script below  
7   if(newValue) {  
8     var a = parseInt(g_form.getValue('u_percentage')); // Convert the value to an integer for comparison  
9     if(a >= 0 && a <= 50){  
10      g_form.setValue('u_result', 'Fail');  
11    } else if(a >= 60 && a <= 100){  
12      g_form.setValue('u_result', 'Pass');  
13    } else {
```

- Project Workspace

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
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');

}

}

}
```



## Creating “Percentage” Client Scripts for Student progress Table:

- Fill the Details as given.

The screenshot shows the Oracle APEX Client Script editor. The script is named 'Percentage' and is associated with the 'Student Progress (u\_student\_progress)' table. The UI type is 'All' and the type is 'onChange'. The field name is 'Total'. The application is 'Global'. The script is as follows:

```
1 function onChange(control, oldValue, newValue, isLoading, isTemplate) {
2   if (isLoading || newValue === '') {
3     return;
4   }
5
6   //Type appropriate comment here, and begin script below
7   var Total = g_form.getValue('u_total');
8   var Percentage = (Total/600)*100;
9   g_form.setValue('u_percentage',Percentage+'%');
10 }
```

The 'Isolate script' checkbox is checked.

- 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+'%');
```

```
}
```

**RESULT:**

<

=

Salesforce

New record

Admin Number

SAL0001078

Admin Date

Grade

-- None --

Student Name

Father Name

Mother Name

Mother Cell

Father Cell

Submit

[Admission](#)  
New record

New In progress Joined Rejected Rejoined Closed Cancelled

Admission Number <input type="text"/> <input type="button" value="Q"/>  Purpose of Join -- None -- <input type="button" value="v"/>  Student Name <input type="text"/>  Father Name <input type="text"/>  Mother Name <input type="text"/>  Comments <input type="text"/>	Admin Date <input type="text"/> <input type="button" value="📅"/>  Grade -- None -- <input type="button" value="v"/>  Fee \$ <input type="text"/> 0.00  Father Cell <input type="text"/>  Mother Cell <input type="text"/>  Admin Status -- None -- <input type="button" value="v"/>
---	---

---

School Details Address

School Area -- None --

School -- None --

<

=

New Section

New record

Submit

Admission Number

Grade

--None --

Student Name

Father Name

Mother Name

Father Cell

Mother Cell

Student Progress

Telugu

Hindi

English

Maths

Science

Social

Total

Percentage

Result

Submit

## **CONCLUSION:**

This project successfully demonstrates how ServiceNow can be implemented to automate and streamline various processes within an educational organization. By creating custom tables, forms, and workflows, the system efficiently manages student admissions, progress tracking, and administrative data. The use of client scripts further enhances functionality by enabling dynamic updates and validations, improving the overall user experience.

Through this project, we have learned how ServiceNow's powerful tools and features can be customized to meet specific institutional needs, resulting in improved efficiency, accuracy, and transparency in managing educational operations.