

Educational Organisation Using ServiceNow

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Team Size : 5

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AIM:

The aim of this project is to **develop an Educational Management System using ServiceNow** that automates and streamlines the administrative processes of educational institutions by managing student and teacher information, simplifying admissions, and providing tools for monitoring academic progress.

ABSTRACT:

The project “**Educational Organisation Using ServiceNow**” focuses on developing an automated Educational Management System on the ServiceNow platform. The system is designed to simplify and streamline various administrative tasks within educational institutions, such as managing student and teacher data, handling admissions, maintaining academic records, and tracking student performance. By using ServiceNow’s powerful tools like table creation, form design, client scripts, and process automation, the project demonstrates how non-IT processes can be efficiently managed on a cloud-based platform. This application enhances data accuracy, reduces manual effort, and improves overall institutional efficiency.

OBJECTIVE:

- The main objective of this project is to develop an Educational Management System using ServiceNow that streamlines the administrative operations of educational institutions.
- It enables efficient management of student and teacher information, simplifies the admission process, automates workflows, and provides tools for monitoring student progress.

METHODOLOGY:

The development of the **Educational Organisation Using ServiceNow** project followed a systematic process using the features and tools provided by the ServiceNow platform. The methodology involves the following steps:

1. Setting Up ServiceNow Instance

- A personal developer instance of ServiceNow was created from the ServiceNow Developer Portal.
- The instance was configured with admin privileges to allow application creation and customization.

2. Creating an Update Set

- An **Update Set** was created to capture all the configurations, scripts, and changes made during development.
- This helps in migrating the developed components between different instances if required.

3. Creating a Table

- A custom table named **Educational Organisation** (or similar) was created to store student and teacher information.
- Fields such as *Student ID*, *Student Name*, *Department*, *Course*, *Admission Date*, and *Grade* were added.
- Relationships between related tables were established to manage linked data.

4. Designing the Form Layout and Form Design

- The **Form Layout** was organized for a user-friendly interface.
- The **Form Designer** was used to add and arrange fields logically for better data entry and viewing.
- Sections and tabs were customized for clarity and usability.

5. Number Maintenance Configuration

- Automatic numbering was configured using **Number Maintenance** to generate unique record IDs for each entry (e.g., STU0001, STU0002).
- This ensures proper record tracking and consistency.

6. Process Flow Creation

- Using **Flow Designer**, workflows were created to automate processes like admission approval, grade updates, and status tracking.
- Notifications and task assignments were added to enhance communication and efficiency.

7. Client Script Implementation

- **Client Scripts** were developed using JavaScript to add validations, dynamic field behaviors, and form interactivity.
- Example: Auto-filling fields, restricting invalid data entries, and displaying alerts for missing information.

8. Testing and Result Verification

- The developed application was tested by creating, updating, and viewing student records.
- Automated workflows and scripts were verified for accuracy and functionality.
- The final output was an efficient, user-friendly system for educational data management.

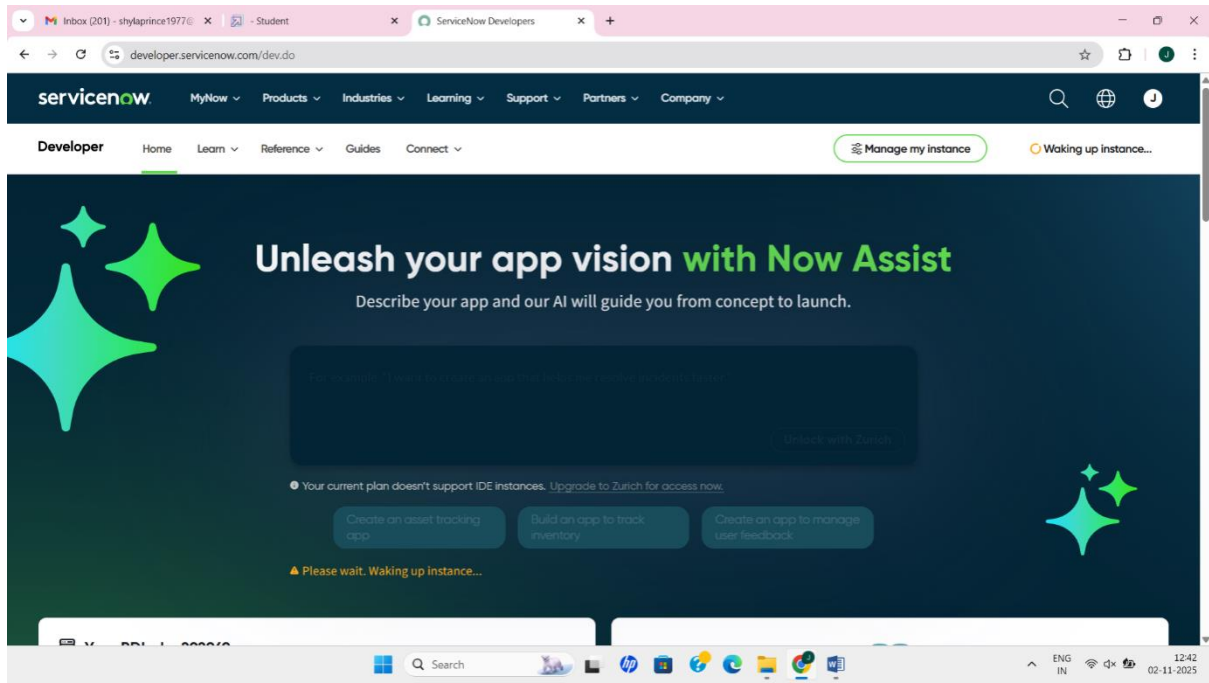
TOOLS AND TECHNOLOGIES USED:

- ❖ Service Now Platform
- ❖ Flow Designer
- ❖ Form Designer
- ❖ Client Scripts (JavaScript)
- ❖ Update Set Management

STEPS TO IMPLEMENT:

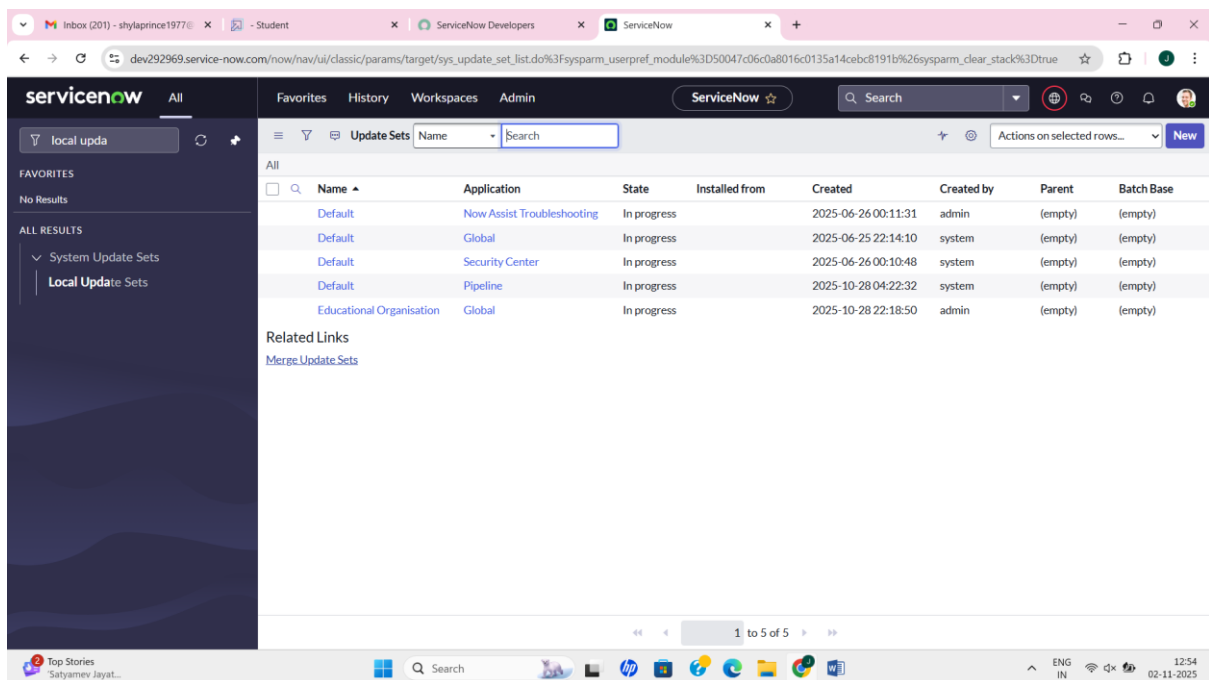
Step 1

Set up a service now instance



Step 2

Create a update set on the local update set



Step 3

Create a tables in system definition name the tables as Admission,Salesforce and Student Progress

The screenshot shows the ServiceNow 'Tables' list view. The left sidebar contains a navigation menu with options like 'Platform Analytics Administration', 'Data Sources', 'Imported Tables', 'Protected Tables', 'Log Protection', 'Protected Table Log', 'System Archiving', 'Archive Tables', 'Archive Audit Result', 'Archive Knowledge Use', 'System Clone', 'Clone Definition', 'Exclude Tables', 'System Definition', 'Tables', 'Tables & Columns', 'Table Rotations', 'Decision Tables', and 'Remote Tables'. The main area displays a table with columns: Label, Name, Extends table, Extensible, and Updated. The table lists various system tables, including 'Salesforce' (u_salesforce), 'SAML2 Assertion Attribute' (saml2_assertion_attribute), 'SAML2 Assertion Keystore' (saml2_assertion_keystore), 'SAML2 Assertion Producer' (saml2_assertion_producer), 'SAN Connection' (cmdb_ci_san_connection), 'SAN Disk' (cmdb_ci_san_disk), 'SAN Endpoint' (cmdb_ci_san_endpoint), 'SAN Export' (cmdb_ci_san_export), 'SAN Fabric' (cmdb_ci_san_fabric), 'SAN Zone' (cmdb_ci_san_zone), 'SAN Zone Alias' (cmdb_ci_san_zone_alias), 'SAN Zone Alias Member' (cmdb_ci_san_zone_alias_member), 'SAN Zone Member' (cmdb_ci_san_zone_member), 'SAN Zone Set' (cmdb_ci_san_zone_set), 'SAP APP Endpoint' (cmdb_ci_endpoint_sap_app), and 'SAP Application' (cmdb_ci_appl_sap).

Label	Name	Extends table	Extensible	Updated
Search	Search	Search	Search	Search
Salesforce	u_salesforce	(empty)	true	2025-10-29 08:04:15
SAML2 Assertion Attribute	saml2_assertion_attribute	Application File	false	2025-06-25 21:57:22
SAML2 Assertion Keystore	saml2_assertion_keystore	(empty)	false	2025-06-25 21:57:22
SAML2 Assertion Producer	saml2_assertion_producer	Application File	false	2025-06-25 21:57:23
SAN Connection	cmdb_ci_san_connection	Configuration Item	false	2025-06-25 22:03:18
SAN Disk	cmdb_ci_san_disk	Storage Device	true	2025-06-25 22:04:56
SAN Endpoint	cmdb_ci_san_endpoint	Configuration Item	false	2025-06-25 22:03:52
SAN Export	cmdb_ci_san_export	Storage Export	true	2025-06-25 22:04:57
SAN Fabric	cmdb_ci_san_fabric	Configuration Item	false	2025-06-25 22:03:44
SAN Zone	cmdb_ci_san_zone	Configuration Item	false	2025-06-25 22:07:18
SAN Zone Alias	cmdb_ci_san_zone_alias	Configuration Item	false	2025-06-25 22:03:13
SAN Zone Alias Member	cmdb_ci_san_zone_alias_member	Configuration Item	false	2025-06-25 22:03:43
SAN Zone Member	cmdb_ci_san_zone_member	Configuration Item	false	2025-06-25 22:08:01
SAN Zone Set	cmdb_ci_san_zone_set	Configuration Item	false	2025-06-25 22:02:38
SAP APP Endpoint	cmdb_ci_endpoint_sap_app	Endpoint	false	2025-06-25 22:08:35
SAP Application	cmdb_ci_appl_sap	Application	true	2025-06-25 22:02:37

The screenshot shows the ServiceNow 'Tables' list view after filtering. The left sidebar is the same as the previous screenshot. The main area displays a table with columns: Label, Name, Extends table, Extensible, and Updated. Only one table is visible: 'Admission' (u_admission), which extends from 'Salesforce'.

Label	Name	Extends table	Extensible	Updated
admission	u_admission	Salesforce	false	2025-10-29 00:40:11

Step 4

Create the label for the tables

The screenshot shows the ServiceNow 'Table Admission' configuration page. The left sidebar contains a navigation menu with 'Tables' selected. The main area is titled 'Table Admission' and includes fields for 'Label' (Admission), 'Name' (u_admission), and 'Extends table' (Salesforce). There are also checkboxes for 'Create module', 'Create mobile module', and 'Add module to menu'. Below these fields are tabs for 'Columns', 'Controls', and 'Application Access'. The 'Columns' tab is active, showing a table of 'Dictionary Entries'.

Column label	Type	Reference	Max length	Default value	Display
Admin Date	Date	(empty)	40		false
Admin Number	String	(empty)	40	javascript:getNextObj(Number Padded);	true
Admin Status	Choice	(empty)	40		false
Admission Number	Reference	Salesforce	40		false
Area	String	(empty)	40		false
City	String	(empty)	40		false

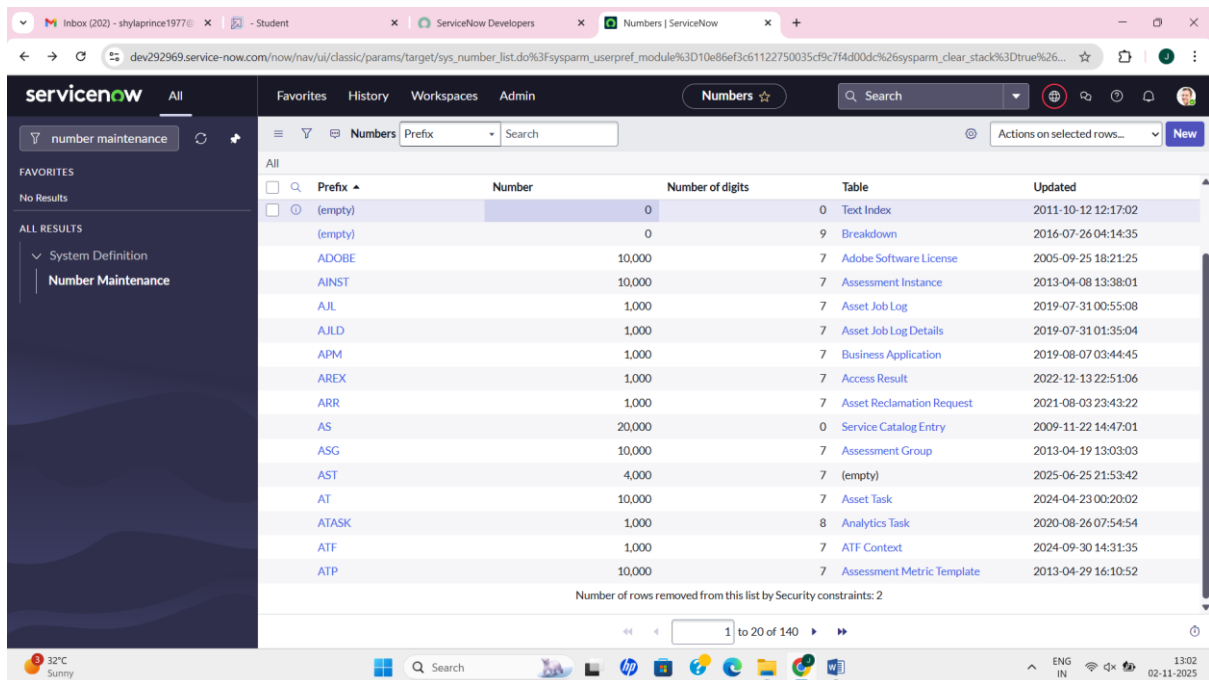
Step 5

Design the form for the table content then configure the table in the service now administrator

The screenshot shows the ServiceNow 'Configuring Table form' page. The left sidebar contains a navigation menu with 'Tables' selected. The main area is titled 'Configuring Table form' and includes a 'Back' button. There are two columns: 'Available' and 'Selected'. The 'Available' column lists various fields like 'Admin Number', 'Area', 'City', 'Class', 'Created', 'Created by', 'District', 'House No', 'Mandal', 'Pincode', 'School', 'School Area', 'Updated', 'Updated by', and 'Updates'. The 'Selected' column lists fields like 'Process Flow(formatter)', '[- begin_split -]', 'Admission Number', 'Purpose of Join', 'Student Name', 'Father Name', 'Mother Name', '[- split -]', 'Admin Date', 'Grade', 'Fee', 'Father Cell', 'Mother Cell', 'Admin Status', '[- end_split -]', and 'Comments'. There are 'Cancel' and 'Save' buttons between the columns. Below the columns is a 'Form view and section' section with a 'View name' dropdown (Default view) and a 'Section' dropdown (Admission, School Details, Address, New...). There is also a 'Create new field' section with fields for 'Name', 'Type' (String), and 'Field length' (Small (40)).

Step 6

In the Service Now Administrator, Number Maintenance Configuration

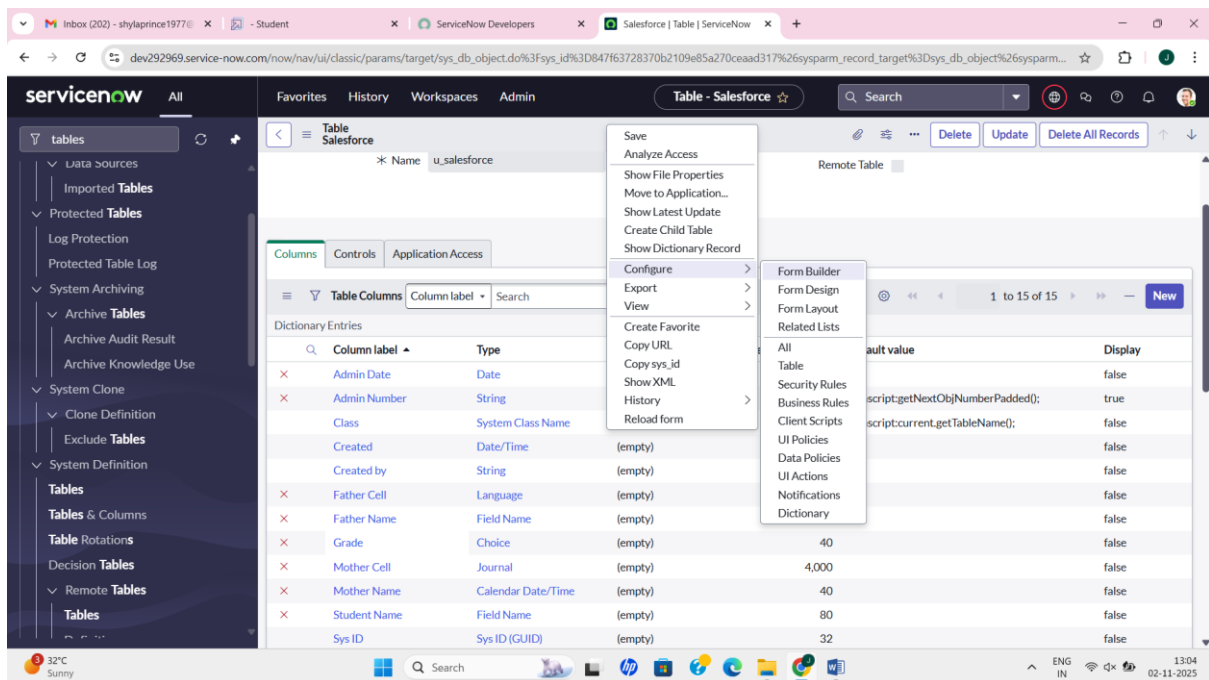


The screenshot shows the ServiceNow Number Maintenance Configuration page. The left sidebar contains a navigation menu with 'number maintenance' selected. The main area displays a table with columns: Prefix, Number, Number of digits, Table, and Updated. The table lists various prefixes and their corresponding numbers and tables. A context menu is open over the 'Numbers' table, showing options like 'Save', 'Analyze Access', 'Show File Properties', 'Move to Application...', 'Show Latest Update', 'Create Child Table', 'Show Dictionary Record', 'Configure', 'Export', 'View', 'Create Favorite', 'Copy URL', 'Copy sys_id', 'Show XML', 'History', and 'Reload form'. The 'Configure' option is highlighted, and a sub-menu is visible with options like 'Form Builder', 'Form Design', 'Form Layout', and 'Related Lists'.

Prefix	Number	Number of digits	Table	Updated
(empty)	0	0	Text Index	2011-10-12 12:17:02
(empty)	0	9	Breakdown	2016-07-26 04:14:35
ADOBE	10,000	7	Adobe Software License	2005-09-25 18:21:25
AINST	10,000	7	Assessment Instance	2013-04-08 13:38:01
AJL	1,000	7	Asset Job Log	2019-07-31 00:55:08
AJLD	1,000	7	Asset Job Log Details	2019-07-31 01:35:04
APM	1,000	7	Business Application	2019-08-07 03:44:45
AREX	1,000	7	Access Result	2022-12-13 22:51:06
ARR	1,000	7	Asset Reclamation Request	2021-08-03 23:43:22
AS	20,000	0	Service Catalog Entry	2009-11-22 14:47:01
ASG	10,000	7	Assessment Group	2013-04-19 13:03:03
AST	4,000	7	(empty)	2025-06-25 21:53:42
AT	10,000	7	Asset Task	2024-04-23 00:20:02
ATASK	1,000	8	Analytics Task	2020-08-26 07:54:54
ATF	1,000	7	ATF Context	2024-09-30 14:31:35
ATP	10,000	7	Assessment Metric Template	2013-04-29 16:10:52

Step 7

The process flow was created for designing the form and layout



The screenshot shows the ServiceNow Table Configuration page for 'Table - Salesforce'. The left sidebar contains a navigation menu with 'tables' selected. The main area displays a table with columns: Column label, Type, and Display. The table lists various columns and their types. A context menu is open over the 'Table Columns' table, showing options like 'Save', 'Analyze Access', 'Show File Properties', 'Move to Application...', 'Show Latest Update', 'Create Child Table', 'Show Dictionary Record', 'Configure', 'Export', 'View', 'Create Favorite', 'Copy URL', 'Copy sys_id', 'Show XML', 'History', and 'Reload form'. The 'Configure' option is highlighted, and a sub-menu is visible with options like 'Form Builder', 'Form Design', 'Form Layout', and 'Related Lists'.

Column label	Type	Display
Admin Date	Date	false
Admin Number	String	true
Class	System Class Name	false
Created	Date/Time	(empty)
Created by	String	(empty)
Father Cell	Language	(empty)
Father Name	Field Name	(empty)
Grade	Choice	(empty)
Mother Cell	Journal	(empty)
Mother Name	Calendar Date/Time	(empty)
Student Name	Field Name	(empty)
Sys ID	Sys ID (GUID)	(empty)

Form Design

Admission [u_admission] | Default view

Fields | Field Types

Filter

Fields

- Admin Number
- Class
- Created
- Created by
- Updated
- Updated by
- Updates

Formatters

- Activities (filtered)
- Contextual Search Results
- Process Flow
- Ratings

Admission [u_admission] | 1 Column

Process Flow(formatter)

Admission Number | Admin Date

Purpose of Join | Grade

Student Name | Fee

Father Name | Father Cell

Mother Name | Mother Cell

Admin Status

Comments | 1 Column

School Details | 2 Column

School Area | School

Address | 2 Column

Step 8

Write the script for the client

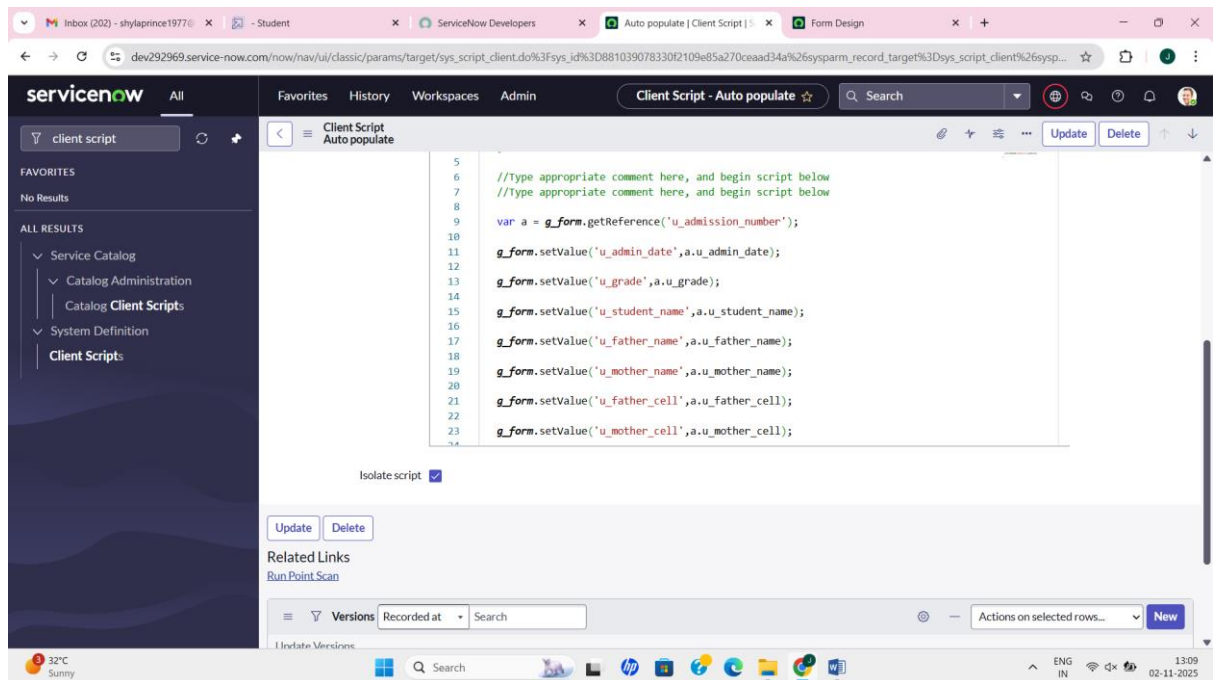
```
function onChange(control, oldValue, newValue, isLoading,
isTemplate) {
    if (isLoading || newValue === '') {
        return;
    }

    //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);
}
```

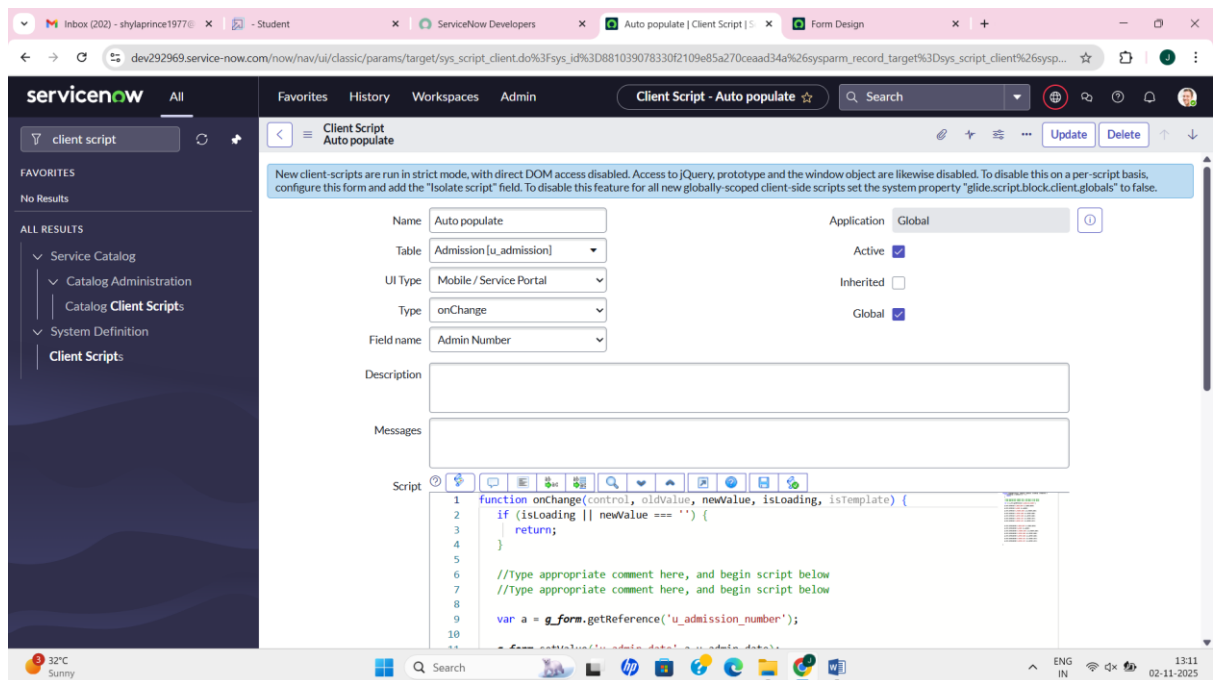
Step 9

The client script was isolated and saved



Step 10

The testing of the client script for the autopopulate in the admission table



Step 11

Create the disable fields for student progress table

The screenshot shows the ServiceNow interface for configuring a Client Script. The left sidebar displays the navigation menu with 'Client Scripts' selected. The main area is titled 'Client Script - Disable Fields'. A blue informational banner at the top states: 'New client-scripts are run in strict mode, with direct DOM access disabled. Access to jQuery, prototype and the window object are likewise disabled. To disable this on a per-script basis, configure this form and add the "Isolate script" field. To disable this feature for all new globally-scoped client-side scripts set the system property "glide.script.block.client.globals" to false.'

The configuration form includes the following fields:

- Name:** Disable Fields
- Table:** Student Progress[u_student...]
- UI Type:** All
- Type:** onLoad
- Application:** Global
- Active:** ☒
- Inherited:** ☐
- Global:** ☒

Below the form fields are sections for 'Description', 'Messages', and 'Script'. The 'Script' section contains the following code:

```
1 function onLoad() {  
2  
3 //Type appropriate comment here, and begin script below  
4  
5 g_form.setDisabled('u_total',true);  
6  
7 g_form.setDisabled('u_percentage',true);  
8  
9 g_form.setDisabled('u_result',true);  
10  
11 }
```

Step 12

Create result and percentage script for the student progress table

The screenshot shows the ServiceNow interface for configuring a Client Script. The left sidebar displays the navigation menu with 'Client Scripts' selected. The main area is titled 'Client Script - Result'. A blue informational banner at the top states: 'New client-scripts are run in strict mode, with direct DOM access disabled. Access to jQuery, prototype and the window object are likewise disabled. To disable this on a per-script basis, configure this form and add the "Isolate script" field. To disable this feature for all new globally-scoped client-side scripts set the system property "glide.script.block.client.globals" to false.'

The configuration form includes the following fields:

- Name:** Result
- Table:** Student Progress[u_student...]
- UI Type:** All
- Type:** onChange
- Application:** Global
- Active:** ☒
- Inherited:** ☐
- Global:** ☒

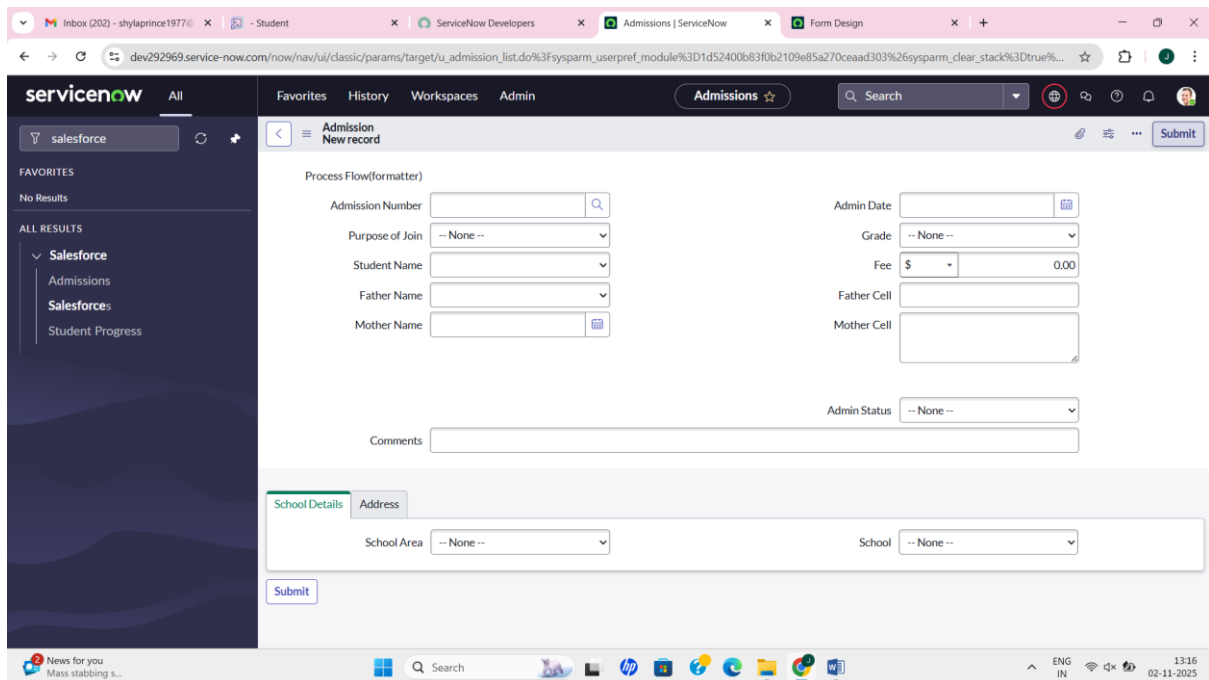
Below the form fields are sections for 'Description', 'Messages', and 'Script'. The 'Script' section contains the following code:

```
1 function onChange(control, oldValue, newValue, isLoading, isTemplate) {  
2  
3 if (isLoading || newValue === '') {  
4  
5 return;  
6  
7 }  
8  
9 //Type appropriate comment here, and begin script below  
10  
11 if(newValue) {  
12  
13 var a = parseInt(g_form.getValue('u_percentage')); // Convert the value to an  
14 integer for comparison  
15  
16 if(a >= 0 && a <= 50){  
17  
18 g_form.setValue('u_result','Fail');  
19  
20 } else if(a >= 60 && a <= 100) {  
21  
22 g_form.setValue('u_result','Pass');  
23  
24 }  
25  
26 }  
27 }
```

At the bottom of the script editor, the 'Isolate script' checkbox is checked.

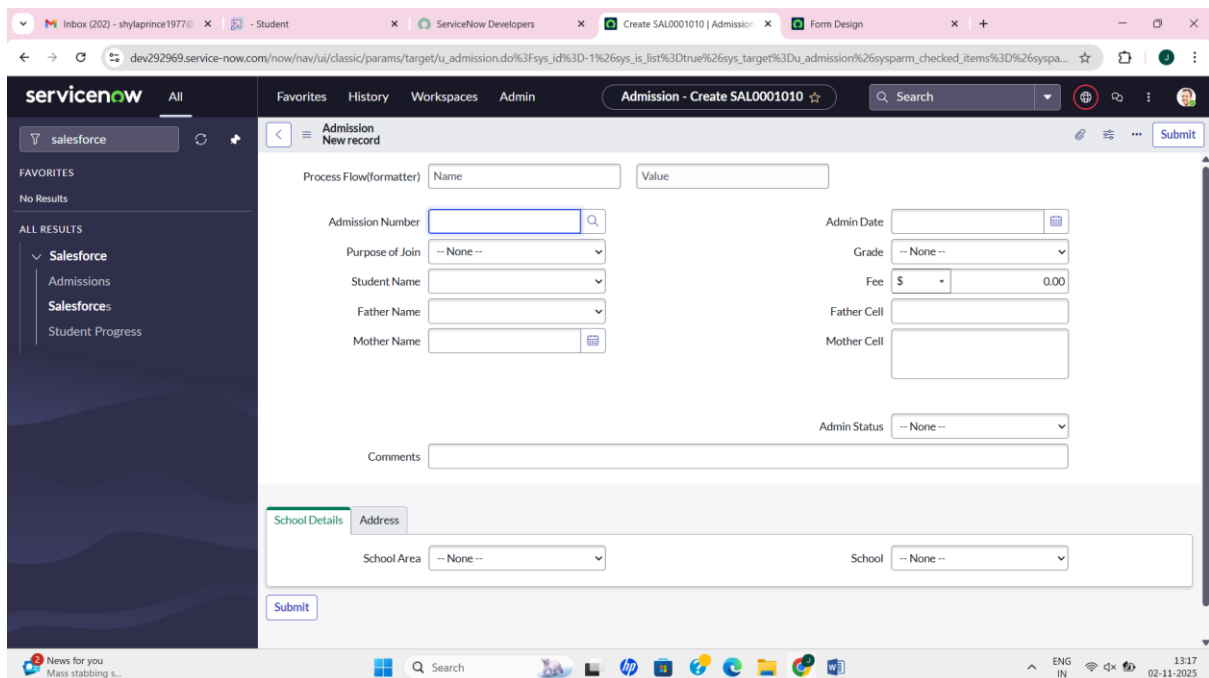
Step 13

The testing and result verification can be output in the salesforce



This screenshot shows the 'Admission New record' form in ServiceNow. The left sidebar contains a 'Salesforce' section with 'Admissions' and 'Student Progress' links. The main form area is titled 'Admission New record' and includes a 'Process Flow(formatter)' section with fields for Admission Number, Purpose of Join, Student Name, Father Name, Mother Name, Admin Date, Grade, Fee, Father Cell, Mother Cell, Admin Status, and Comments. Below this is a 'School Details' section with 'Address' and 'School Area' fields. A 'Submit' button is located at the bottom left of the form.

Admission:



This screenshot shows the 'Admission - Create SAL0001010' form in ServiceNow. The left sidebar is identical to the previous screenshot. The main form area is titled 'Admission - Create SAL0001010' and includes a 'Process Flow(formatter)' section with fields for Name, Value, Admission Number, Purpose of Join, Student Name, Father Name, Mother Name, Admin Date, Grade, Fee, Father Cell, Mother Cell, Admin Status, and Comments. Below this is a 'School Details' section with 'Address' and 'School Area' fields. A 'Submit' button is located at the bottom left of the form.

Student Progress:

dev292969.service-now.com/now/nav/ui/classic/params/target/u_student_progress.do%3Fsys_id%3D-1%26sys_is_list%3Dtrue%26sys_target%3Du_student_progress%26sysparm_checked_items...

servicenow All

salesforce

FAVORITES
No Results

ALL RESULTS
Salesforce
Admissions
Salesforce
Student Progress

New Section
New record

Admission Number

Admission Number.Grade -- None --

Admission Number.Student Name

Admission Number.Father Name

Admission Number.Mother Name

Admission Number.Father Cell

Admission Number.Mother Cell

Submit

Student Progress

Telugu

Hindi

English

Maths

Science

Total

Percentage

Result

Submit

PAK - SA
Game score

Search

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dev292969.service-now.com/now/nav/ui/classic/params/target/u_student_progress.do%3Fsys_id%3D-1%26sys_is_list%3Dtrue%26sys_target%3Du_student_progress%26sysparm_checked_items...

servicenow All

salesforce

FAVORITES
No Results

ALL RESULTS
Salesforce
Admissions
Salesforce
Student Progress

New Section
New record

Admission Number.Student Name

Admission Number.Mother Name

Admission Number.Father Cell

Admission Number.Mother Cell

Submit

Student Progress

Telugu

Hindi

English

Maths

Science

Total

Percentage

Result

Submit

PAK - SA
Game score

Search

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RESULT:

- A working **Educational Management Application** was successfully developed on ServiceNow.
- It enables:
 - Easy record creation and tracking
 - Workflow automation
 - Real-time data management for educational institutions
- The project demonstrates how ServiceNow can be used beyond IT services — to manage education-related operations efficiently.

CONCLUSION:

This project successfully demonstrates the implementation of a basic Educational Management System using ServiceNow. Through this project, the administrative activities such as maintaining student details, admissions, and grades are automated and streamlined. It shows the flexibility of ServiceNow as a platform for developing custom enterprise applications in different domains.