

Educational Organisation Using ServiceNow

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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.

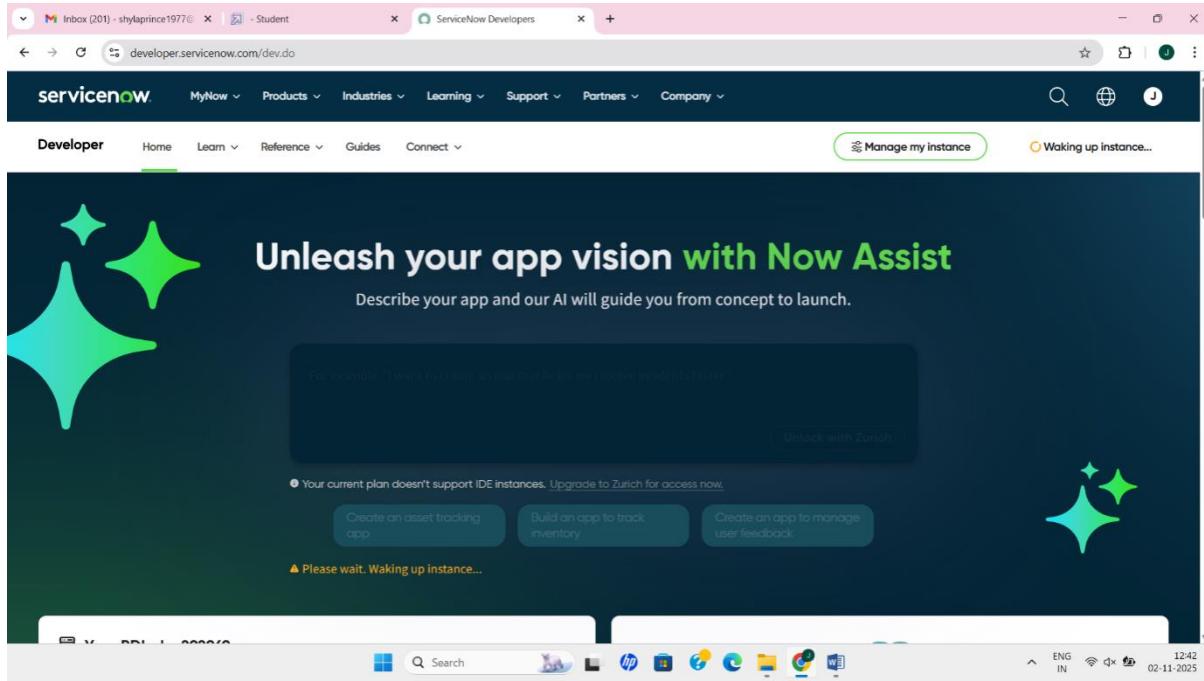
TOOLS AND TECHNOLOGIES USED:

- ❖ 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

A screenshot of the ServiceNow classic interface showing the "Update Sets" list. The left sidebar has a search bar and a link to "local upda". The main area displays a table of update sets with columns: Name, Application, State, Installed from, Created, Created by, Parent, and Batch Base. The table contains five rows, all of which are currently in progress. The first row is for "Default" application "Now Assist Troubleshooting". The second row is for "Default" application "Global". The third row is for "Default" application "Security Center". The fourth row is for "Default" application "Pipeline". The fifth row is for "Educational Organisation" application "Global". At the bottom of the table, there are links for "Merge Update Sets" and "New". The browser's address bar shows "dev292969.service-now.com/nav/ui/classic/params/target/sys_update_set_list.do%3Fsysparm_userpref_module%3D50047c060a8016c0135a14cebc8191b%26sysparm_clear_stack%3Dtrue". The operating system taskbar at the bottom shows various application icons.

Step 3

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

The screenshot shows the ServiceNow 'Tables' list page. The left sidebar is collapsed, and the main area displays a table of table definitions. A search bar at the top is set to 'Label'. The table has columns for 'Label', 'Name', 'Extends table', 'Extensible', and 'Updated'. The results show various system tables like 'Salesforce', 'SAML2 Assertion Attribute', and 'SAN Connection'. A search bar at the bottom indicates '1 to 20 of 1,566' results.

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

The screenshot shows the ServiceNow 'Tables' list page. The left sidebar is collapsed, and the main area displays a table of table definitions. A search bar at the top is set to 'admission'. The table has columns for 'Label', 'Name', 'Extends table', 'Extensible', and 'Updated'. The results show one table named 'Admission' which extends the 'Salesforce' table. A search bar at the bottom indicates '1 to 1 of 1' result.

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 'Tables' screen. On the left, a sidebar lists various system categories like Platform Analytics, Data Sources, Protected Tables, System Archiving, and Tables. The 'Tables' section is expanded, showing sub-options like Tables & Columns, Table Rotations, Decision Tables, and Remote Tables. The main panel displays the configuration for the 'Table Admission'. The 'Label' field is set to 'Admission', and the 'Name' field is set to 'u_admission'. The 'Extends table' dropdown is set to 'Salesforce'. Under the 'Columns' tab, there is a table titled 'Dictionary Entries' listing columns such as Admin Date, Admin Number, Admin Status, Admission Number, Area, and City. The 'Type' column indicates the data type for each column. The bottom right corner of the screen shows the system status bar with weather information (32°C, Sunny), network connectivity, battery level, and the date/time (02-11-2025).

Step 5

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

The screenshot shows the 'Configuring Table form' screen. The left sidebar is identical to the previous screenshot, showing the 'Tables' section. The main area is titled 'Configuring Table form' and has a 'Back' button. It features two main sections: 'Available' and 'Selected'. The 'Available' section contains a list of fields: Admin Number, Area, City, Class, Created, Created by, District, House No, Mandal, Pincode, School, School Area, Updated, Updated by, and Updates. The 'Selected' section contains a list of fields: Process Flow(formatter), Admision Number, Purpose of Join, Student Name, Father Name, Mother Name, Grade, Fee, Father Cell, Mother Cell, Admin Status, and Comments. Below these sections are buttons for 'Cancel' and 'Save'. At the bottom, there is a 'Form view and section' section with a 'View name' dropdown set to 'Default view', a 'Section' dropdown currently showing 'Admission', and a 'Create new field' section where a new field can be added with 'Name', 'Type' (String), and 'Field length' (Small (40)). The bottom right corner shows the system status bar.

Step 6

In the Service Now Administrator, Number Maintenance Configuration

The screenshot shows the ServiceNow web interface with the URL https://dev292969.service-now.com/nav/uiclassic/params/target/sys_number_list.do?sysparm_userpref_module%3D10e86ef3c61122750035cf9c7f4d00dc%26sysparm_clear_stack%3Dtrue%26.... The page title is 'Numbers | ServiceNow'. The left sidebar has 'Number Maintenance' under 'System Definition'. The main content area is titled 'Numbers' with a search bar. The table lists various number prefixes with their details.

Prefix	Number	Number of digits	Table	Updated
(empty)	0	0	0 Text Index	2011-10-12 12:17:02
(empty)	0	0	9 Breakdown	2016-07-26 04:14:35
ADOBE	10,000	7	7 Adobe Software License	2005-09-25 18:21:25
AINST	10,000	7	7 Assessment Instance	2013-04-08 13:38:01
AJL	1,000	7	7 Asset Job Log	2019-07-31 00:55:08
AJLD	1,000	7	7 Asset Job Log Details	2019-07-31 01:35:04
APM	1,000	7	7 Business Application	2019-08-07 03:44:45
AREX	1,000	7	7 Access Result	2022-12-13 22:51:06
ARR	1,000	7	7 Asset Reclamation Request	2021-08-03 23:43:22
AS	20,000	0	0 Service Catalog Entry	2009-11-22 14:47:01
ASG	10,000	7	7 Assessment Group	2013-04-19 13:03:03
AST	4,000	7	7 (empty)	2025-06-25 21:53:42
AT	10,000	7	7 Asset Task	2024-04-23 00:20:02
ATASK	1,000	8	8 Analytics Task	2020-08-26 07:54:54
ATF	1,000	7	7 ATF Context	2024-09-30 14:31:35
ATP	10,000	7	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 web interface with the URL https://dev292969.service-now.com/nav/uiclassic/params/target/sys_db_object.do?sys_id%3D847f63728370b2109e85a270cead317%26sysparm_record_target%3Dsys_db_object%26sysparm.... The page title is 'Table - Salesforce | Table | ServiceNow'. The left sidebar has 'Tables' under 'System Definition'. The main content area shows the 'Table - Salesforce' configuration with a context menu open over a table row. The menu includes 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, Reload form, Form Builder, Form Design, Form Layout, Related Lists, All, Table, Security Rules, Business Rules, Client Scripts, UI Policies, Data Policies, UI Actions, Notifications, and Dictionary.

Form Design

Admission [u_admission] Default view

Fields

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

Formatters

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

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

School Details

School Area School

Address

32°C Sunny

Search

ENG IN 02-11-2025 13:06

The screenshot shows the ServiceNow Form Design interface for a 'Student' object. The main area displays a form titled 'Admission [u_admission]' with a 'Default view'. On the left, there are two vertical tabs: 'Fields' and 'Formatters'. The 'Fields' tab lists several system fields: Admin Number, Class, Created, Created by, Updated, Updated by, and Updates. The 'Formatters' tab lists Activities (filtered), Contextual Search Results, Process Flow, and Ratings. The main form area contains sections for 'Process Flow(formatter)', 'Admission Number', 'Purpose of Join', 'Student Name', 'Father Name', 'Mother Name', 'Admin Status', 'Comments', 'School Details', and 'Address'. Each section has two input fields. At the bottom of the screen, there is a taskbar with icons for various applications like Microsoft Word, Excel, and Internet Explorer, along with a search bar and system status indicators.

Step 8

Write the script for the client

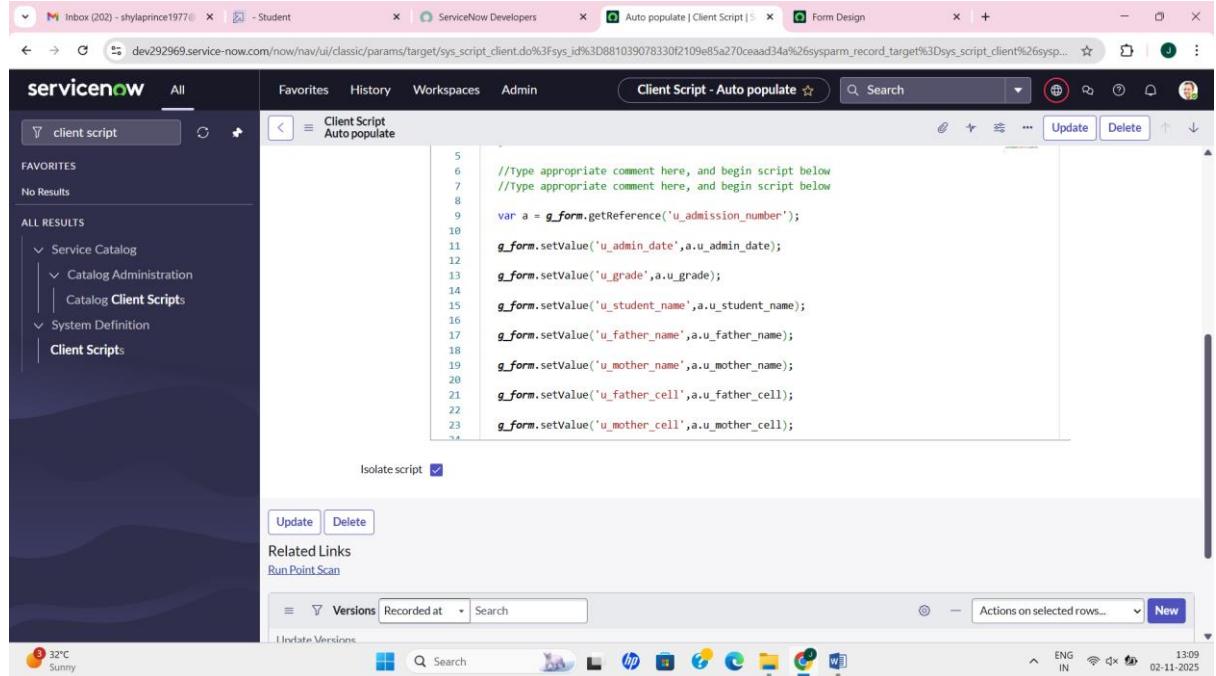
```
functiononChange(control, oldValue, newValue, isLoading,
isTemplate) {
    if (isLoading || newValue === "") {
        return;
    }

//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



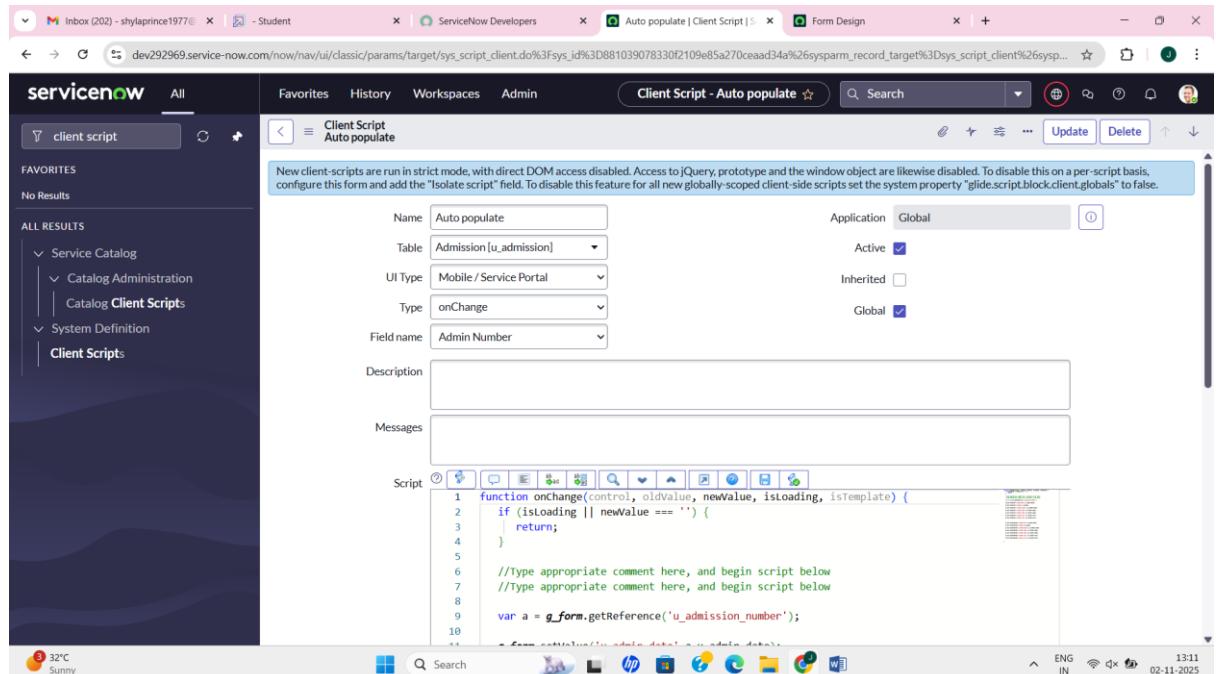
A screenshot of the ServiceNow Client Script - Auto populate page. The script is pasted into the code editor:

```
//Type appropriate comment here, and begin script below
//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);
```

Below the code editor, there is an "Isolate script" checkbox which is checked. At the bottom of the page, there are "Update" and "Delete" buttons.

Step 10

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



A screenshot of the Client Script - Auto populate configuration page. The configuration details are as follows:

- Name: Auto populate
- Table: Admission [u_admission]
- UI Type: Mobile / Service Portal
- Type: onChange
- Field name: Admin Number
- Application: Global
- Active: checked
- Inherited: unchecked
- Global: checked

The "Script" section contains the same client script as in Step 9:

```
function onChange(control, oldValue, newValue, isLoading, isTemplate) {
    if (isLoading || newValue === '') {
        return;
    }
    //Type appropriate comment here, and begin script below
    //Type appropriate comment here, and begin script below
    var a = g_form.getReference('u_admission_number');
```

Step 11

Create the disable fields for student progress table

The screenshot shows the ServiceNow interface for creating a client script. The left sidebar shows 'Client Scripts' under 'Catalog Client Scripts'. The main area is titled 'Client Script - Disable Fields' with a sub-section 'Disable Fields'. The script details are as follows:

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

The 'Script' section contains the following code:

```
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 12

Create result and percentage script for the student progress table

The screenshot shows the ServiceNow interface for creating a client script. The left sidebar shows 'Client Scripts' under 'Catalog Client Scripts'. The main area is titled 'Client Script - Result' with a sub-section 'Result'. The script details are as follows:

- Messages: (empty)
- Script:

The 'Script' section contains the following code:

```
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');
        }
    }
}
```

Step 13

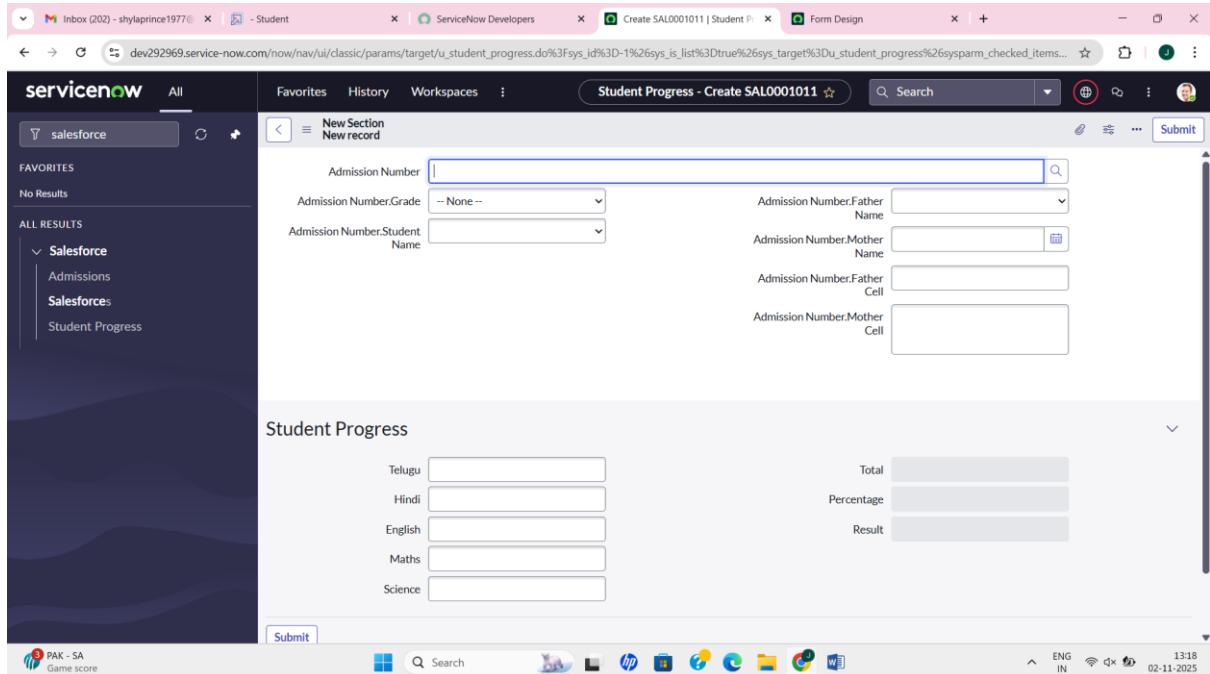
The testing and result verification can be output in the salesforce

This screenshot shows the ServiceNow Admissions module. The top navigation bar includes tabs for Favorites, History, Workspaces, Admin, and Admissions. The main content area is titled "Admission New record". The form contains fields for Process Flow(formatter), 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 tabs for Address and School Area, and another tab for School. A "Submit" button is located at the bottom left of the form. The left sidebar shows a search bar for "salesforce" and a list of results under "ALL RESULTS" including "Salesforce", "Admissions", "Salesforces", and "Student Progress". The bottom status bar shows system information like ENG IN, 13:16, and 02-11-2025.

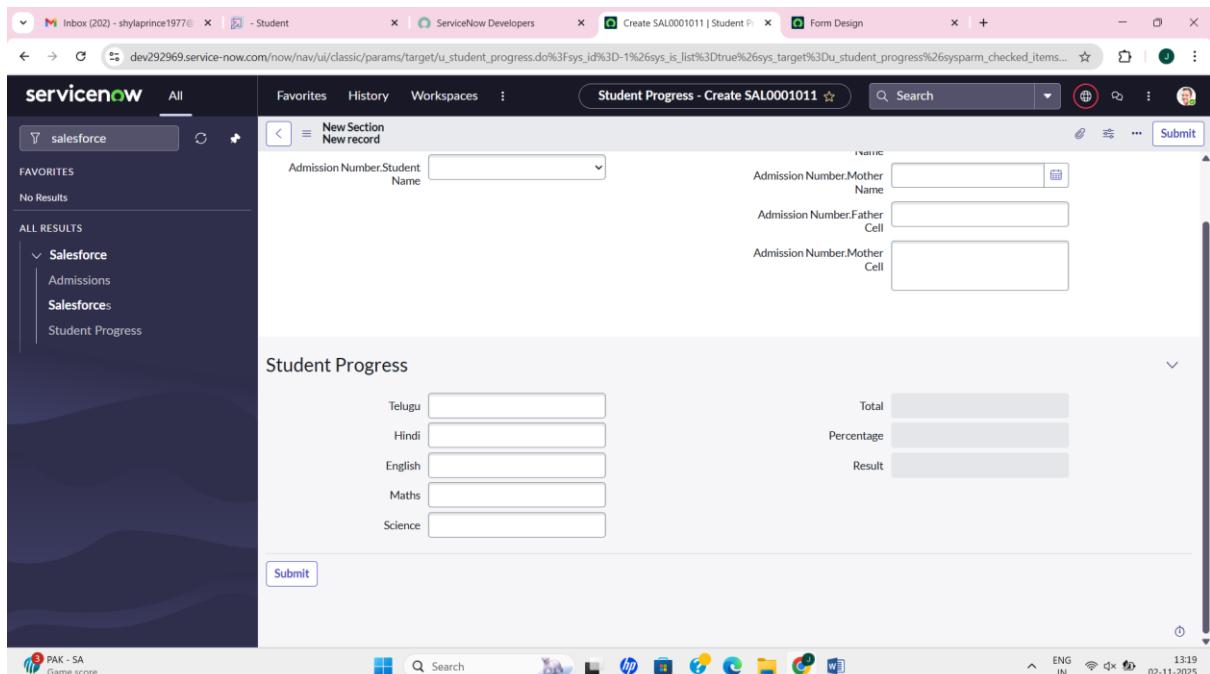
Admission:

This screenshot shows the ServiceNow Admissions module. The top navigation bar includes tabs for Favorites, History, Workspaces, Admin, and Admissions. The main content area is titled "Admission - Create SAL0001010". The form contains fields for Process Flow(formatter), 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 tabs for Address and School Area, and another tab for School. A "Submit" button is located at the bottom left of the form. The left sidebar shows a search bar for "salesforce" and a list of results under "ALL RESULTS" including "Salesforce", "Admissions", "Salesforces", and "Student Progress". The bottom status bar shows system information like ENG IN, 13:17, and 02-11-2025. The "Process Flow(formatter)" field is highlighted with a blue border.

Student Progress:



The screenshot shows a ServiceNow interface for creating a student progress record. The title bar says "Student Progress - Create SAL0001011". The left sidebar has a "Salesforce" section under "ALL RESULTS". The main form has fields for "Admission Number" (with dropdowns for "Grade" and "Student Name"), and "Admission Number" details for Father and Mother (Name and Cell). Below this is a "Student Progress" section with input fields for Telugu, Hindi, English, Maths, and Science, along with Total, Percentage, and Result summary fields. A "Submit" button is at the bottom.



This screenshot is identical to the one above, showing the "Student Progress - Create SAL0001011" form. The only difference is the status bar at the bottom, which now shows "PAK - SA Game score" instead of "PAK - SA".

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.