Educational Organization Using Servicenow

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1. Executive Summary:

Educational institutions handle a wide variety of administrative and operational requests — admissions, student records, faculty data, maintenance requests, exam queries, library requests, hostel support, transport, etc. These are often managed manually (spreadsheets, emails, paper forms), causing latency, data inconsistency, and lack of visibility.

This project builds an Educational Management & Support System on the ServiceNow platform to centralize requests, automate routing and approvals, enforce role-based access, and enable tracking and reporting. The solution uses ServiceNow tables, forms, Flow Designer, client scripts, and update sets to deliver a robust, low-code automation for campus operations.

2. Problem Statement:

Educational institutions process hundreds of ad-hoc requests from students, faculty and staff daily. Current problems include:

- **Manual and fragmented workflows:** Requests are submitted via emails, physical forms, or disparate systems that do not talk to each other.

- **Delays and misrouting:** Requests are manually reviewed and forwarded which causes delays and sometimes gets assigned to wrong departments.
- **Lack of auditability and tracking:** Students and staff cannot easily track status; administrators lack a unified view for KPIs.
- **Data inconsistency:** Multiple copies of the same data (spreadsheets, local databases) lead to versioning issues and errors.
- **Resource inefficiencies:** Repetitive manual work leads to wasted staff hours and slower resolution times.

3.Goal:

Design and implement a ServiceNow-based solution to centralize request intake, automate routing and assignment, provide status visibility to requesters and teams, and enable administrators to monitor KPIs and audit trails — improving turnaround time, accuracy, and transparency.

4. Project Objectives:

- **Specific**: Build a ServiceNow application that supports centralized request submission (students/staff), auto-assignment to departmental support groups, and status tracking.
- **Measurable:** Reduce average request resolution time by X% (baseline to be measured). Provide dashboards with request counts by status, department, and SLA breaches.
- **Achievable:** Use ServiceNow Developer Instance, Flow Designer, and standard tables / client scripts.
- **Relevant:** Addresses operational inefficiencies for campus support processes.
- **Time-bound:** Core functionality delivered and tested within 9 working days (example timeline below).

5. Scope & Boundaries

In-Scope

- Create custom tables: Students, Staff, Requests (Campus Support Requests), Courses (optional).
- Build forms for request submission, admission, faculty record updates.
- Automate routing: Map request categories to Support Groups (IT, Library, Examination, Hostel, Transport).
- Use Flow Designer to auto-assign and notify groups/users.
- Configure number maintenance for unique ticket IDs.
- Implement client-side validations (client scripts).
- Provide basic dashboards / list views and reporting.
- Produce documentation and a demo video.

Out-of-Scope

- Complex integrations with external systems (e.g., ERP, LMS) — can be planned later.
- Advanced ML-based classification for automatic categorization.
- Full production deployment and multi-tenant features.

6. Deliverables

- ServiceNow Developer Instance configuration (update set).
- Custom Tables and Forms (Students, Staff, Campus Support Requests).
- Flow Designer workflows for auto-assignment and notifications.
- Client Scripts for validation and client-side behavior.
- umber Maintenance rules for unique IDs.
- List views & simple dashboards for administrators.
- Test cases and test report.
- Project documentation (this document, README, phase-wise docs).
- Demo video hosted on Google Drive (public link) and GitHub repository with documents.

7. Task Initiation

- Set up a ServiceNow Developer Instance.
- Create an Update Set for tracking custom changes.
- Design and create tables for managing students, teachers, and admissions.

- Customize form layouts and design for data entry.
- Configure number maintenance for record management.
- Implement workflow automation using Process Flow and Flow Designer.
- Write Client Scripts for field validation and automation.
- Test the functionality to ensure efficiency and accuracy.
- Document all phases of the project and record a demo video for submission.

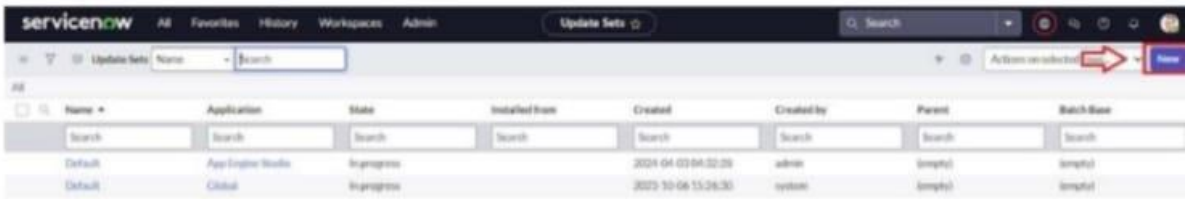
Milestone 1: Users

Activity 1: Create Users

Creating a Update Set :

1. Click on All >> Local update sets .

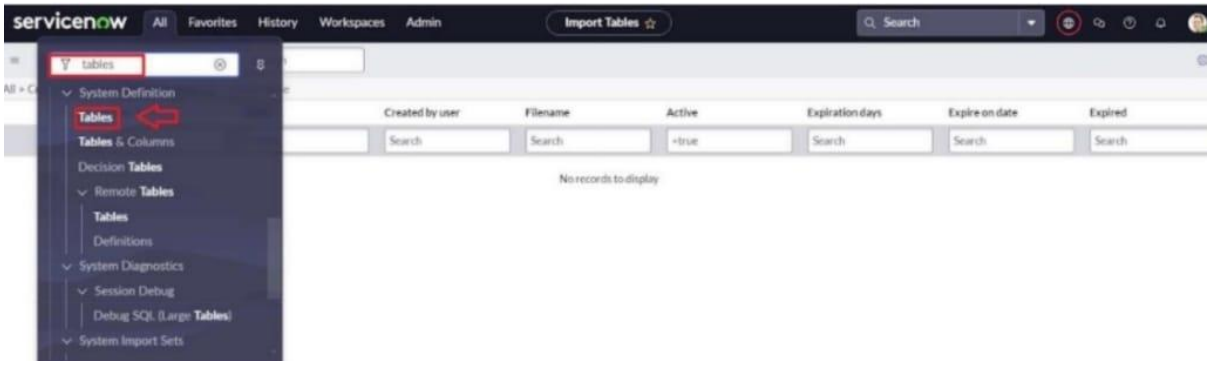
2. Click on new.



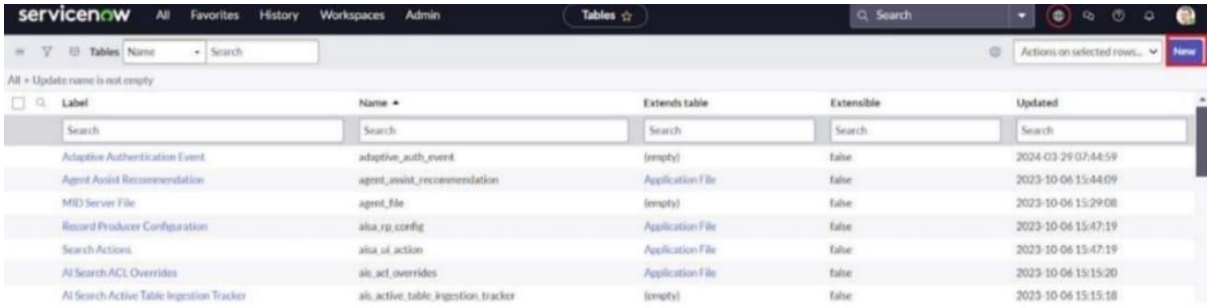
3.Enter the Details Name: Educational Organisation >> Click on Submit and mark Current.

Creating Salesforce Table :

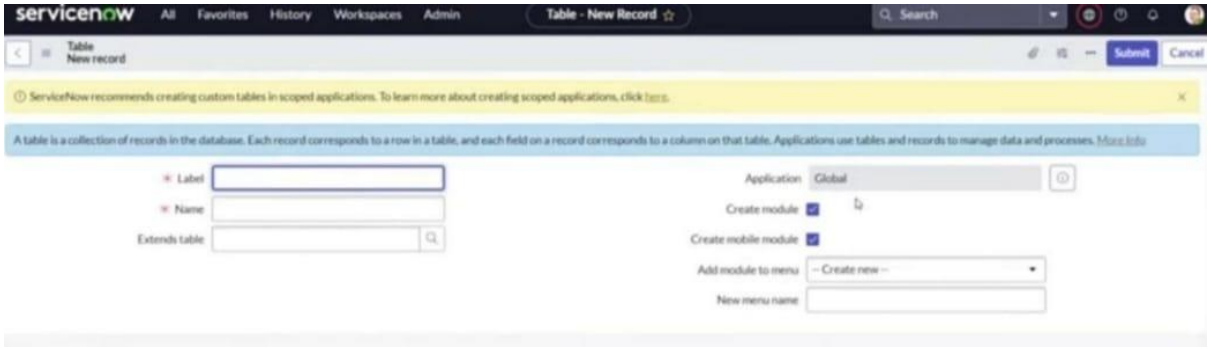
- All >> Tables.



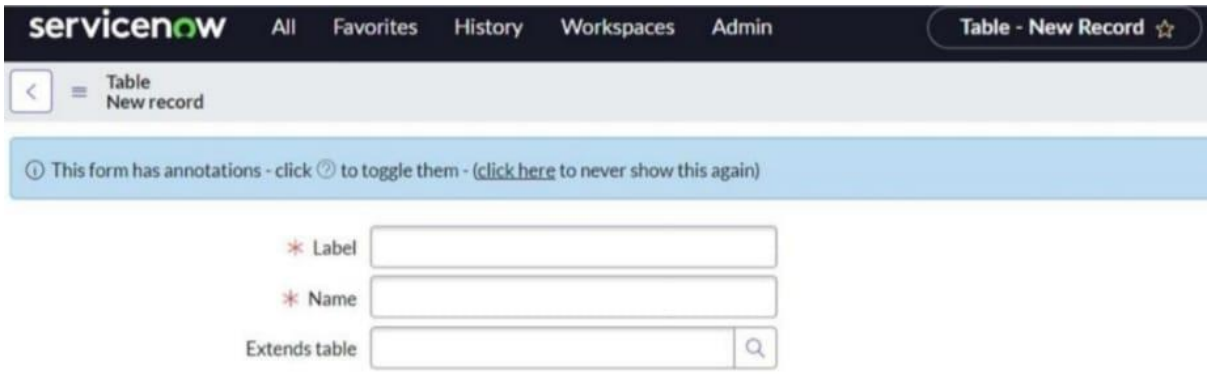
- Click on new .

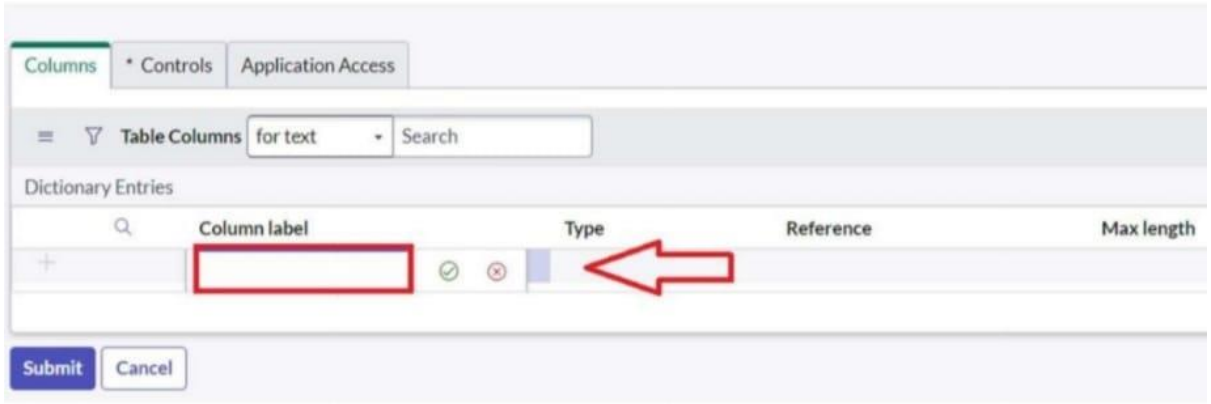


- Enter the Label(Anything you want): Salesforce >> Click on Name it will Automatically generate Api name.

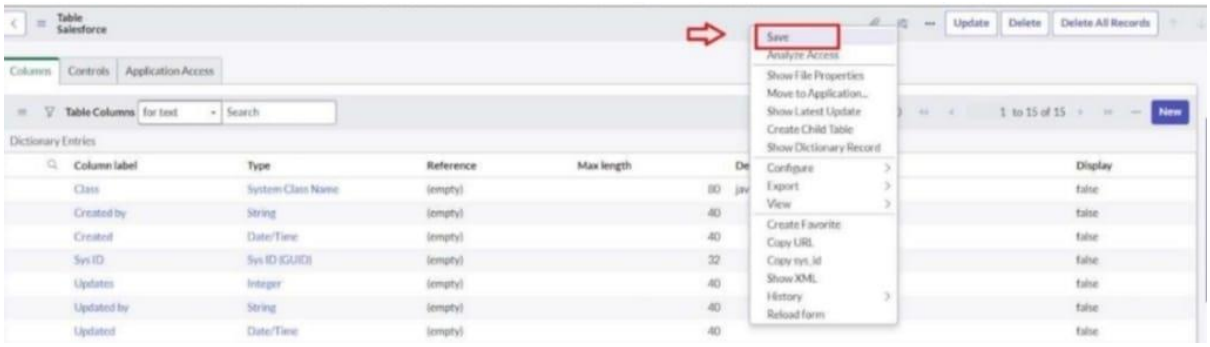


• Create columns as given below, Double Click on Column label and Enter the Column labels and click on the tick mark >> Give Type as given .





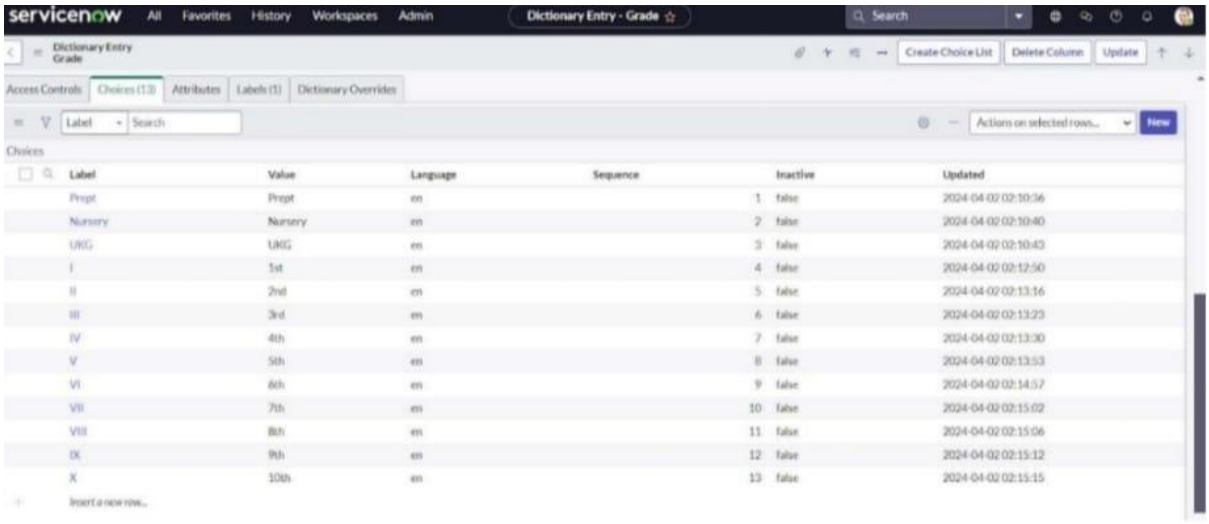
• For “Admin Number” Give Display as True and right click on the toggle bar on top >> save.



• Click on controls >> Enable Extensible.

• 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 .

• Click on “Grade” Column >> Click on Choices and give Label, Value and Sequence as given below.

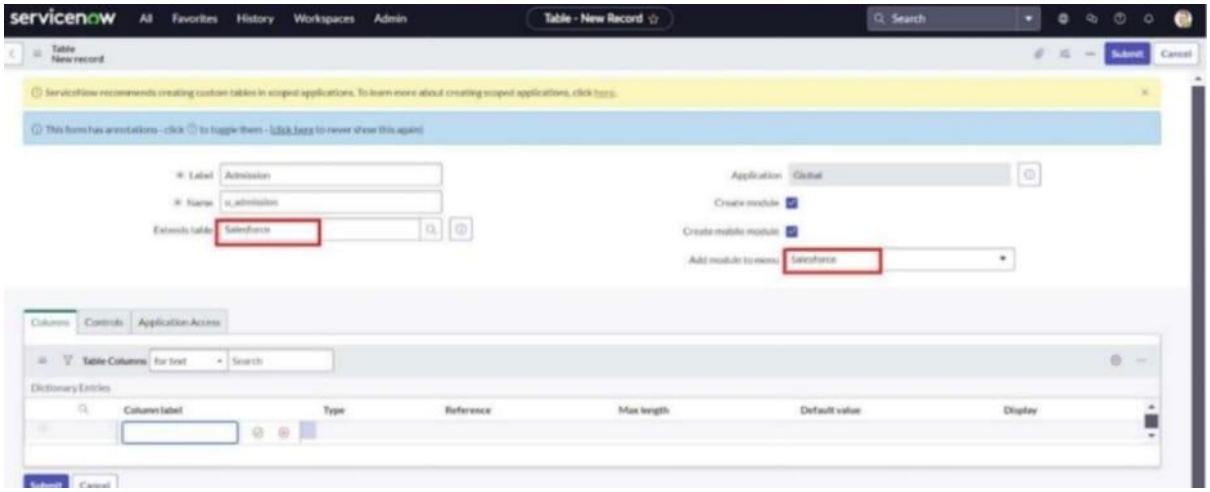


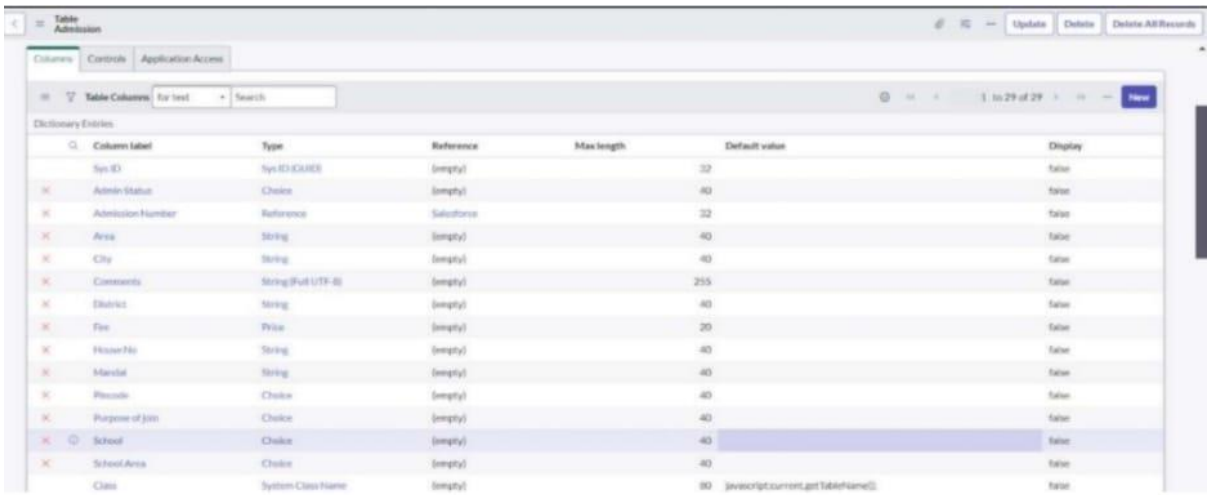
Creating Admission Table :

• Create an Admission Table with Columns given.

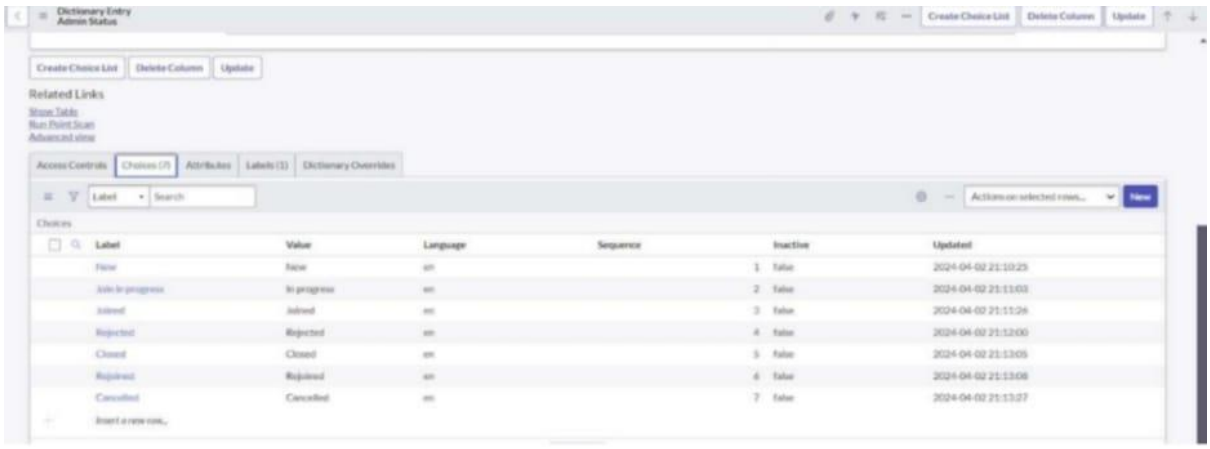
• Select Extends Table >> Salesforce and also Select Add module to menu >> Salesforce.

• 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:

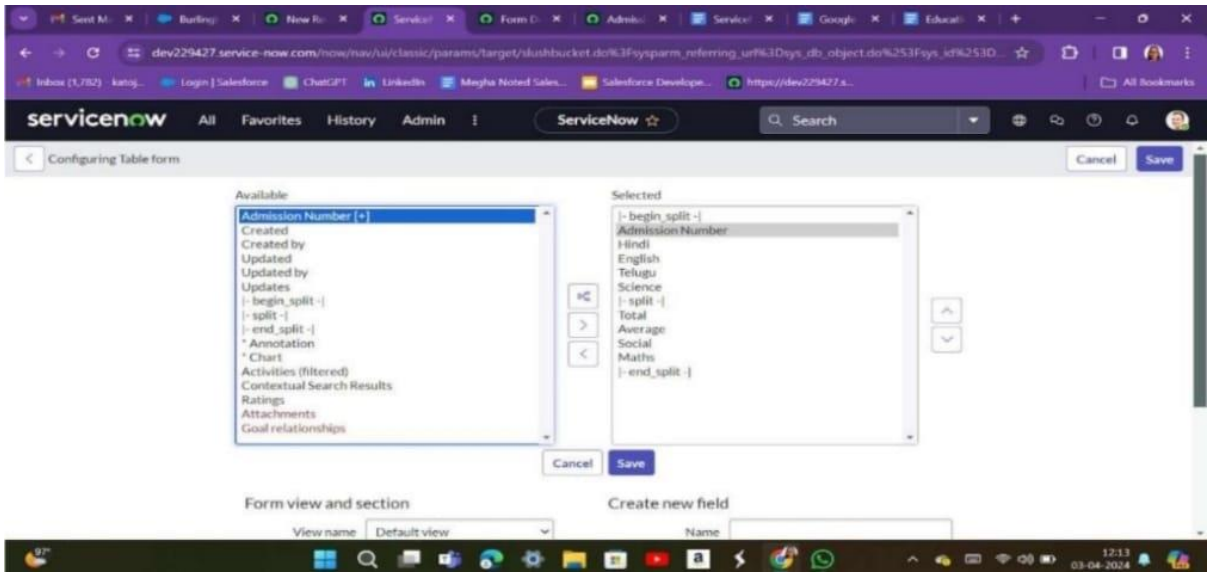
Creating Student Progress Table :

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

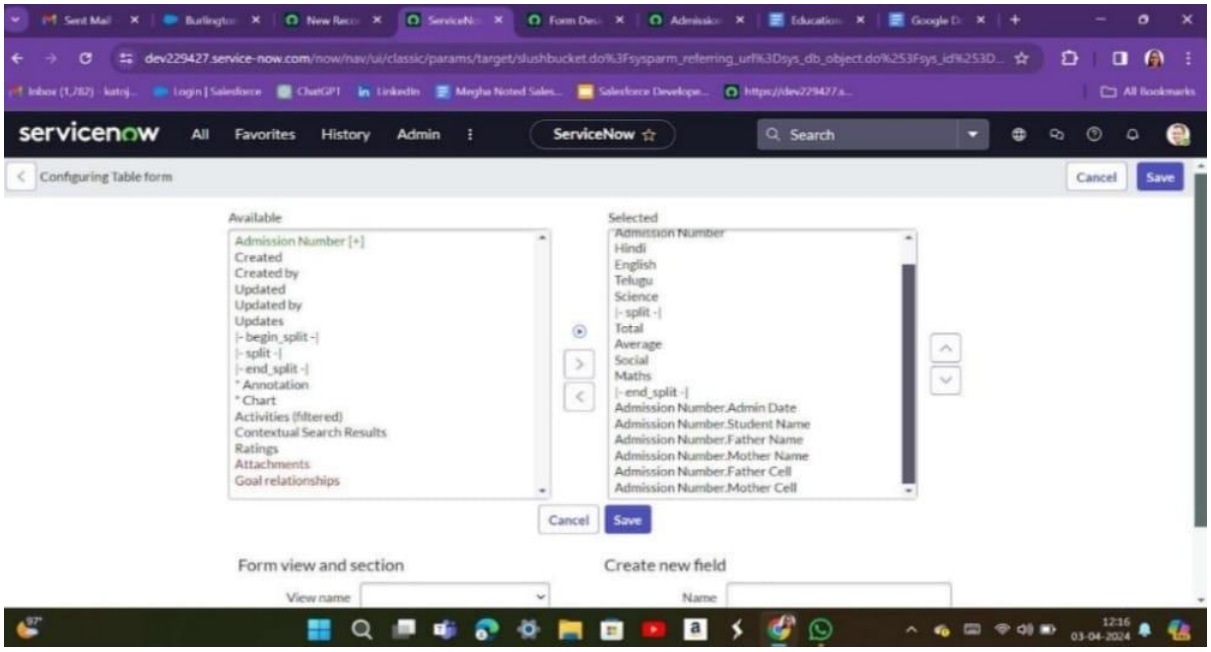
Configuring Table form for Student Progress Table :

• In the Student Progress Table Page , Click on Layout form .

• Click on Admission Number [+] .

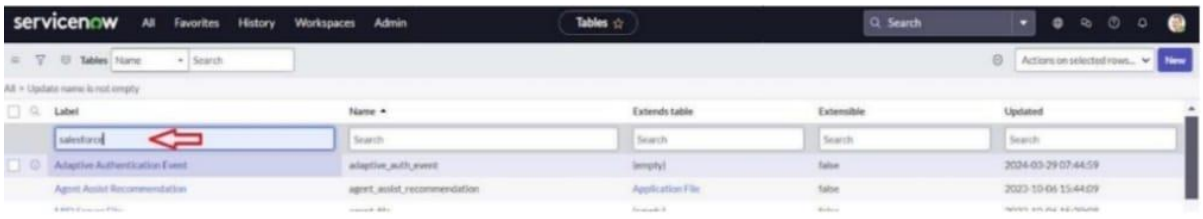


• Select below Admission Number fields in Available side and send it to selected side as below >> save.

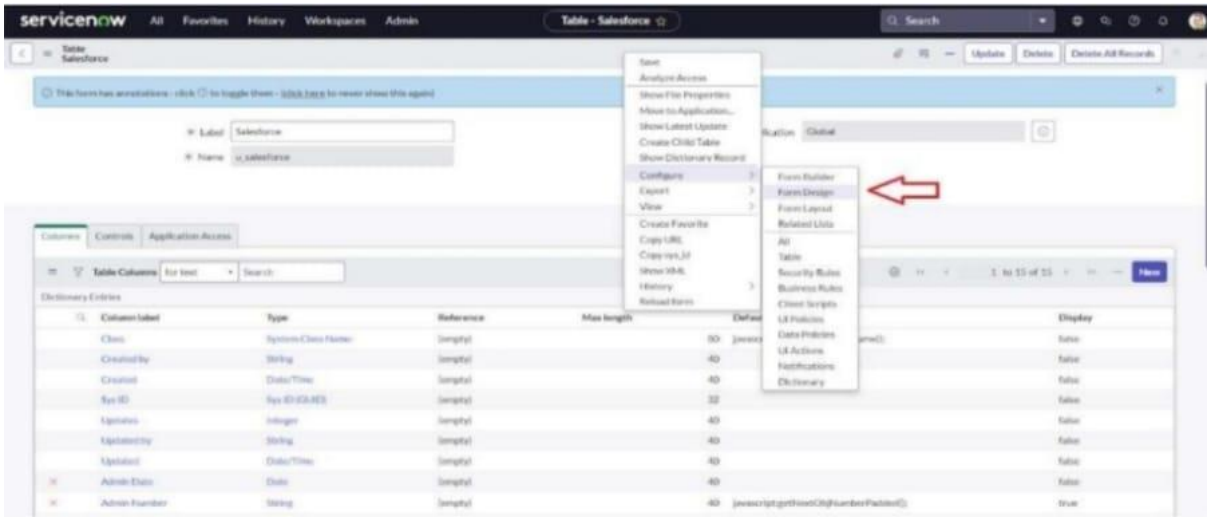


Creating Form Design for Salesforce Table :

1. All >> System Definition >> Tables .
2. In Label Search for Salesforce and open .



3. Right Click on top Toggle >> Configure >> Form Design.



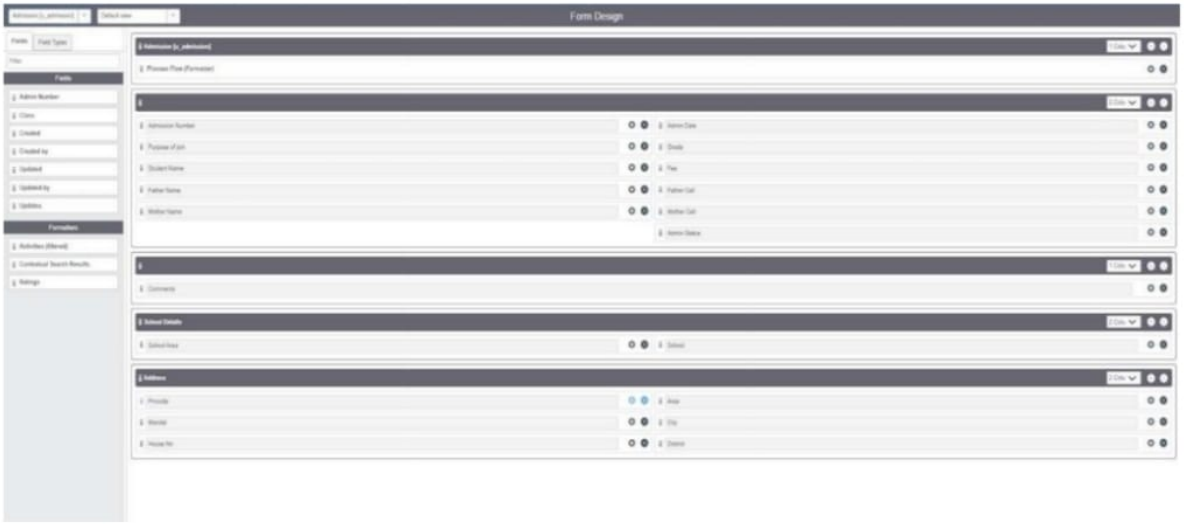
4. In drop down select Salesforce(u_salesforce).

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

6.Save.

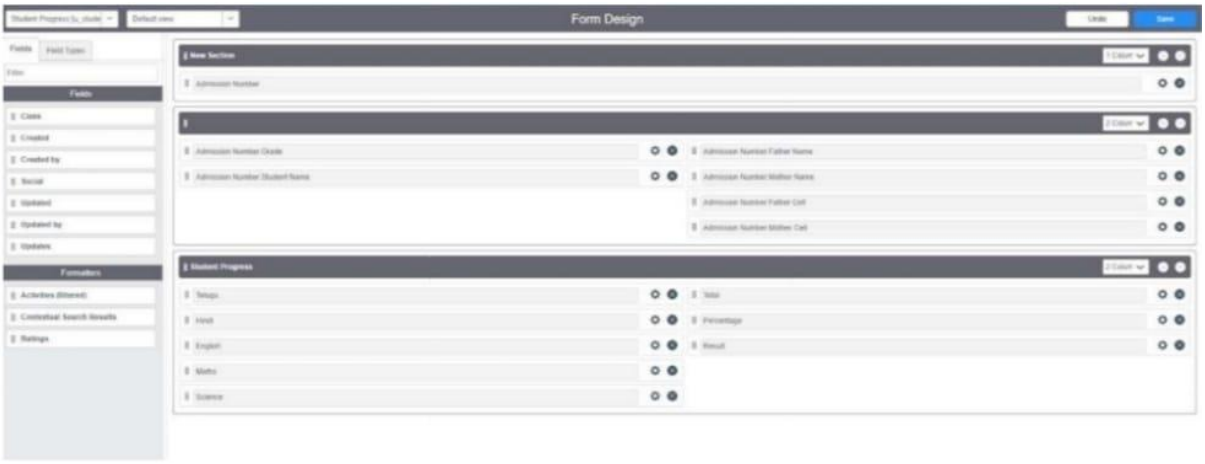
Creating Form Design for Admission Table :

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



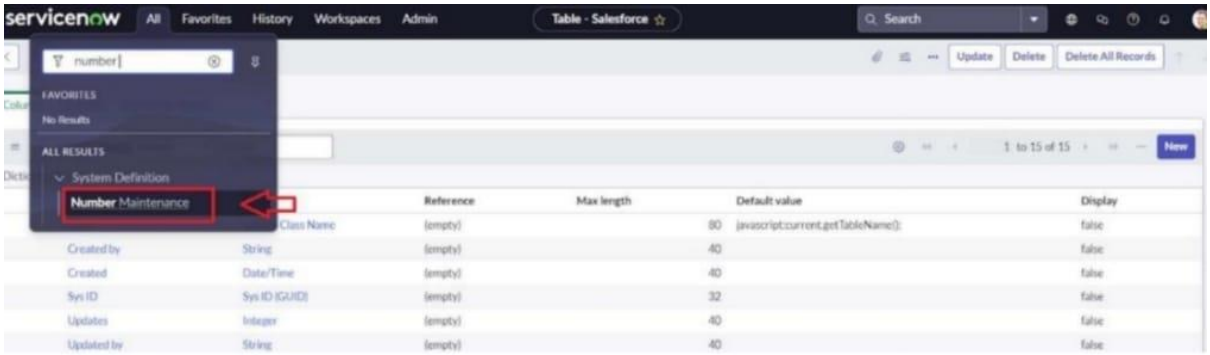
Creating Form Design for Admission Table :

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

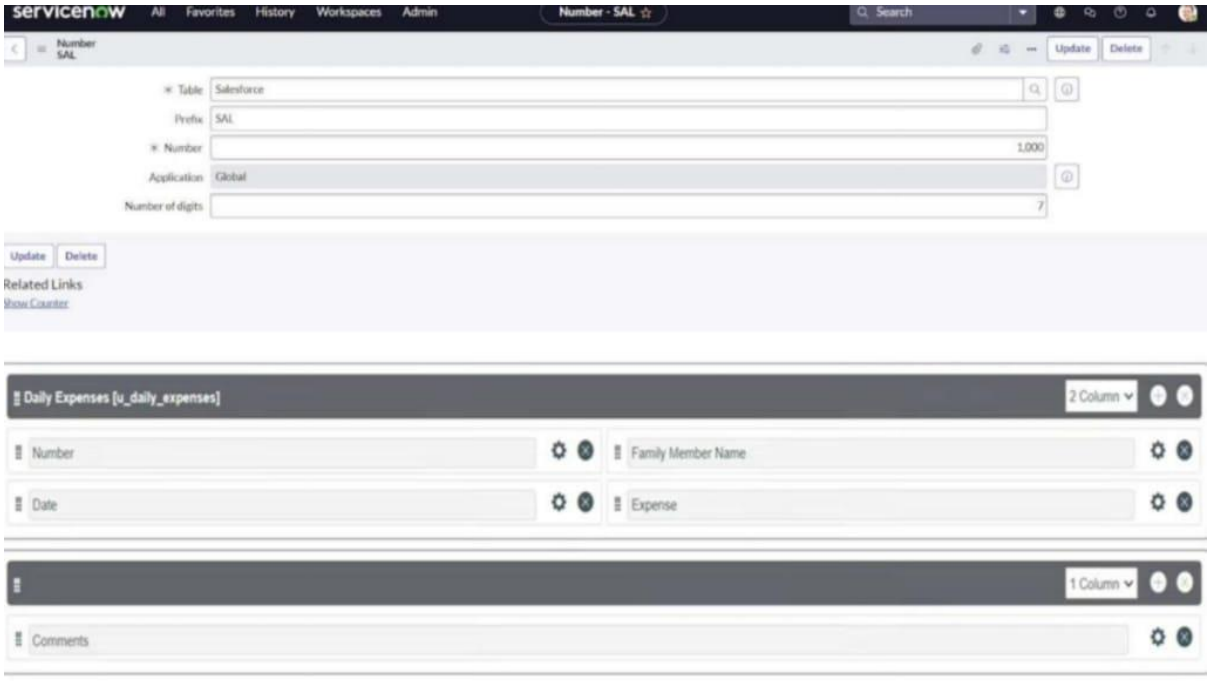


Creating Number Maintenance for Admin Number :

- All >> Number Maintenance >> New



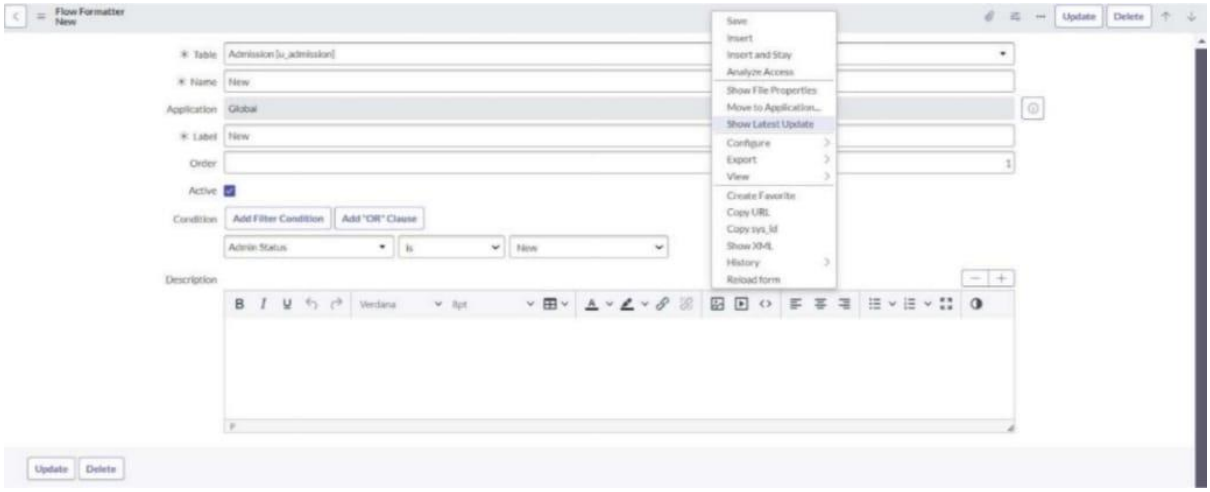
- Fill the details >> Submit.



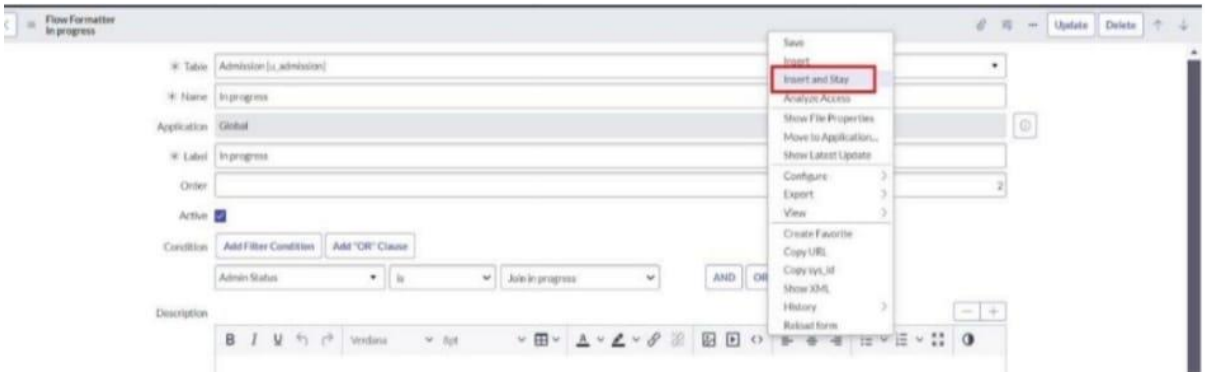
Creating Process Flow for Admission Table :

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.



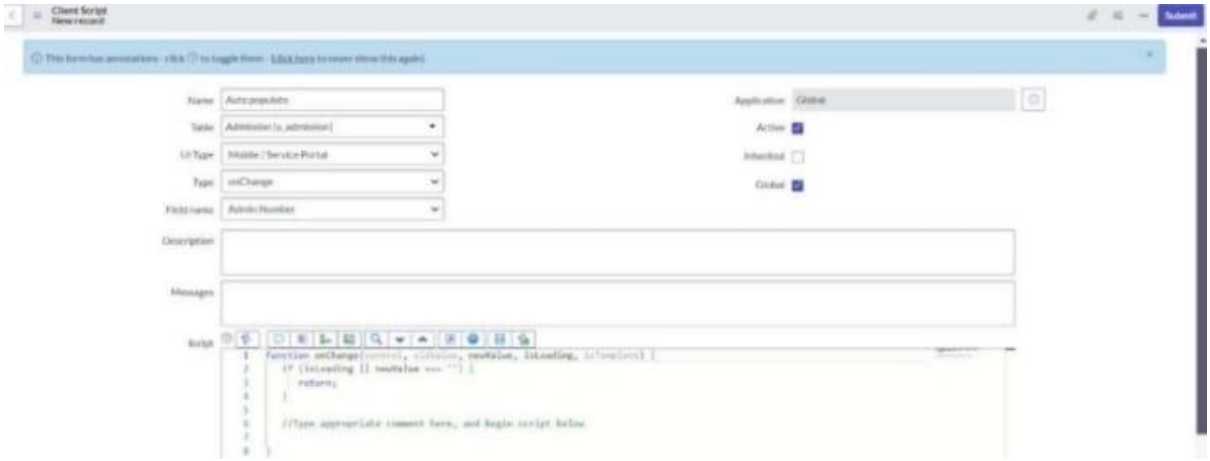
- Replace the Name and Label in order and click on Insert on stay.

Joined >> Rejected >> Rejoined >> Closed >> Cancelled.

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

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.

```
4. function onChange(control, oldValue, newValue, isLoading, isTemplate) {
5.          if (isLoading || newValue === '') {
6.          return;
7.          }
8.           //Type appropriate comment here, and begin script below
9.         var a =
10.          g_form.getReference('u_admission_number');
11.          g_form.setValue('u_admin_date',a.u_admin_date);
12.          g_form.setValue('u_grade',a.u_grade);
13.          g_form.setValue('u_student_name',a.u_student_na me);
14.          g_form.setValue('u_father_name',a.u_father_name);
15.          g_form.setValue('u_mother_name',a.u_mother_na me);
16.           g_form.setValue('u_father_cell',a.u_father_cell);
17.          g_form.setValue('u_mother_cell',a.u_mother_cell);
18.         g_form.setDisabled('u_admin_date',a.u_admin_da te);
19.          g_form.setDisabled('u_grade',a.u_grade);
20.         g_form.setDisabled('u_student_name',a.u_student _name);
21.          g_form.setDisabled('u_father_name',a.u_father_n ame);
```

22. g_form.setDisabled('u_mother_name',a.u_mother _name);

23. g_form.setDisabled('u_father_cell',a.u_father_cell

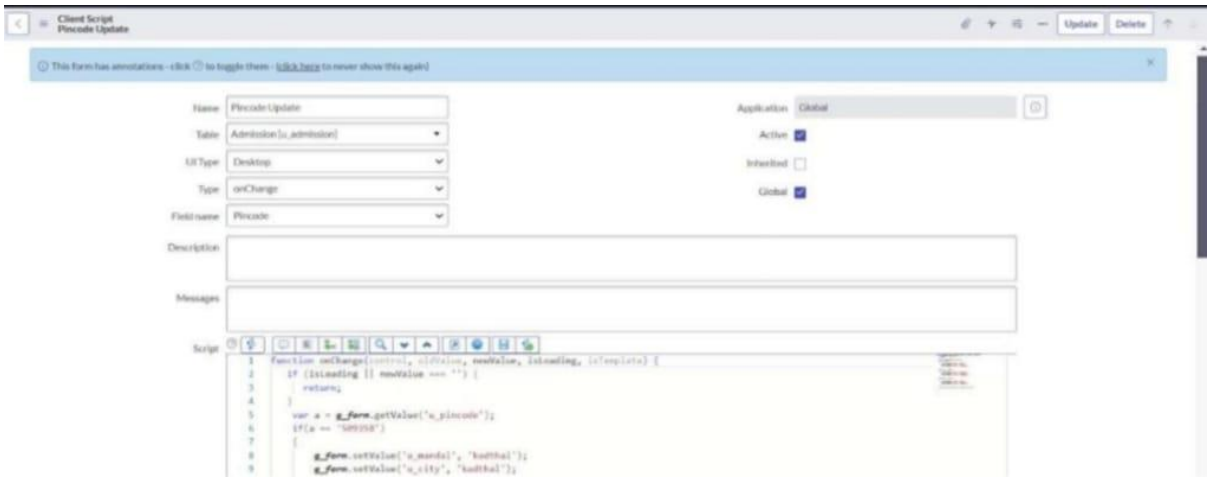
24. g_form.setDisabled('u_mother_cell',a.u_mother_c ell);

25. }

26. Note: Make sure the Field names should be the same as you created.

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');

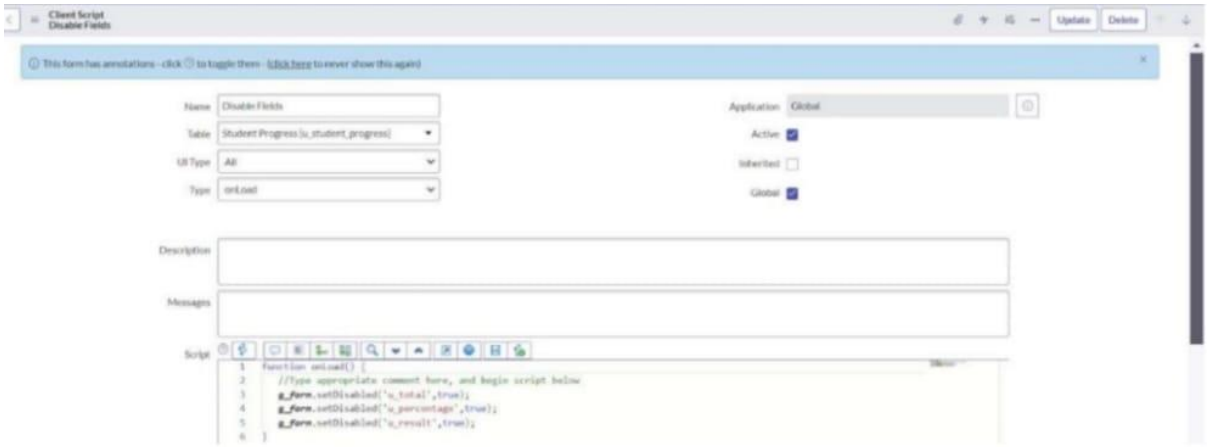
}

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
 }
```

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()

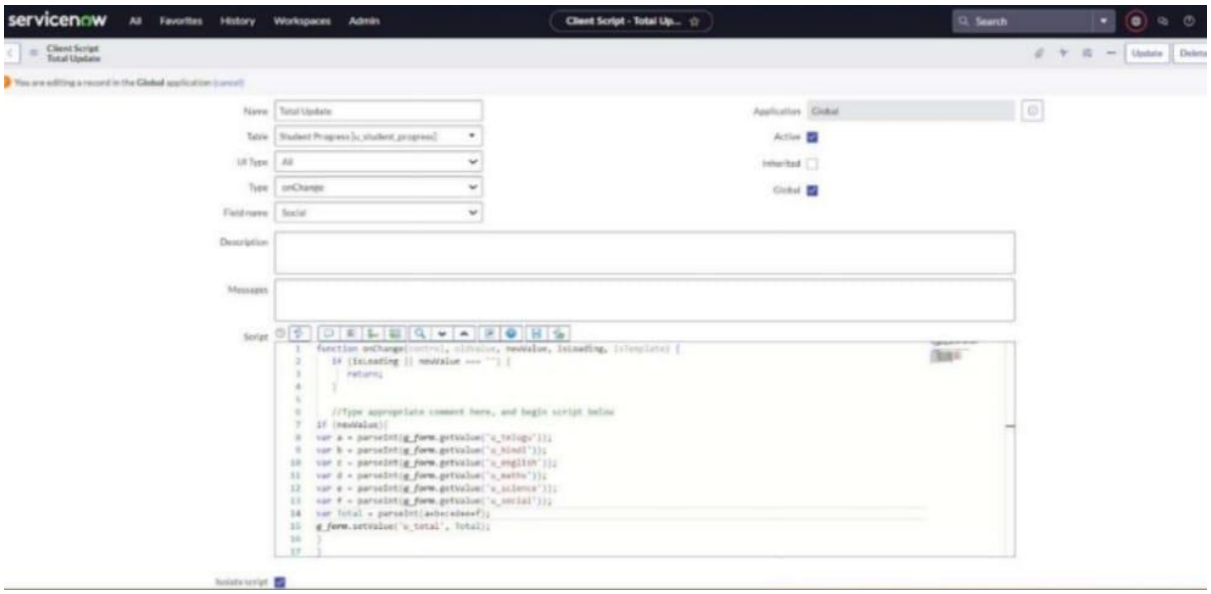
```
{
        //Type appropriate comment here, and begin script below
 g_form.setDisabled('u_total',true);
 g_form.setDisabled('u_percentage',true);
```

g_form.setDisabled('u_result',true);

}

Creating “Total Update” 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

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);

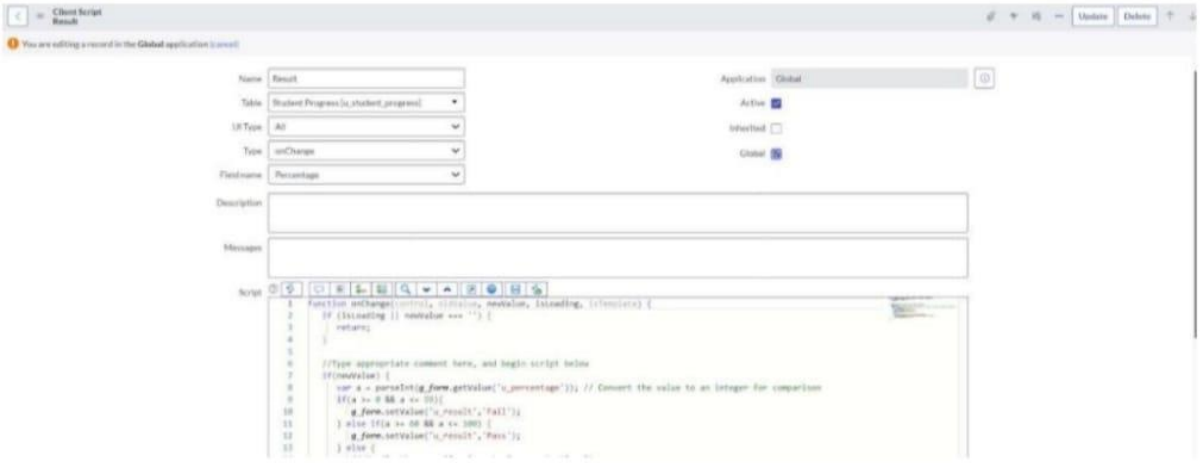
g_form.setValue('u_total', Total);

}

}

Creating “Result” Client Scripts for Student progress Table

- Fill the Details as given.



- 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');

}

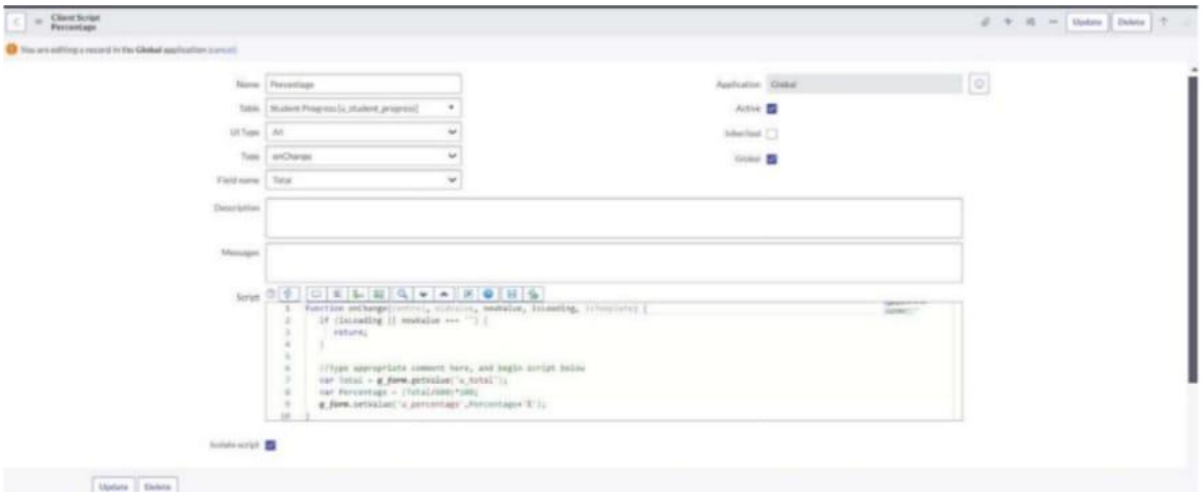
else if(a >= 60 && a <= 100) {

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.



- 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+'%');
}
```

8. Requirement Analysis

Functional Requirements

- **Submit Request**: Authorized users (students/staff) must be able to submit support requests using a form with category, description, and attachments.
- **Auto Assignment**: The system should auto-assign incoming requests to pre-defined support groups based on category.
- **Notifications**: Send email notifications to the assigned group and to the requester at each milestone (created, assigned, in-progress, resolved).
- **Tracking & Audit**: Every request should preserve a history of actions (audit log) and allow status tracking.
- **Role-based Access**: Admins can update records; support users can view assigned requests only.
- **Reporting**: Provide list views and simple reports/dashboards for admin to monitor request status, SLA breaches, and volume.

Non-functional Requirements

- **Performance**: Each create/update action should complete within acceptable response time (e.g., < 3 seconds under test load).
- **Scalability**: Designed so additional categories and groups can be added without rework.
- **Security**: Role-based access control, data visibility limited by user role.
- **Usability**: Forms should be mobile-friendly and intuitive.

9. Test Plan

Test Types

- Unit Tests: Validate client scripts and business rules logic.
- Integration Tests: Flow Designer actions & email notifications.
- System Tests: End-to-end scenario testing across modules.

- Acceptance Tests: Final validation with mentor / stakeholder.

Example Test Cases

ID	TITLE	STEPS	EXPECTED RESULT
TC-01	Create Student Record	Create student with all mandatory fields	Student saved with unique student_id
TC-02	Submit Support Request (IT)	Login as student; submit request category = IT	Request created; assigned_group = IT Support; notification sent
TC-03	Auto-assignment Logic	Submit multiple requests for same category	Requests assigned to group per assignment rule (round robin / lead)
TC-04	Client Validation	Submit form leaving mandatory field blank	Client validation prevents submission and shows message
TC-05	Role-based Access	Login as non-admin user and attempt to edit another user's request	Permission denied / read-only
TC-06	Notification Content	Trigger assignment	Email contains request_id, short description, link to record

10. Acceptance Criteria

- All critical test cases (TC-01 to TC-06) must pass.
- No critical defects outstanding.
- Demo video successfully demonstrates E2E flow and notifications.

- Documentation uploaded to GitHub and Update Set exported for reviewer.

11. Security & Privacy Considerations

- Avoid storing sensitive personal data unnecessarily.
- Use ServiceNow roles to restrict access to student contact details.
- If real personal data is used for demo, anonymize or use sample records.

12. Maintenance & Future Enhancements

- Integrate with student information system (SIS) for auto-populating student data.
- Add SLA timers and escalations.
- Add analytics dashboards and KPI tracking.
- Implement a knowledge base / FAQ for self-service.
- Add role-based mobile app views.

13. Expected Outcome

- A fully functional ServiceNow-based Educational Management System.
- Automated workflows for admissions and student management.
- Improved data accuracy and simplified administrative operations.

14. Conclusion

The Educational Organisation Using ServiceNow project successfully automated key academic and administrative processes within an institution. By using ServiceNow tools like tables, forms, and Flow Designer, the system improved efficiency, reduced manual work, and ensured accurate data management.

This project proved that cloud-based workflow automation can simplify institutional operations and enhance productivity. It provides a strong base for future upgrades like analytics dashboards and AI-based automation, promoting a smarter and more efficient educational environment.