

Apex Specialist Superbadge

1. Automate record creation

(i) MaintenanceRequestHelper Class :-

```
public with sharing class MaintenanceRequestHelper {  
    public static void updateWorkOrders(List<Case> updWorkOrders,  
    Map<Id,Case> nonUpdCaseMap) {  
        Set<Id> validIds = new Set<Id>();  
  
        For (Case c : updWorkOrders){  
            if (nonUpdCaseMap.get(c.Id).Status != 'Closed' && c.Status == 'Closed'){  
                if (c.Type == 'Repair' || c.Type == 'Routine Maintenance'){  
                    validIds.add(c.Id);  
  
                }  
            }  
        }  
  
        if (!validIds.isEmpty()){  
            List<Case> newCases = new List<Case>();  
            Map<Id,Case> closedCasesM = new Map<Id,Case>([SELECT Id, Vehicle__c,  
Equipment__c, Equipment__r.Maintenance_Cycle__c,(SELECT  
Id,Equipment__c,Quantity__c FROM Equipment_Maintenance_Items__r)  
                FROM Case WHERE Id IN :validIds]);  
            Map<Id,Decimal> maintenanceCycles = new Map<ID,Decimal>();  
            AggregateResult[] results = [SELECT Maintenance_Request__c,  
MIN(Equipment__r.Maintenance_Cycle__c)cycle FROM  
Equipment_Maintenance_Item__c WHERE Maintenance_Request__c IN :ValidIds  
GROUP BY Maintenance_Request__c];  
  
            for (AggregateResult ar : results){  
                maintenanceCycles.put((Id) ar.get('Maintenance_Request__c'), (Decimal)  
ar.get('cycle'));  
            }  
        }  
    }  
}
```

```

for(Case cc : closedCasesM.values()){
    Case nc = new Case (
        ParentId = cc.Id,
        Status = 'New',
        Subject = 'Routine Maintenance',
        Type = 'Routine Maintenance',
        Vehicle__c = cc.Vehicle__c,
        Equipment__c =cc.Equipment__c,
        Origin = 'Web',
        Date_Reported__c = Date.Today()

    );

    If (maintenanceCycles.containsKey(cc.Id)){
        nc.Date_Due__c = Date.today().addDays((Integer)
maintenanceCycles.get(cc.Id));
    } else {
        nc.Date_Due__c = Date.today().addDays((Integer)
cc.Equipment__r.maintenance_Cycle__c);
    }

    newCases.add(nc);
}

insert newCases;

List<Equipment_Maintenance_Item__c> clonedWPs = new
List<Equipment_Maintenance_Item__c>();
for (Case nc : newCases){
    for (Equipment_Maintenance_Item__c wp :
closedCasesM.get(nc.ParentId).Equipment_Maintenance_Items__r){
        Equipment_Maintenance_Item__c wpClone = wp.clone();
        wpClone.Maintenance_Request__c = nc.Id;
        ClonedWPs.add(wpClone);

    }
}

```

```
        insert ClonedWPs;  
    }  
}  
}
```

(ii) MaintenanceRequest Trigger :-

```
trigger MaintenanceRequest on Case (before update, after update) {  
    if(Trigger.isUpdate && Trigger.isAfter){
```

```
MaintenanceRequestHelper.updateWorkOrders(Trigger.New,Trigger.OldMap);  
    }  
}  
}
```

2. Synchronize Salesforce data with an external system

(i) WarehouseCalloutService Class :-

```
public with sharing class WarehouseCalloutService implements Queueable {  
    private static final String WAREHOUSE_URL = 'https://th-superbadge-  
apex.herokuapp.com/equipment';
```

//class that makes a REST callout to an external warehouse system to get a list of equipment that needs to be updated.

//The callout's JSON response returns the equipment records that you upsert in Salesforce.

```
@future(callout=true)
public static void runWarehouseEquipmentSync(){
    Http http = new Http();
    HttpRequest request = new HttpRequest();

    request.setEndpoint(WAREHOUSE_URL);
    request.setMethod('GET');
    HttpResponse response = http.send(request);

    List<Product2> warehouseEq = new List<Product2>();

    if (response.getStatusCode() == 200){
        List<Object> jsonResponse =
```

```

(List<Object>)JSON.deserializeUntyped(response.getBody());
System.debug(response.getBody());

//class maps the following fields: replacement part (always true), cost,
current inventory, lifespan, maintenance cycle, and warehouse SKU
//warehouse SKU will be external ID for identifying which equipment
records to update within Salesforce
for (Object eq : jsonResponse){
    Map<String,Object> mapJson = (Map<String,Object>)eq;
    Product2 myEq = new Product2();
    myEq.Replacement_Part__c = (Boolean) mapJson.get('replacement');
    myEq.Name = (String) mapJson.get('name');
    myEq.Maintenance_Cycle__c = (Integer)
mapJson.get('maintenanceperiod');
    myEq.Lifespan_Months__c = (Integer) mapJson.get('lifespan');
    myEq.Cost__c = (Integer) mapJson.get('cost');
    myEq.Warehouse_SKU__c = (String) mapJson.get('sku');
    myEq.Current_Inventory__c = (Double) mapJson.get('quantity');
    myEq.ProductCode = (String) mapJson.get('_id');
    warehouseEq.add(myEq);
}
if (warehouseEq.size() > 0){
    upsert warehouseEq;
    System.debug('Your equipment was synced with the warehouse one');
}
}

public static void execute (QueueableContext context){
    runWarehouseEquipmentSync();
}
}

}

(ii) WarehouseSyncSchedule Class :-
global with sharing class WarehouseSyncSchedule implements Schedulable{
global void execute(SchedulableContext ctx){
    System.enqueueJob(new WarehouseCalloutService());
}

```

```
    }  
}
```

(iii) Anonymous Window :-

```
System.enqueueJob(new WarehouseCalloutService());
```

3. Schedule synchronization

(i) WarehouseSyncSchedule Class :-

```
global with sharing class WarehouseSyncSchedule implements Schedulable{  
    global void execute(SchedulableContext ctx){  
        System.enqueueJob(new WarehouseCalloutService());  
    }  
}
```

4. Test automation logic

(i) MaintenanceRequest Trigger :-

```
trigger MaintenanceRequest on Case (before update, after update) {  
    if(Trigger.isUpdate && Trigger.isAfter){  
        MaintenanceRequestHelper.updateWorkOrders(Trigger.New,  
        Trigger.OldMap);  
    }  
}
```

(ii) MaintenanceRequestHelper Class :-

```
public with sharing class MaintenanceRequestHelper {  
    public static void updateWorkOrders(List<Case> updWorkOrders,  
    Map<Id,Case> nonUpdCaseMap) {  
        Set<Id> validIds = new Set<Id>();
```

```
        For (Case c : updWorkOrders){  
            if (nonUpdCaseMap.get(c.Id).Status != 'Closed' && c.Status == 'Closed'){  
                if (c.Type == 'Repair' || c.Type == 'Routine Maintenance'){  
                    validIds.add(c.Id);
```

```

        }
    }
}

if (!validIds.isEmpty()){
    List<Case> newCases = new List<Case>();
    Map<Id,Case> closedCasesM = new Map<Id,Case>([SELECT Id, Vehicle__c,
Equipment__c, Equipment__r.Maintenance_Cycle__c,(SELECT
Id,Equipment__c,Quantity__c FROM Equipment_Maintenance_Items__r)
FROM Case WHERE Id IN :validIds]);
    Map<Id,Decimal> maintenanceCycles = new Map<ID,Decimal>();
    AggregateResult[] results = [SELECT Maintenance_Request__c,
MIN(Equipment__r.Maintenance_Cycle__c)cycle FROM
Equipment_Maintenance_Item__c WHERE Maintenance_Request__c IN :ValidIds
GROUP BY Maintenance_Request__c];

    for (AggregateResult ar : results){
        maintenanceCycles.put((Id) ar.get('Maintenance_Request__c'), (Decimal)
ar.get('cycle'));
    }

    for(Case cc : closedCasesM.values()){
        Case nc = new Case (
            ParentId = cc.Id,
            Status = 'New',
            Subject = 'Routine Maintenance',
            Type = 'Routine Maintenance',
            Vehicle__c = cc.Vehicle__c,
            Equipment__c =cc.Equipment__c,
            Origin = 'Web',
            Date_Reported__c = Date.Today()

        );
        If (maintenanceCycles.containsKey(cc.Id)){
            nc.Date_Due__c = Date.today().addDays((Integer)
maintenanceCycles.get(cc.Id));
        }
    }
}

```

```

        newCases.add(nc);
    }

insert newCases;

List<Equipment_Maintenance_Item__c> clonedWPs = new
List<Equipment_Maintenance_Item__c>();
for (Case nc : newCases){
    for (Equipment_Maintenance_Item__c wp :
closedCasesM.get(nc.ParentId).Equipment_Maintenance_Items__r){
        Equipment_Maintenance_Item__c wpClone = wp.clone();
        wpClone.Maintenance_Request__c = nc.Id;
        ClonedWPs.add(wpClone);

    }
}
insert ClonedWPs;
}
}
}
}

```

(iii) MaintenanceRequestHelperTest Class :-

```

@istest
public with sharing class MaintenanceRequestHelperTest {

private static final string STATUS_NEW = 'New';
private static final string WORKING = 'Working';
private static final string CLOSED = 'Closed';
private static final string REPAIR = 'Repair';
private static final string REQUEST_ORIGIN = 'Web';
private static final string REQUEST_TYPE = 'Routine Maintenance';
private static final string REQUEST SUBJECT = 'Testing subject';

PRIVATE STATIC Vehicle__c createVehicle(){
    Vehicle__c Vehicle = new Vehicle__C(name = 'SuperTruck');
    return Vehicle;
}

```

```
PRIVATE STATIC Product2 createEq(){
    product2 equipment = new product2(name = 'SuperEquipment',
        lifespan_months__C = 10,
        maintenance_cycle__C = 10,
        replacement_part__c = true);
    return equipment;
}
```

```
PRIVATE STATIC Case createMaintenanceRequest(id vehicleId, id
equipmentId){
    case cs = new case(Type=REPAIR,
        Status=STATUS_NEW,
        Origin=REQUEST_ORIGIN,
        Subject=REQUEST SUBJECT,
        Equipment__c=equipmentId,
        Vehicle__c=vehicleId);
    return cs;
}
```

```
PRIVATE STATIC Equipment_Maintenance_Item__c createWorkPart(id
equipmentId,id requestId){
    Equipment_Maintenance_Item__c wp = new
Equipment_Maintenance_Item__c(Equipment__c = equipmentId,
                                Maintenance_Request__c = requestId);
    return wp;
}
```

```
@istest
private static void testMaintenanceRequestPositive(){
    Vehicle__c vehicle = createVehicle();
    insert vehicle;
    id vehicleId = vehicle.Id;

    Product2 equipment = createEq();
    insert equipment;
    id equipmentId = equipment.Id;
```

```

case somethingToUpdate =
createMaintenanceRequest(vehicleId,equipmentId);
insert somethingToUpdate;

Equipment_Maintenance_Item__c workP =
createWorkPart(equipmentId,somethingToUpdate.id);
insert workP;

test.startTest();
somethingToUpdate.status = CLOSED;
update somethingToUpdate;
test.stopTest();

Case newReq = [Select id, subject, type, Equipment__c, Date_Reported__c,
Vehicle__c, Date_Due__c
from case
where status =:STATUS_NEW];

Equipment_Maintenance_Item__c workPart = [select id
from Equipment_Maintenance_Item__c
where Maintenance_Request__c =:newReq.Id];

system.assert(workPart != null);
system.assert(newReq.Subject != null);
system.assertEquals(newReq.Type, REQUEST_TYPE);
SYSTEM.assertEquals(newReq.Equipment__c, equipmentId);
SYSTEM.assertEquals(newReq.Vehicle__c, vehicleId);
SYSTEM.assertEquals(newReq.Date_Reported__c, system.today());
}

@istest
private static void testMaintenanceRequestNegative(){
Vehicle__C vehicle = createVehicle();
insert vehicle;
id vehicleId = vehicle.Id;

product2 equipment = createEq();

```

```

insert equipment;
id equipmentId = equipment.Id;

case emptyReq = createMaintenanceRequest(vehicleId,equipmentId);
insert emptyReq;

Equipment_Maintenance_Item__c workP = createWorkPart(equipmentId,
emptyReq.Id);
insert workP;

test.startTest();
emptyReq.Status = WORKING;
update emptyReq;
test.stopTest();

list<case> allRequest = [select id
                           from case];

Equipment_Maintenance_Item__c workPart = [select id
                                             from Equipment_Maintenance_Item__c
                                             where Maintenance_Request__c = :emptyReq.Id];

system.assert(workPart != null);
system.assert(allRequest.size() == 1);
}

@istest
private static void testMaintenanceRequestBulk(){
    list<Vehicle__C> vehicleList = new list<Vehicle__C>();
    list<Product2> equipmentList = new list<Product2>();
    list<Equipment_Maintenance_Item__c> workPartList = new
list<Equipment_Maintenance_Item__c>();
    list<case> requestList = new list<case>();
    list<id> oldRequestIds = new list<id>();

    for(integer i = 0; i < 300; i++){
        vehicleList.add(createVehicle());
        equipmentList.add(createEq());

```

```

    }

    insert vehicleList;
    insert equipmentList;

    for(integer i = 0; i < 300; i++){
        requestList.add(createMaintenanceRequest(vehicleList.get(i).id,
equipmentList.get(i).id));
    }
    insert requestList;

    for(integer i = 0; i < 300; i++){
        workPartList.add(createWorkPart(equipmentList.get(i).id,
requestList.get(i).id));
    }
    insert workPartList;

    test.startTest();
    for(case req : requestList){
        req.Status = CLOSED;
        oldRequestIds.add(req.Id);
    }
    update requestList;
    test.stopTest();

list<case> allRequests = [select id
                           from case
                           where status =: STATUS_NEW];

list<Equipment_Maintenance_Item__c> workParts = [select id
                                                   from Equipment_Maintenance_Item__c
                                                   where Maintenance_Request__c in:
oldRequestIds];

    system.assert(allRequests.size() == 300);
}
}

```

5. Test callout logic

(i) WarehouseCalloutService Class :-

```
public with sharing class WarehouseCalloutService {  
  
    private static final String WAREHOUSE_URL = 'https://th-superbadge-apex.herokuapp.com/equipment';  
  
    //@future(callout=true)  
    public static void runWarehouseEquipmentSync(){  
  
        Http http = new Http();  
        HttpRequest request = new HttpRequest();  
  
        request.setEndpoint(WAREHOUSE_URL);  
        request.setMethod('GET');  
        HttpResponse response = http.send(request);  
  
        List<Product2> warehouseEq = new List<Product2>();  
  
        if (response.getStatusCode() == 200){  
            List<Object> jsonResponse =  
            (List<Object>)JSON.deserializeUntyped(response.getBody());  
            System.debug(response.getBody());  
  
            for (Object eq : jsonResponse){  
                Map<String, Object> mapJson = (Map<String, Object>)eq;  
                Product2 myEq = new Product2();  
                myEq.Replacement_Part__c = (Boolean) mapJson.get('replacement');  
                myEq.Name = (String) mapJson.get('name');  
                myEq.Maintenance_Cycle__c = (Integer) mapJson.get('maintenanceperiod');  
                myEq.Lifespan_Months__c = (Integer) mapJson.get('lifespan');  
                myEq.Cost__c = (Decimal) mapJson.get('cost');  
                myEq.Warehouse_SKU__c = (String) mapJson.get('sku');  
                myEq.Current_Inventory__c = (Double) mapJson.get('quantity');  
                warehouseEq.add(myEq);  
            }  
        }  
    }  
}
```

```

        }

        if (warehouseEq.size() > 0){
            upsert warehouseEq;
            System.debug('Your equipment was synced with the warehouse one');
            System.debug(warehouseEq);
        }

    }
}
}

```

(ii) WarehouseCalloutServiceMock Class :-

```

@isTest
global class WarehouseCalloutServiceMock implements HttpCalloutMock {
    // implement http mock callout
    global static HttpResponse respond(HttpRequest request){

        System.assertEquals('https://th-superbadge-
apex.herokuapp.com/equipment', request.getEndpoint());
        System.assertEquals('GET', request.getMethod());

        // Create a fake response
        HttpResponse response = new HttpResponse();
        response.setHeader('Content-Type', 'application/json');

        response.setBody('[{"_id":"55d66226726b611100aaf741","replacement":false,"qua
ntity":5,"name":"Generator 1000
kW","maintenanceperiod":365,"lifespan":120,"cost":5000,"sku":"100003"}]');
        response.setStatusCode(200);
        return response;
    }
}

```

(iii) WarehouseCalloutServiceTest Class :-

```

@isTest
private class WarehouseCalloutServiceTest {

```

```

@isTest
static void testWareHouseCallout(){
    Test.startTest();
    // implement mock callout test here
    Test.setMock(HTTPCalloutMock.class, new
WarehouseCalloutServiceMock());
    WarehouseCalloutService.runWarehouseEquipmentSync();
    Test.stopTest();
    System.assertEquals(1, [SELECT count() FROM Product2]);
}
}

```

6. Test scheduling logic

(i) WarehouseSyncSchedule Class :-

```

global class WarehouseSyncSchedule implements Schedulable {
    global void execute(SchedulableContext ctx) {

        WarehouseCalloutService.runWarehouseEquipmentSync();
    }
}

```

(ii) WarehouseSyncScheduleTest Class :-

```

@isTest
public class WarehouseSyncScheduleTest {

    @isTest static void WarehousescheduleTest(){
        String scheduleTime = '00 00 01 * * ?';
        Test.startTest();
        Test.setMock(HttpCalloutMock.class, new
WarehouseCalloutServiceMock());
        String jobID=System.schedule('Warehouse Time To Schedule to Test',
scheduleTime, new WarehouseSyncSchedule());
        Test.stopTest();
        //Contains schedule information for a scheduled job. CronTrigger is similar
        to a cron job on UNIX systems.
        // This object is available in API version 17.0 and later.
        CronTrigger a=[SELECT Id FROM CronTrigger where NextFireTime > today];
    }
}

```

```

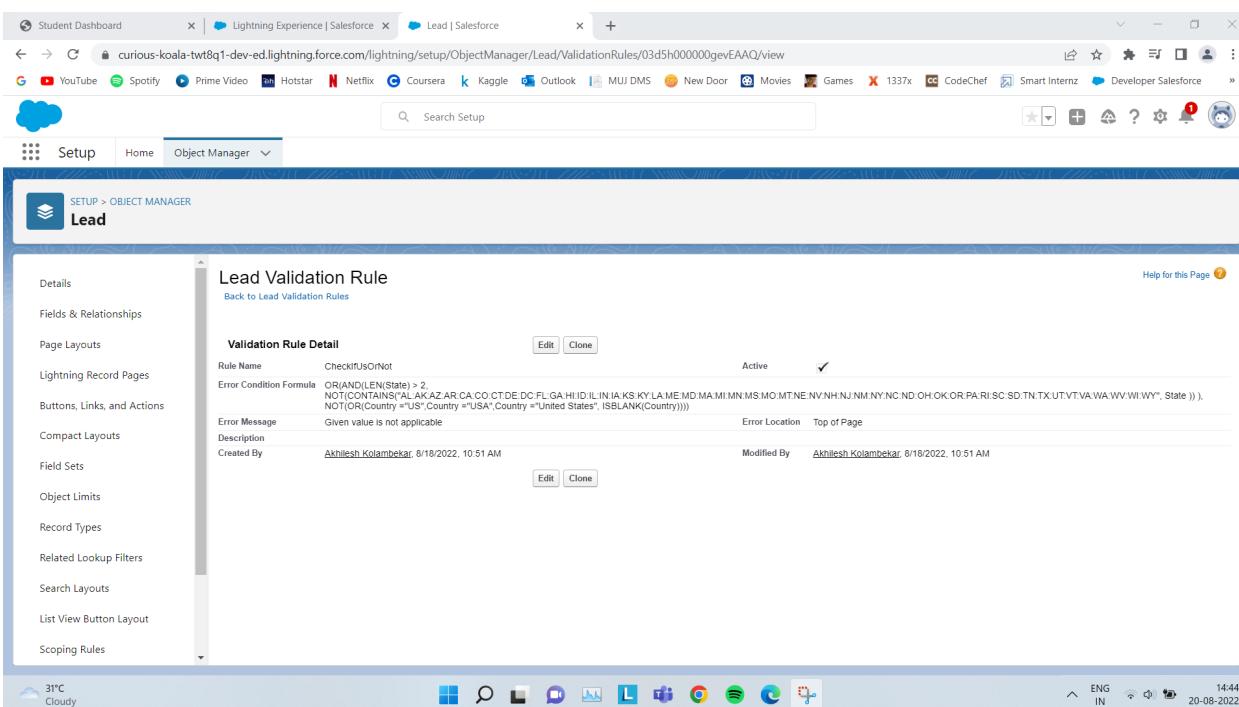
        System.assertEquals(jobID, a.Id,'Schedule ');
    }

}

```

Lead Automation Specialist

1. Automate Leads



The screenshot shows the Lead Validation Rule configuration page in the Salesforce Object Manager. The validation rule is named "CheckIfJobOrNot" and is active. The error condition formula is:

```
OR(AND(LEN(SB9) > 2, NOT(CONTAINSAL(AK,AZ,AR,CA,CO,CT,DE,DC,FL,GA,H,I,D,I,L,N,I,A,K,S,K,Y,L,A,M,E,M,D,M,A,M,I,M,N,M,S,M,O,M,T,N,E,N,V,N,H,N,J,M,N,Y,N,C,N,D,O,H,O,K,O,R,P,A,R,I,S,C,S,D,T,X,U,T,V,T,V,A,W,V,W,W,I,W,Y)), State ))
```

The error message is "Given value is not applicable". The rule was created by Akhilash Kolambekar on 8/18/2022 at 10:51 AM and modified by the same user on the same date.

Student Dashboard | Lightning Experience | Salesforce | Queues | Salesforce

curious-koala-twt8q1-dev-ed.lightning.force.com/lightning/setup/Queues/page?address=%2Fp%2Fown%2Fqueue%2Fd%3Fd%3D00G5h000000me2R

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Setup Home Object Manager

queue

Users Environments Jobs Apex Flex Queue

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SETUP Queues

Queue Rainbow Sales

Help for this Page

Label	Rainbow Sales	Queue Name	Rainbow_Sales
Queue Email		Send Email to Members	<input type="checkbox"/>
Supported Objects	Lead	Modified By	Akhilesh Kolambekar 8/18/2022, 10:52 AM
Created By	Akhilesh Kolambekar 8/18/2022, 10:52 AM		

View All Users

No members.

31°C Cloudy ENG IN 20-08-2022 14:45

This screenshot shows the 'Queues' setup page in Salesforce. A queue named 'Rainbow Sales' is displayed. The queue has a label 'Rainbow Sales', supports the 'Lead' object, and was created by Akhilesh Kolambekar on 8/18/2022 at 10:52 AM. There are no members assigned to this queue.

Student Dashboard | Lightning Experience | Salesforce | Queues | Salesforce

curious-koala-twt8q1-dev-ed.lightning.force.com/lightning/setup/Queues/page?address=%2Fp%2Fown%2Fqueue%2Fd%3Fd%3D00G5h000000me2W%2FappLayout%3Dsetup%26tour... L

YouTube Spotify Prime Video Hoststar Netflix Coursera Kaggle Outlook MUJ DMS New Door Movies Games 1337x CodeChef Smart Internz Developer Salesforce

Setup Home Object Manager

queue

Users Environments Jobs Apex Flex Queue

Didn't find what you're looking for? Try using Global Search.

SETUP Queues

Queue Assembly System Sales

Help for this Page

Label	Assembly System Sales	Queue Name	Assembly_System_Sales
Queue Email		Send Email to Members	<input type="checkbox"/>
Supported Objects	Lead	Modified By	Akhilesh Kolambekar 8/18/2022, 10:53 AM
Created By	Akhilesh Kolambekar 8/18/2022, 10:53 AM		

View All Users

No members.

31°C Cloudy ENG IN 20-08-2022 14:46

This screenshot shows the 'Queues' setup page in Salesforce. A queue named 'Assembly System Sales' is displayed. The queue has a label 'Assembly System Sales', supports the 'Lead' object, and was created by Akhilesh Kolambekar on 8/18/2022 at 10:53 AM. There are no members assigned to this queue.

The screenshot shows the Salesforce Setup interface for Lead Assignment Rules. The left sidebar navigation includes Feature Settings, Marketing (Lead Assignment Rules selected), LinkedIn Lead Gen, Sales, and Web-to-Lead. The main content area displays a Lead Assignment Rule named "Rainbow Sales". The rule detail shows it was created by Akhilesh Kolambekar on 8/18/2022 at 10:54 AM and is active. The rule entries table lists two entries: "Lead: Lead Source EQUALS Web" assigned to Rainbow Sales and "Lead: Lead Source NOT EQUAL TO Web" assigned to Assembly System Sales.

2. Automate Accounts

The screenshot shows the Salesforce Setup interface for Account Custom Fields. The left sidebar navigation includes Details, Fields & Relationships (selected), Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, List View Button Layout, and Hierarchy Columns. The main content area displays the "Number of deals" custom field for the Account object. The custom field definition detail shows the field label is "Number of deals", field name is "Number_of_deals", API name is "Number_of_deals__c", and object name is "Account". The roll-up summary options show a data type of Opportunity, summarized object of Opportunity, and filter criteria. The field was created by Akhilesh Kolambekar on 8/18/2022 at 10:59 AM and modified by Akhilesh Kolambekar on 8/18/2022 at 10:59 AM.

The screenshot shows the Salesforce setup interface for creating a custom field. The page title is "Account Custom Field Number of won deals". The "Custom Field Definition Detail" section includes:

- Field Information**: Field Label: Number of won deals, Field Name: Number_of_won_deals, API Name: Number_of_won_deals__c.
- Object Name**: Account.
- Roll-Up Summary Options**: Data Type: Roll-Up Summary, Summarized Object: Opportunity, Filter Criteria: Stage EQUALS Closed Won, Summary Type: COUNT.

The sidebar on the left lists various customization options like Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, etc. The bottom status bar shows it's 31°C Cloudy, ENG IN, and the date is 20-08-2022.

The screenshot shows the continuation of creating a custom field. The page title is "Account Custom Field Last won deal date". The "Custom Field Definition Detail" section includes:

- Field Information**: Field Label: Last won deal date, Field Name: Last_won_deal_date, API Name: Last_won_deal_date__c.
- Object Name**: Account.
- Roll-Up Summary Options**: Data Type: Roll-Up Summary, Summarized Object: Opportunity, Field to Aggregate: Opportunity_Close Date, Filter Criteria: Stage EQUALS Closed Won, Summary Type: MAX.

The sidebar and bottom status bar are identical to the first screenshot.

The screenshot shows the Salesforce setup interface for creating a custom field. The left sidebar is titled 'Fields & Relationships'. The main content area is titled 'Account Custom Field Deal win percent'. The 'Custom Field Definition Detail' section includes:

- Field Information**: Field Label: Deal win percent, Field Name: Deal_win_percent, API Name: Deal_win_percent_c, Object Name: Account.
- Formula Options**: Data Type: Formula, Decimal Places: 2, Formula: Number_of_won_deals__c/Number_of_deals__c.

The status bar at the bottom indicates it's 31°C Cloudy, and the system was last modified on 20-08-2022 at 11:03 AM by Akhilesh Kolambekar.

The screenshot shows the Salesforce setup interface for creating a custom field. The left sidebar is titled 'Fields & Relationships'. The main content area is titled 'Account Custom Field Amount of won deals'. The 'Custom Field Definition Detail' section includes:

- Field Information**: Field Label: Amount of won deals, Field Name: Amount_of_won_deals, API Name: Amount_of_won_deals_c, Object Name: Account.
- Roll-Up Summary Options**: Data Type: Roll-Up Summary, Summarized Object: Opportunity, Field to Aggregate: Opportunity_Amount, Filter Criteria: Stage EQUALS Closed Won, Summary Type: SUM.

The status bar at the bottom indicates it's 31°C Cloudy, and the system was last modified on 20-08-2022 at 11:04 AM by Akhilesh Kolambekar.

Student Dashboard | SPSGP-45245-Salesforce Dev | Lightning Experience | Salesforce | Account | Salesforce

curious-koala-twt8q1-dev-ed.lightning.force.com/lightning/setup/ObjectManager/Account/FieldsAndRelationships/00N5h00000CpDIM/view

Setup Home Object Manager

Account Custom Field Call for Service

Custom Field Definition Detail

Field Information

Field Label	Call for Service
Field Name	Call_for_Service
API Name	Call_for_Service__c
Description	
Help Text	
Data Owner	
Field Usage	
Data Sensitivity Level	
Compliance Categorization	
Created By	Akhilesh Kolambekar 8/18/2022, 11:08 AM
Modified By	Akhilesh Kolambekar 8/18/2022, 11:08 AM

Formula Options

Data Type: Formula

IF(DATE(YEAR(Last_won_deal_date__c)+2,MONTH(Last_won_deal_date__c),DAY(Last_won_deal_date__c))<=TODAY(),"YES","NO")

Object Name: Account

Help for this Page

31°C Cloudy

ENG IN 20-08-2022

Student Dashboard | SPSGP-45245-Salesforce Dev | Lightning Experience | Salesforce | Account | Salesforce

curious-koala-twt8q1-dev-ed.lightning.force.com/lightning/setup/ObjectManager/Account/ValidationRules/03d5h00000gewJAQ/view

Setup Home Object Manager

Account Validation Rule

Validation Rule Detail

Rule Name: ValidationForBilling

Error Condition Formula:

```
OR(
    NOT(CONTAINS(AL,AK,AZ,AR,CA,CO,CT,DE,DC,FL,GA,HI,ID,IL,IN,IA,KS,KY,LA,ME,MD,MA,MI,MN,MS,MO,MT,NE,NV,NH,NJ,NY,NC,ND,OH,OK,OR,PA,RI,SC,SD,TN,TX,UT,VT,VA,WV,WI,WY, BillingState)),
    LEN(BillingState) <> 2,
    NOT(CONTAINS("US", BillingCountry = "USA", BillingCountry = "United States", ISBLANK(BillingCountry))),
    NOT(CONTAINS(AL,AK,AZ,AR,CA,CO,CT,DE,DC,FL,GA,HI,ID,IL,IN,IA,KS,KY,LA,ME,MD,MA,MI,MN,MS,MO,MT,NE,NV,NH,NJ,NY,NC,ND,OH,OK,OR,PA,RI,SC,SD,TN,TX,UT,VT,VA,WV,WI,WY, ShippingState)),
    LEN(ShippingState) <> 2,
    NOT(OR(ShippingCountry = "US", ShippingCountry = "United States", ISBLANK(ShippingCountry ))))
```

Error Message:

you have to make sure that nobody can save a new account unless the shipping and billing state fields are valid US state abbreviations and the country field is either blank or US, USA or United States

Error Location: Top of Page

Description: Created By: Akhilesh Kolambekar 8/18/2022, 11:10 AM Modified By: Akhilesh Kolambekar 8/19/2022, 12:03 AM

31°C Cloudy

ENG IN 20-08-2022

The screenshot shows the Salesforce setup interface for Account Validation Rules. The left sidebar lists various configuration options like Details, Fields & Relationships, Page Layouts, and Record Types. The main content area displays the 'Account Validation Rule' detail page. It includes fields for Rule Name (ValidationForType), Error Condition Formula (ISCHANGED(Name) && (OR(ISPICKVAL(Type, 'Customer - Direct'), ISPICKVAL(Type, 'Customer - Channel')))), Error Message (the account type is either "Customer - Direct" or "Customer - Channel" we don't want anybody to change the name.), and a Description. The record was created by Akhilesh Kolambekar on 8/18/2022 at 11:12 AM and modified by the same user on 8/19/2022 at 12:03 AM. The status is Active.

3. Create Robot Setup Object

The screenshot shows the Salesforce setup interface for the newly created 'Robot Setup' object. The left sidebar lists various configuration options. The main content area displays the 'Robot Setup' detail page. It includes fields for API Name (Robot_Setup__c), Custom (Custom), Singular Label (Robot Setup), Plural Label (Robot Setup), and several status and history fields: Enable Reports, Track Activities, Track Field History, Deployment Status (Deployed), Help Settings, and Standard salesforce.com Help Window. The record was created by Akhilesh Kolambekar on 8/18/2022 at 11:12 AM and modified by the same user on 8/19/2022 at 12:03 AM. The status is Active.

Student Dashboard | SPSGP-45245-Salesforce Dev | Lightning Experience | Salesforce | Robot Setup | Salesforce

curious-koala-twt8q1-dev-ed.lightning.force.com/lightning/setup/ObjectManager/01l5h000000eeX6/FieldsAndRelationships/00N5h00000CpDp8/view

YouTube Spotify Prime Video Hoststar Netflix Coursera Kaggle Outlook MUJ DMS New Door Movies Games 1337x CodeChef Smart Internz Developer Salesforce

Cloud Setup Home Object Manager

Robot Setup Custom Field Date

Robot Setup Custom Field Date

Custom Field Definition Detail

Field Information

Field Label	Date
Field Name	Date
API Name	Date__c
Description	
Help Text	
Data Owner	
Field Usage	
Data Sensitivity Level	
Compliance Categorization	

Object Name: Robot Setup
Data Type: Date

Created By: Akhilash.Kolambekar 8/18/2022, 11:19 AM
Modified By: Akhilash.Kolambekar 8/18/2022, 11:19 AM

General Options

Validation Rules

No validation rules defined

Always show me more records per related list

Back To Top

31°C Cloudy

ENG IN 20-08-2022

Student Dashboard | SPSGP-45245-Salesforce Dev | Lightning Experience | Salesforce | Robot Setup | Salesforce

curious-koala-twt8q1-dev-ed.lightning.force.com/lightning/setup/ObjectManager/01l5h000000eeX6/FieldsAndRelationships/00N5h00000CpDp8/view

YouTube Spotify Prime Video Hoststar Netflix Coursera Kaggle Outlook MUJ DMS New Door Movies Games 1337x CodeChef Smart Internz Developer Salesforce

Cloud Setup Home Object Manager

Robot Setup Custom Field Notes

Robot Setup Custom Field Notes

Custom Field Definition Detail

Field Information

Field Label	Notes
Field Name	Notes
API Name	Notes__c
Description	
Help Text	
Data Owner	
Field Usage	
Data Sensitivity Level	
Compliance Categorization	

Object Name: Robot Setup
Data Type: Text

Created By: Akhilash.Kolambekar 8/18/2022, 11:19 AM
Modified By: Akhilash.Kolambekar 8/18/2022, 11:19 AM

General Options

Text Options

Length: 100

Validation Rules

No validation rules defined

Always show me more records per related list

Back To Top

31°C Cloudy

ENG IN 20-08-2022

Robot Setup Custom Field
Day of the Week

Custom Field Definition Detail

Field Information

- Field Label: Day of the Week
- Field Name: Day_of_the_Week
- API Name: Day_of_the_Week_c
- Description:
- Help Text:
- Data Owner:
- Field Usage:

Object Name: Robot_Setup
Created By: Akhilesh Kolambekar / 8/18/2022, 11:23 AM
Modified By: Akhilesh Kolambekar / 8/18/2022, 11:23 AM

Formula Options

Data Type: Formula

```
CASE(weekday(Date__c),
1, "Sunday",
2, "Monday",
3, "Tuesday",
4, "Wednesday",
5, "Thursday",
6, "Friday",
7, "Saturday",
Text(weekday(Date__c))
)
```

Robot Setup Custom Field
Opportunity

Custom Field Definition Detail

Field Information

- Field Label: Opportunity
- Field Name: Opportunity
- API Name: Opportunity__c
- Description:
- Help Text:
- Data Owner:
- Field Usage:

Object Name: Robot_Setup
Type: Master-Detail
Created By: Akhilesh Kolambekar / 8/18/2022, 11:22 AM
Modified By: Akhilesh Kolambekar / 8/18/2022, 11:22 AM

Master-Detail Options

- Related To: Opportunity
- Related List Label: Robot Setup
- Sharing Setting: Read/Write: Allows users with at least Read/Write access to the Master record to create, edit, or delete related Detail records
- Reparentable Master Detail:

Lookup Filter: No lookup filters defined.

Validation Rules: [New](#)

No validation rules defined.

4. Create Sales Process and Validate Opportunities

Student Dashboard | SPSGP-45245-Salesforce Dev | Lightning Experience | Salesforce | Home | Salesforce

curious-koala-twt8q1-dev-ed.lightning.force.com/lightning/setup/null/page?address=%2Fsetup%2Fu%2Fbpfields.jsp%3Fid%3D0195h00000kfOn%26retURL%3D%252Fsetup%252...

Setup Home Object Manager

Search Setup

Lead Assignment Rules
Lead Auto-Response Rules
Lead Processes
Lead Settings
LinkedIn Lead Gen
Lead Gen Fields
LinkedIn Accounts
Web-to-Lead
Sales Social Accounts and Contacts Settings

Didn't find what you're looking for?
Try using Global Search.

Sales Process RB Robotics Sales Process Help for this Page

Opportunity Stages

Sales Process	RB Robotics Sales Process
Namespace Prefix	
Description	
Available Values	Selected Values
Prospecting (Open, 10%, Pipeline) Qualification (Open, 10%, Pipeline) Proposal/Price Quote (Open, 75%, Pipeline) Negotiation/Review (Open, 90%, Pipeline) Closed Won (Closed/Won, 100%, Closed) Closed Lost (Closed/Lost, 0%, Omitted)	Needs Analysis (Open, 20%, Pipeline) Value Proposition (Open, 50%, Pipeline) Id: Decision Makers (Open, 60%, Pipeline) Perception Analysis (Open, 70%, Pipeline) Closed Won (Closed/Won, 100%, Closed) Awaiting Approval (Open, 100%, Pipeline)

Add Remove Save Cancel

31°C Cloudy ENG IN 20-08-2022

Student Dashboard | SPSGP-45245-Salesforce Dev | Lightning Experience | Salesforce | Opportunity | Salesforce

curious-koala-twt8q1-dev-ed.lightning.force.com/lightning/setup/ObjectManager/Opportunity/FieldsAndRelationships/StageName/01J5h00000IzNl0/edit?tid=006&pt=23

Setup Home Object Manager

Object Manager

Details Fields & Relationships

Page Layouts
Lightning Record Pages
Buttons, Links, and Actions
Compact Layouts
Field Sets
Object Limits
Record Types
Related Lookup Filters
Search Layouts
List View Button Layout
Scoping Rules
Triggers
Flow Triggers

Opportunity Stages

Help for this Page

Changing the Type or Forecast Category updates all opportunities that have this stage value. If you change the Type or Forecast Category, this global update can require several hours, depending on the amount of data you have. We send you an email when the process is finished.
The process doesn't interrupt your users' work, but it does update the Last Modified By date and time in affected records.

Stage Name	Awaiting Approval	Probability
Type	Open	100
Forecast Category	Pipeline	
Chart Color	Assigned dynamically	
Description		

Save Save & New Cancel

31°C Cloudy ENG IN 20-08-2022

Student Dashboard | SPSGP-45245-Salesforce Dev | Lightning Experience | Salesforce | Opportunity | Salesforce

curious-koala-twt8q1-dev-ed.lightning.force.com/lightning/setup/ObjectManager/Opportunity/RecordTypes/0125h00000yVSIAAM/view

Setup Home Object Manager

SETUP > OBJECT MANAGER
Opportunity

Record Type
RB Robotics Process RT

Use the Edit button to change the properties of this record type. Use the Edit links in the Picklist Values related list to choose the picklist values available for records with this record type.

Record Type Label	RB Robotics Process RT	Edit
Sales Process	RB_Robotics_Sales_Process	
Record Type Name	RB_Robotics_Process_RT	
Namespace Prefix		
Description		
Created By	Akhilesh Kolambekar, 8/18/2022, 11:30 AM	
Modified By	Akhilesh Kolambekar, 8/18/2022, 11:30 AM	

Picklists Available for Editing

Action	Field	Modified Date
Edit	Delivery/Installation Status	8/18/2022, 11:30 AM
Edit	Lead Source	8/18/2022, 11:30 AM
Edit	Type	8/18/2022, 11:30 AM

Help for this Page

31°C Cloudy

ENG IN 20-08-2022

Student Dashboard | SPSGP-45245-Salesforce Dev | Lightning Experience | Salesforce | Opportunity | Salesforce

curious-koala-twt8q1-dev-ed.lightning.force.com/lightning/setup/ObjectManager/Opportunity/FieldsAndRelationships/00N5h00000CpDpm/view

Setup Home Object Manager

SETUP > OBJECT MANAGER
Opportunity

Opportunity Custom Field
Approved
Back to Opportunity Fields

Custom Field Definition Detail

Field Information	Object Name: Opportunity Data Type: Checkbox
Field Label: Approved	Field Name: Approved
API Name: Approved_c	Description:
Help Text:	Object Name: Opportunity Data Type: Checkbox
Data Owner:	Object Name: Opportunity Data Type: Checkbox
Field Usage:	Object Name: Opportunity Data Type: Checkbox
Data Sensitivity Level:	Object Name: Opportunity Data Type: Checkbox
Compliance Categorization:	Object Name: Opportunity Data Type: Checkbox
Created By: Akhilesh Kolambekar, 8/18/2022, 11:31 AM	Modified By: Akhilesh Kolambekar, 8/18/2022, 11:31 AM

Validation Rules

Help for this Page

31°C Cloudy

ENG IN 20-08-2022

The screenshot shows the Salesforce Lightning Experience interface. The top navigation bar includes tabs for Student Dashboard, SPSGP-45245-Salesforce Dev..., Lightning Experience | Salesforce, and Opportunity | Salesforce. The main content area is titled "Opportunity Validation Rule" under "Object Manager". The "Validation Rule Detail" section displays the following information:

- Rule Name:** ValidationForHighValue
- Error Condition Formula:** `|(Amount>1000 & Approved__c = false & Ispickval(StageName,"Closed Won"))`
- Error Message:** cannot have validation rule
- Description:** (empty)
- Created By:** Akhilesh Kolambekar, 8/18/2022, 11:34 AM
- Modified By:** Akhilesh Kolambekar, 8/19/2022, 12:03 AM
- Status:** Active
- Error Location:** Top of Page

The left sidebar lists various configuration options for the Opportunity object, such as Details, Fields & Relationships, Page Layouts, and Compact Layouts. The bottom of the screen shows the Windows taskbar with icons for various applications like YouTube, Spotify, Prime Video, Netflix, Coursera, Kaggle, Outlook, MUJ DMS, New Door, Movies, Games, 1337x, CodeChef, Smart Internz, and Developer Salesforce.

5. Automate Opportunities

The screenshot shows the Salesforce Lightning Experience interface. The top navigation bar includes tabs for Student Dashboard, SPSGP-45245-Salesforce Dev..., Lightning Experience | Salesforce, and Users | Salesforce. The main content area is titled "User Detail" for the user "Nushi Davoud". The "User Detail" section displays the following information:

- Name:** Nushi Davoud
- Email:** nushi.davoud@gmail.com
- Phone:** +91 9876543210
- Role:** Admin
- Manager:** Akhilesh Kolambekar
- Location:** Mumbai, Maharashtra, India
- Time Zone:** (GMT+05:30) Pacific Daylight Time (America/US, America/Argentina/Buenos_Aires)
- Language:** English (United States)
- Temporary Verification Code:** 123456

The left sidebar lists various configuration options for users, such as User Management Settings, Profile Settings, Database, Prospectus, Interface, Actions & Record Types, Global Actions, and Site and Domains. The bottom of the screen shows the Windows taskbar with icons for various applications like YouTube, Spotify, Prime Video, Netflix, Coursera, Kaggle, Outlook, MUJ DMS, New Door, Movies, Games, 1337x, CodeChef, Smart Internz, and Developer Salesforce.

Student Dashboard | SPSGP-45245-Salesforce Dev | Lightning Experience | Salesforce | Email Alerts | Salesforce

curious-koala-twt8q1-dev-ed.lightning.force.com/lightning/setup/WorkflowEmails/page?address=%2F01W5h000000PLY2

Setup Home Object Manager

email al

Process Automation Workflow Actions Email Alerts

Didn't find what you're looking for? Try using Global Search.

Email Alerts

Finance Account Creation

Email Alert Detail

Description	Finance Account Creation
Unique Name	Finance_Account_Creation
From Email Address	Current User's email address
Recipients	User_Akhilesh_Kolambekar User_Nushi_Davoud User_Integration_User
Additional Emails	
Created By	Akhilesh Kolambekar 8/18/2022, 11:28 PM
Modified By	Akhilesh Kolambekar 8/18/2022, 11:28 PM

Rules Using This Email Alert | Approval Processes Using This Email Alert | Entitlement Processes Using This Email Alert

Help for this Page

31°C Cloudy

ENG IN 20-08-2022

Student Dashboard | SPSGP-45245-Salesforce Dev | Lightning Experience | Salesforce | Email Alerts | Salesforce

curious-koala-twt8q1-dev-ed.lightning.force.com/lightning/setup/WorkflowEmails/page?address=%2F01W5h000000PLY7

Setup Home Object Manager

email al

Process Automation Workflow Actions Email Alerts

Didn't find what you're looking for? Try using Global Search.

Email Alerts

SALES: Opportunity Needs Approval

Email Alert Detail

Description	SALES_Opportunity_Needs_Approval
Unique Name	SALES_Opportunity_Needs_Approval
From Email Address	Current User's email address
Recipients	User_Akhilesh_Kolambekar User_Nushi_Davoud
Additional Emails	
Created By	Akhilesh Kolambekar 8/18/2022, 11:30 PM
Modified By	Akhilesh Kolambekar 8/18/2022, 11:30 PM

Rules Using This Email Alert | Approval Processes Using This Email Alert | Entitlement Processes Using This Email Alert

Help for this Page

31°C Cloudy

ENG IN 20-08-2022

Student Dashboard | SPSGP-45245-Salesforce Dev | Lightning Experience | Salesforce | Email Alerts | Salesforce

curious-koala-twt8q1-dev-ed.lightning.force.com/lightning/setup/WorkflowEmails/page?address=%2F01W5h000000PLYC

Setup Home Object Manager

email alerts

Process Automation Workflow Actions Email Alerts

Didn't find what you're looking for? Try using Global Search.

SEARCH Setup

SETUP Email Alerts

Sales: Opportunity Approval Status Email

Rules Using This Email Alert | Approval Processes Using This Email Alert | Entitlement Processes Using This Email Alert

Email Alert Detail

Description	Sales: Opportunity Approval Status Email
Unique Name	Sales_Opportunity_Approval_Status_Email
From Email Address	Current User's email address
Recipients	User_Akhilesh_Kolambekar User_Nishi_Davoud
Additional Emails	
Created By	Akhilesh Kolambekar 8/18/2022, 11:31 PM
Modified By	Akhilesh Kolambekar 8/18/2022, 11:31 PM

Help for this Page

Rules Using This Email Alert Help

This alert is currently not used by any rules

Approval Processes Using This Email Alert Help

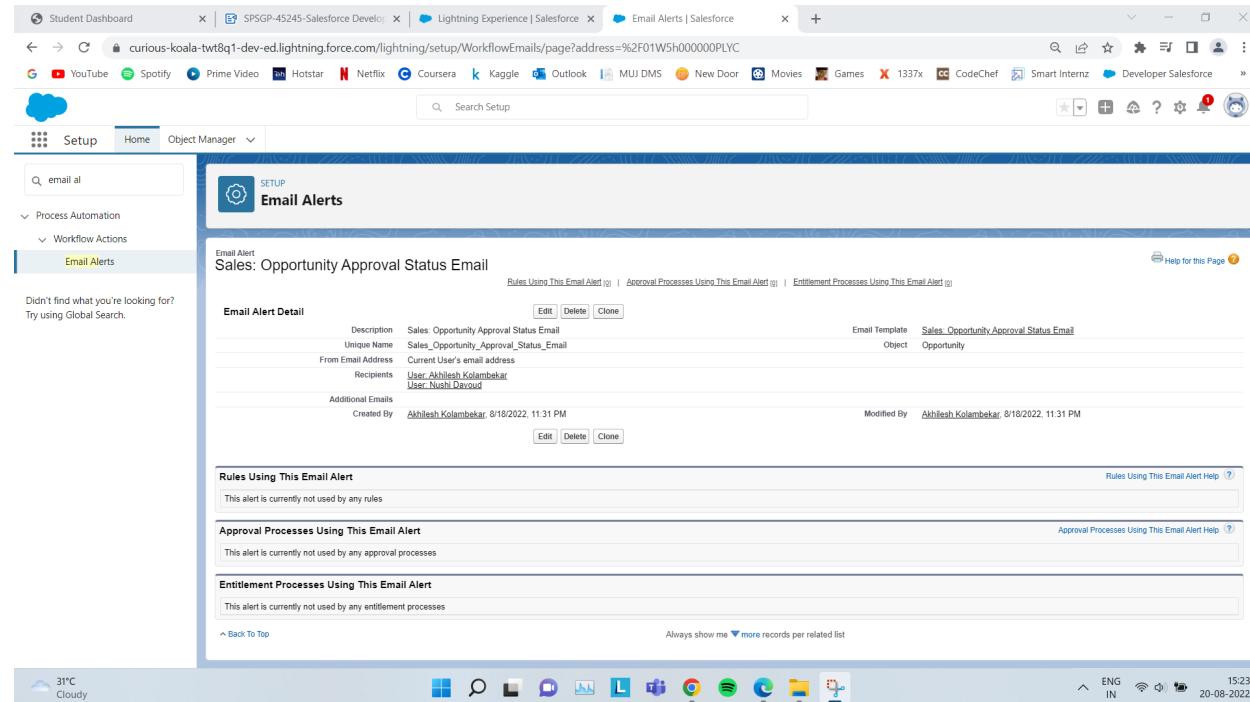
This alert is currently not used by any approval processes

Entitlement Processes Using This Email Alert Help

This alert is currently not used by any entitlement processes

Back To Top Always show me ▾ more records per related list

31°C Cloudy ENG IN 20-08-2022



Student Dashboard | SPSGP-45245-Salesforce Dev | Lightning Experience | Salesforce | Approval Processes | Salesforce

curious-koala-twt8q1-dev-ed.lightning.force.com/lightning/setup/ApprovalProcesses/page?address=%2F04a5h000000TfU

Setup Home Object Manager

Q: Approval

Data Mass Transfer Approval Requests Process Automation Approval Processes

Didn't find what you're looking for? Try using Global Search.

SEARCH Setup

Approval Processes

Opportunity prospect

Process Definition Detail

Process Name	proposed
Unique Name	proposed
Start Date	2022-08-18
End Date	2022-08-18
Action Criteria	Opportunity: Assess (Opportunity: Stage: Lead/Negotiation)
Approval Requirements	1. Approve: Opportunity Owner User_Akhilesh_Kolambekar
Approval Requirements Action	Approve: Opportunity Owner User_Akhilesh_Kolambekar
Other Substeps	2. Auto-Assign: Opportunity Owner User_Akhilesh_Kolambekar

Action Manager of Record Submitter

Action Submitters to React: Approval Requests

Created By Akhilesh Kolambekar 8/18/2022, 11:39 PM

Initial Submission Actions:

Action	View	Record Lock	Edit	Remove	Print Update
--------	------	-------------	------	--------	--------------

Add Existing Add New

Description Lock the record from being edited

Approve Step 1:

Action	View	Record Lock	Edit	Remove	Print Update
--------	------	-------------	------	--------	--------------

Show Actions: Edit | Add

Add Existing Add New

Description Lock the record from being edited

Final Approval Actions:

Action	View	Record Lock	Edit	Remove	Print Update
--------	------	-------------	------	--------	--------------

Add Existing Add New

Description Lock the record from being edited

Final Rejection Actions:

Action	View	Record Lock	Edit	Remove	Print Update
--------	------	-------------	------	--------	--------------

Add Existing Add New

Description Unlock the record for editing

Reject Actions:

Action	View	Record Lock
--------	------	-------------

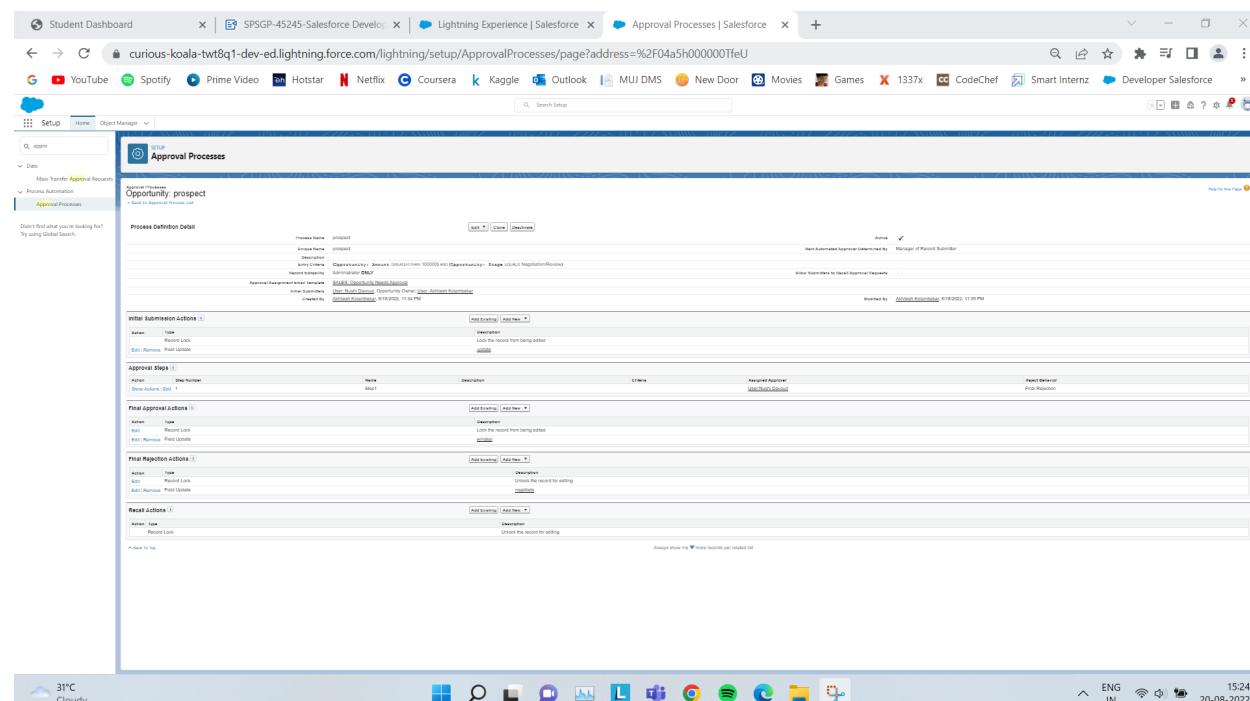
Add Existing Add New

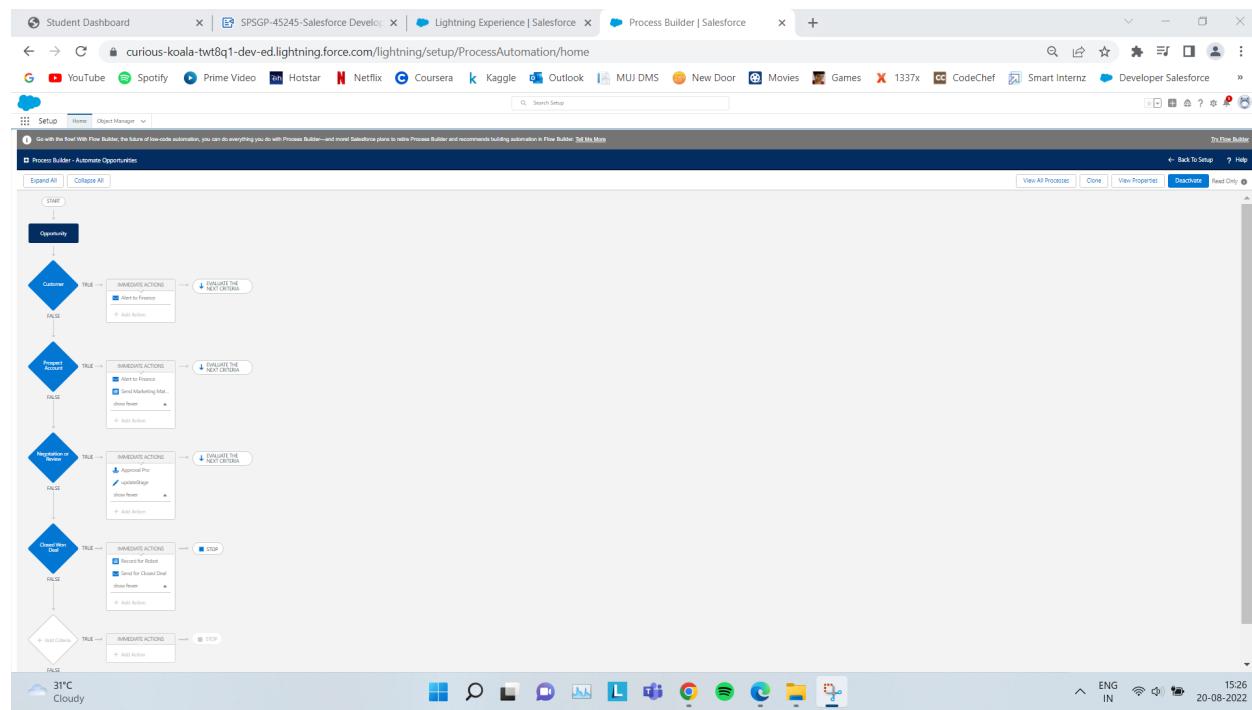
Description Unlock the record for editing

Always show me ▾ more records per related list

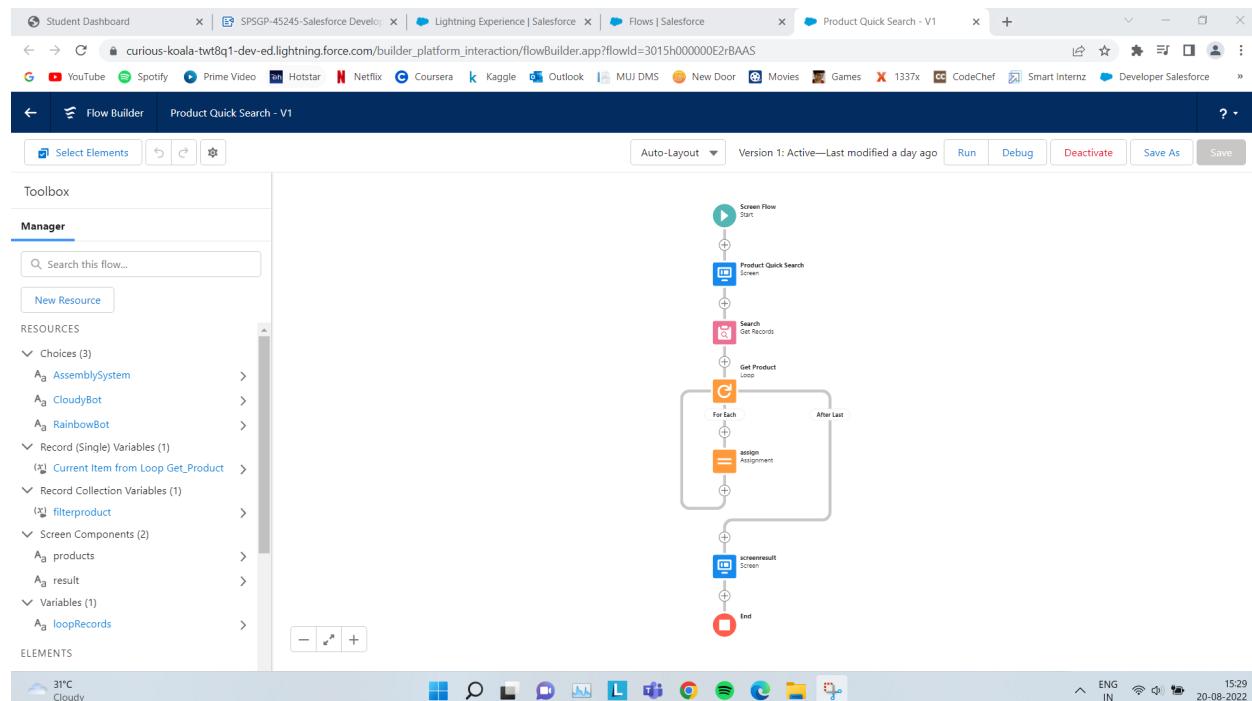
Back To Top

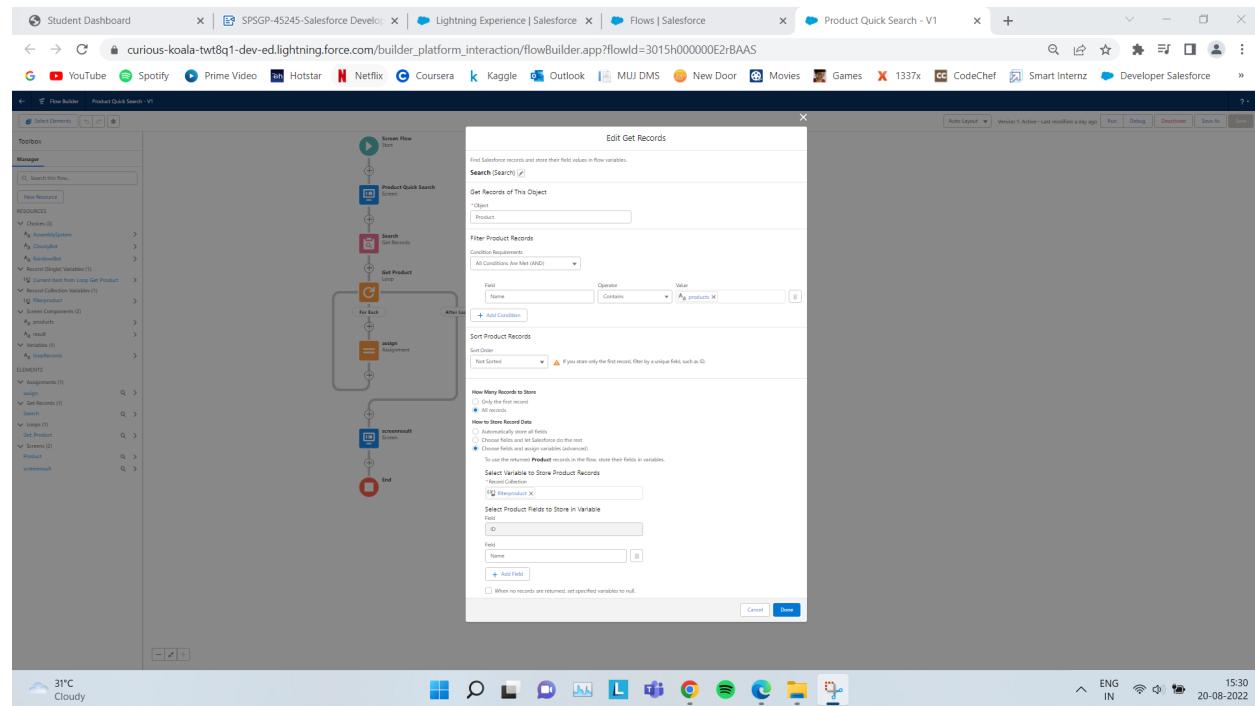
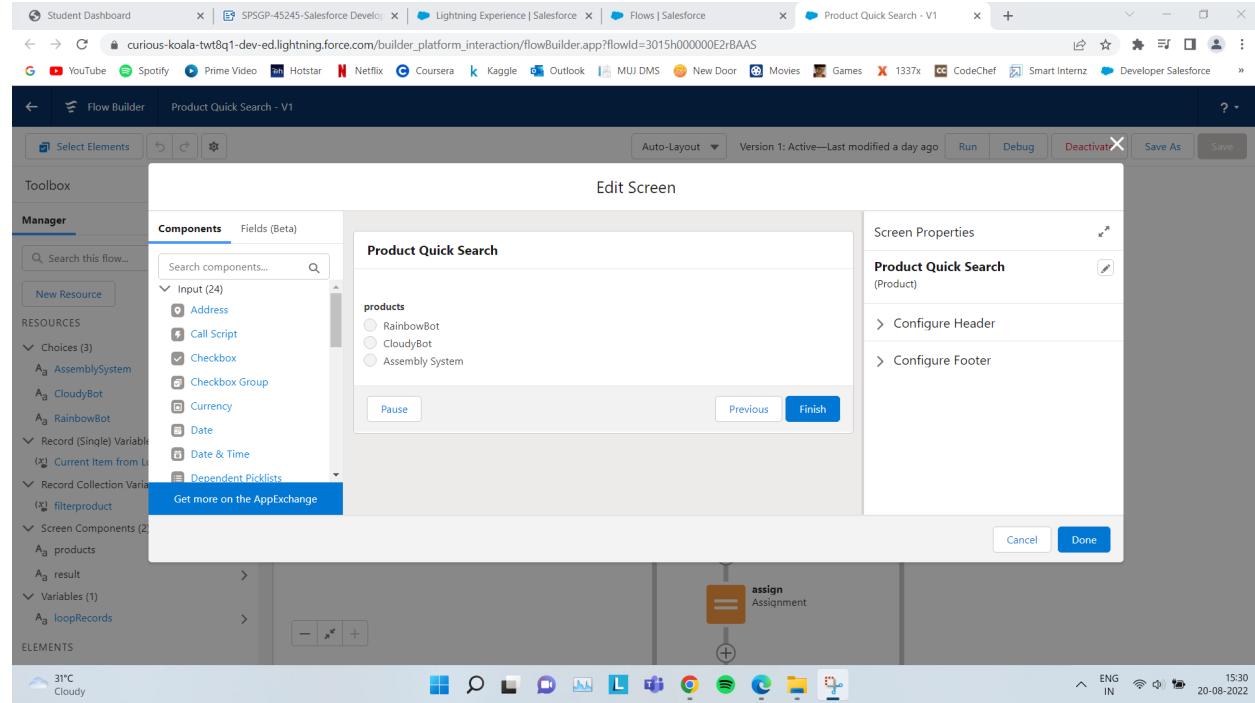
31°C Cloudy ENG IN 20-08-2022 15:24

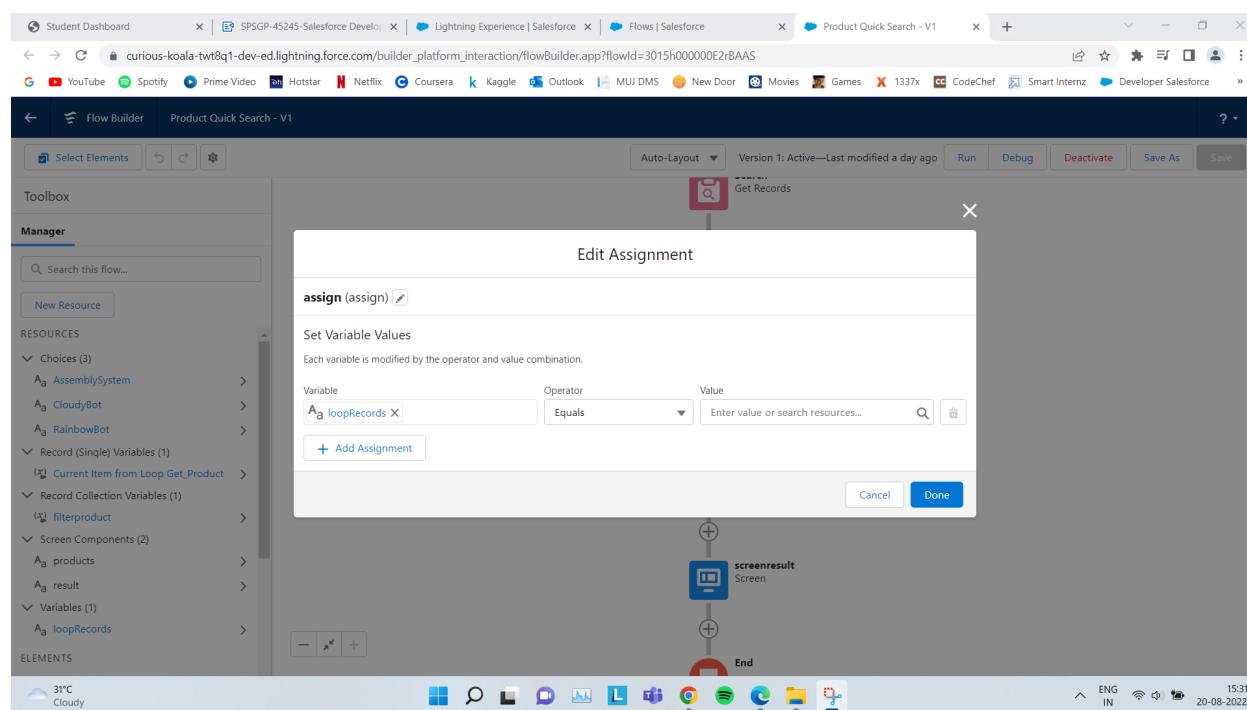
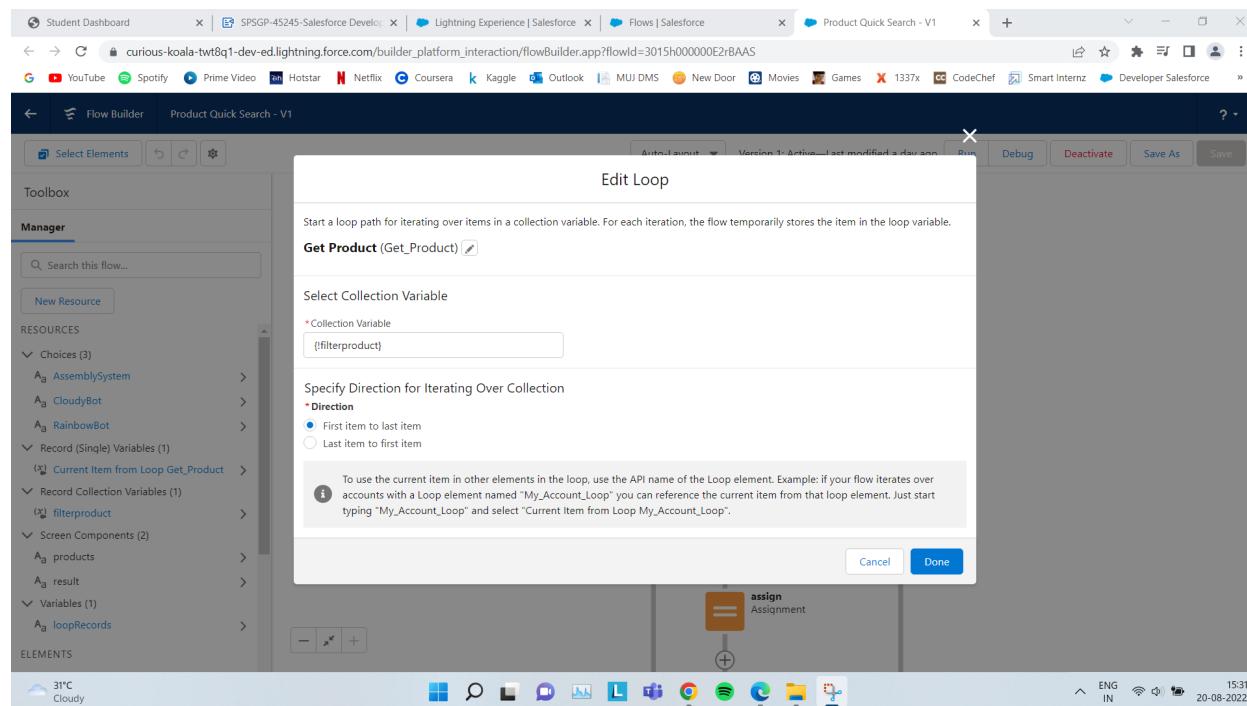


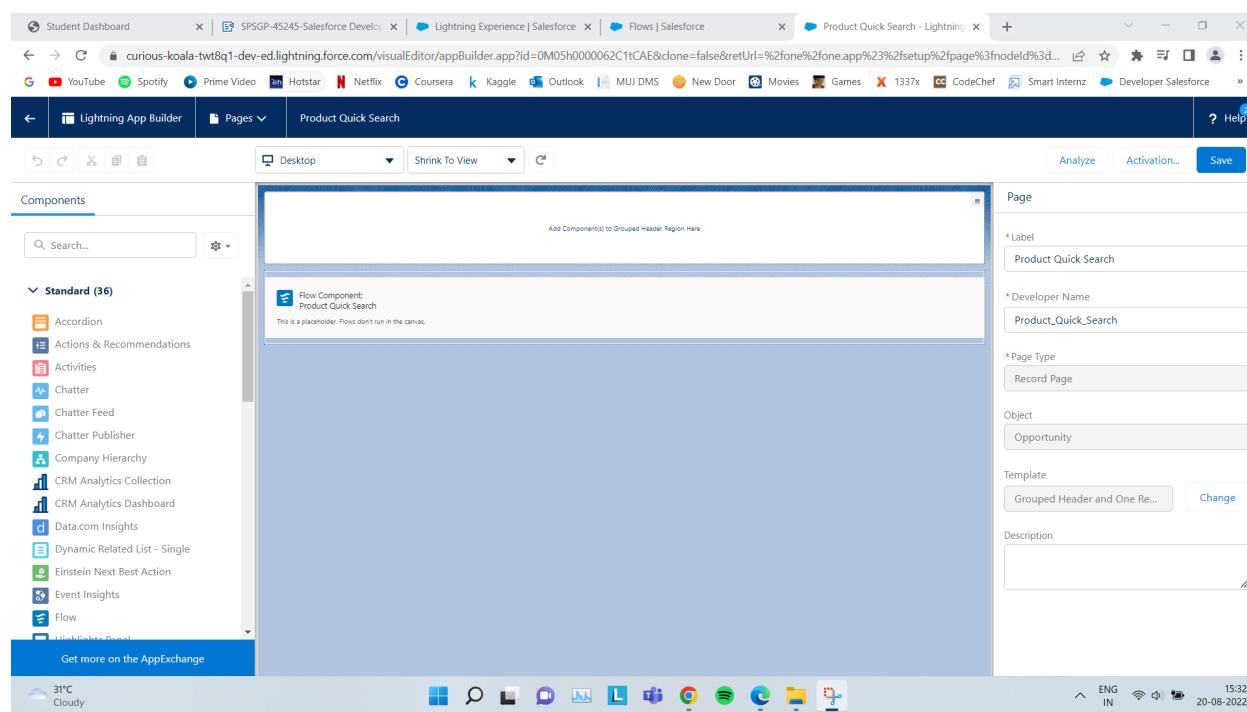
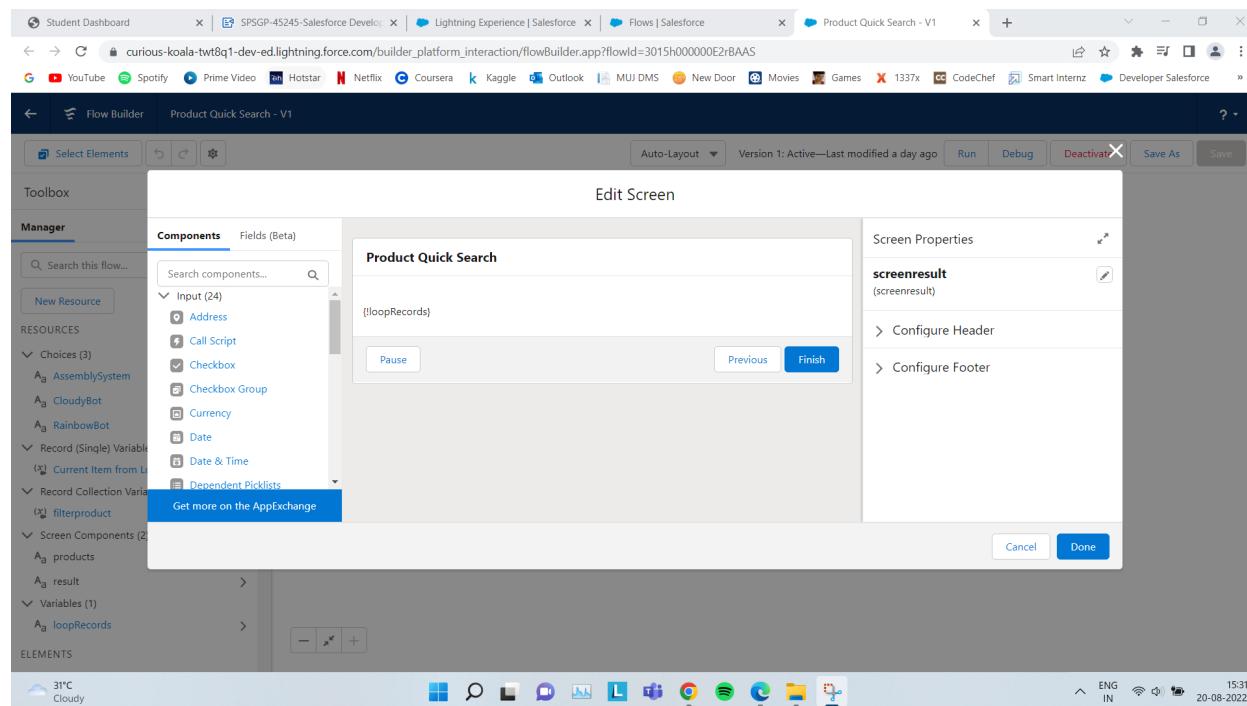


6. Create Flow for Opportunities

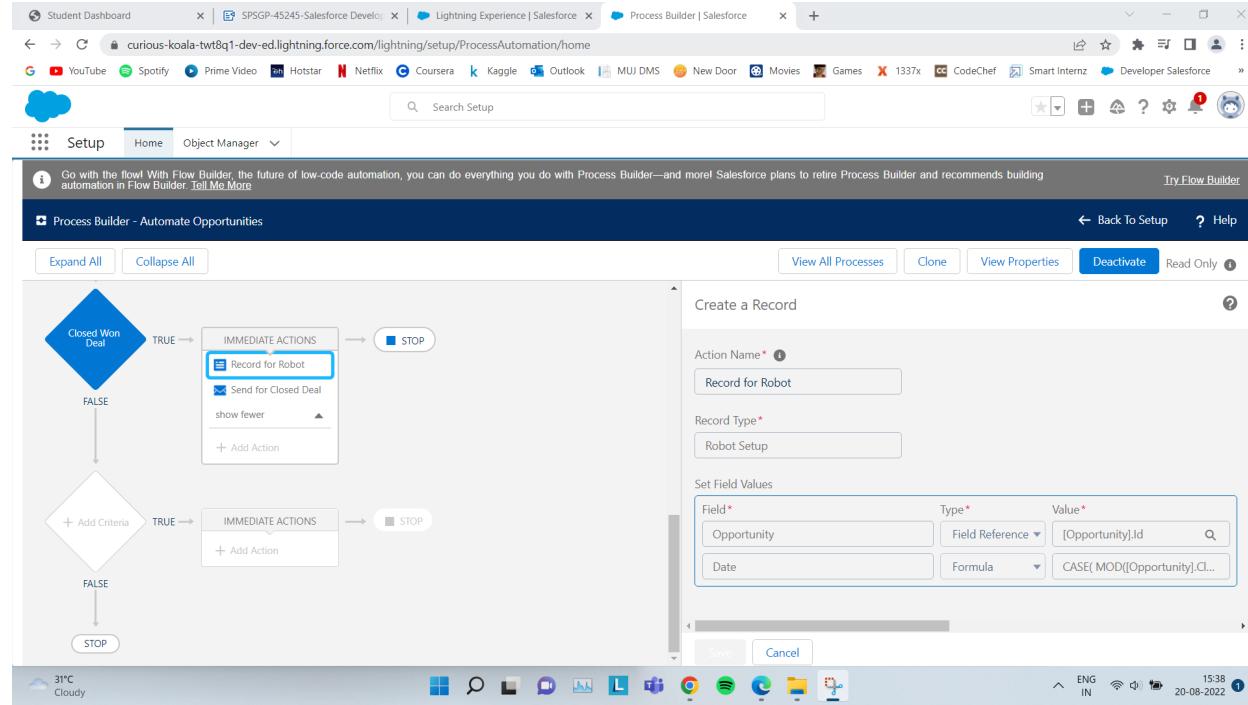








7. Automate Setups



Value for field Date changed to :-
CASE(

MOD([Opportunity].CloseDate + 180 - DATE(1900, 1, 7),7),

0, [Opportunity].CloseDate + 181,

6, [Opportunity].CloseDate + 182,

[Opportunity].CloseDate + 180

)