

<https://trailblazer.me/id/adosi4>

1. Superbadge

# Apex Specialist

Use integration and business logic to push your Apex coding skills to the limit.

[https://trailhead.salesforce.com/en/content/learn/superbadges/superbadge\\_apex](https://trailhead.salesforce.com/en/content/learn/superbadges/superbadge_apex)

## Concepts Tested in This Superbadge

- Apex Triggers
- Asynchronous Apex
- Apex Integration
- Apex Testing

CHALLENGE 1: MaintenanceRequestHelper.apxc

```
1 public with sharing class MaintenanceRequestHelper {
2     public static void updateWorkOrders(List<Case>
    updWorkOrders, Map<Id,Case> nonUpdCaseMap) {
3         Set<Id> validIds = new Set<Id>();
4
5
6         For (Case c : updWorkOrders){
7             if (nonUpdCaseMap.get(c.Id).Status != 'Closed' &&
    c.Status == 'Closed'){
8                 if (c.Type == 'Repair' || c.Type == 'Routine
9
10                    validIds.add(c.Id);
11
12            }
13        }
14    }
15
16    if (!validIds.isEmpty()){
17        List<Case> newCases = new List<Case>();
18        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)
19                                     FROM
Case WHERE Id IN :validIds]);
20         Map<Id,Decimal> maintenanceCycles = new
Map<ID,Decimal>();
21         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];
22
23         for (AggregateResult ar : results){
24             maintenanceCycles.put((Id)
ar.get('Maintenance_Request__c'), (Decimal) ar.get('cycle'));
25         }
26
27         for(Case cc : closedCasesM.values()){
28             Case nc = new Case (
29                 ParentId = cc.Id,
30                 Status = 'New',
31                 Subject = 'Routine Maintenance',
32                 Type = 'Routine Maintenance',
33                 Vehicle__c = cc.Vehicle__c,
34                 Equipment__c =cc.Equipment__c,
35                 Origin = 'Web',
36                 Date_Reported__c = Date.Today()
37
38             );
39
40             If (maintenanceCycles.containsKey(cc.Id)){
41                 nc.Date_Due__c =
Date.today().addDays((Integer) maintenanceCycles.get(cc.Id));
42             } else {
43                 nc.Date_Due__c =
Date.today().addDays((Integer)

```

```

        cc.Equipment__r.maintenance_Cycle__c);
44         }
45
46         newCases.add(nc);
47     }
48
49     insert newCases;
50
51     List<Equipment_Maintenance_Item__c> clonedWPs =
    new List<Equipment_Maintenance_Item__c>();
52     for (Case nc : newCases){
53         for (Equipment_Maintenance_Item__c wp :
    closedCasesM.get(nc.ParentId).Equipment_Maintenance_Items__r
    ){
54             Equipment_Maintenance_Item__c wpClone =
    wp.clone();
55             wpClone.Maintenance_Request__c = nc.Id;
56             ClonedWPs.add(wpClone);
57
58         }
59     }
60     insert ClonedWPs;
61 }
62 }
63 }

```

**MaintenanceRequest.apxt:-**

```

1  trigger MaintenanceRequest on Case (before update, after update) {
2
3      if(Trigger.isUpdate && Trigger.isAfter){
4
5          MaintenanceRequestHelper.updateWorkOrders(Trigger.New, Trigger.OldMap);
6
7      }
8
9  }

```

- After saving the code go back the How We Roll Maintenance ,
- click on Maintenance Requests -> click on 2nd case -> click Details -> change the type Repair to Routine Maintenance -> select Origin = Phone -> Vehicle = select Teardrop Camper , save it.
- Feed -> Close Case = save it..

**CHALLENGE 2: Implement an Apex class** (called WarehouseCalloutService) that implements the queueable interface and makes a callout to the external service used for warehouse inventory management. This service receives updated values in the external system and updates the related records in Salesforce. Before checking this section, **enqueue the job at least once to confirm that it's working as expected.**

### **Solution:**

- Setup -> Search in quick find box -> click Remote Site Settings -> Name = Warehouse URL , Remote Site URL = https://th-superbadge-apex.herokuapp.com , make sure active is selected.
- Go to the developer console use below code

**WarehouseCalloutService.apxc :-**

```

1 public with sharing class WarehouseCalloutService implements
  Queueable {
2     private static final String WAREHOUSE_URL = 'https://th-
3
4     //class that makes a REST callout to an external warehouse
      system to get a list of equipment that needs to be updated.
5     //The callout's JSON response returns the equipment records
      that you upsert in Salesforce.
6
7     @future(callout=true)
8     public static void runWarehouseEquipmentSync(){
9         Http http = new Http();
10        HttpRequest request = new HttpRequest();
11
12        request.setEndpoint(WAREHOUSE_URL);

```

```

13         request.setMethod('GET');
14         HttpResponse response = http.send(request);
15
16         List<Product2> warehouseEq = new List<Product2>();
17
18         if (response.getStatusCode() == 200){
19             List<Object> jsonResponse =
20             (List<Object>)JSON.deserializeUntyped(response.getBody());
21             System.debug(response.getBody());
22
23             //class maps the following fields: replacement part
24             (always true), cost, current inventory, lifespan, maintenance
25             cycle, and warehouse SKU
26             //warehouse SKU will be external ID for identifying
27             which equipment records to update within Salesforce
28             for (Object eq : jsonResponse){
29                 Map<String,Object> mapJson =
30                 (Map<String,Object>)eq;
31                 Product2 myEq = new Product2();
32                 myEq.Replacement_Part__c = (Boolean)
33                 mapJson.get('replacement');
34                 myEq.Name = (String) mapJson.get('name');
35                 myEq.Maintenance_Cycle__c = (Integer)
36                 mapJson.get('maintenanceperiod');
37                 myEq.Lifespan_Months__c = (Integer)
38                 mapJson.get('lifespan');
39                 myEq.Cost__c = (Integer) mapJson.get('cost');
40                 myEq.Warehouse_SKU__c = (String)
41                 mapJson.get('sku');
42                 myEq.Current_Inventory__c = (Double)
43                 mapJson.get('quantity');
44                 myEq.ProductCode = (String) mapJson.get('_id');
45                 warehouseEq.add(myEq);
46             }
47
48             if (warehouseEq.size() > 0){
49                 upsert warehouseEq;
50                 System.debug('Your equipment was synced with the
51

```

```

42     }
43 }
44
45     public static void execute (QueueableContext context){
46         runWarehouseEquipmentSync();
47     }
48
49 }

```

After saving the code open execute anonymous window ( CTRL+E ) and run this method ,

```

1  System.enqueueJob(new WarehouseCalloutService());

```

### **CHALLENGE 3-Schedule synchronization**

Build scheduling logic that executes your callout and runs your code daily. The name of the schedulable class should be **WarehouseSyncSchedule**, and the scheduled job should be named **WarehouseSyncScheduleJob**.

### **Solution**

- Go to the developer console use below code :

WarehouseSyncShedule.apxc :-

```

1  global with sharing class WarehouseSyncSchedule implements
    Schedulable{
2      global void execute(SchedulableContext ctx){
3          System.enqueueJob(new WarehouseCalloutService());
4      }
5  }

```

Save it , after that...

- Go to setup -> Search in Quick find box -> Apex Classes -> click Schedule Apex and  
Job Name = WarehouseSyncScheduleJob , Apex Class = WarehouseSyncSchedule

#### **CHALLENGE 4-Test automation logic**

Build tests for all cases (positive, negative, and bulk) specified in the business requirements by using a class named **MaintenanceRequestHelperTest**. You must have 100% test coverage to pass this section and assert values to prove that your logic is working as expected. Choose **Run All Tests** in the Developer Console at least once before attempting to submit this section. Be patient as it may take 10-20 seconds to process the challenge check.

#### **Solution:**

- Go to the developer console use below code :

```
1 MaintenanceRequestHelperTest.apxc :-
2
3
4 @istest
5 public with sharing class MaintenanceRequestHelperTest {
6
7     private static final string STATUS_NEW = 'New';
8     private static final string WORKING = 'Working';
9     private static final string CLOSED = 'Closed';
10    private static final string REPAIR = 'Repair';
11    private static final string REQUEST_ORIGIN = 'Web';
12    private static final string REQUEST_TYPE = 'Routine
13
14    private static final string REQUEST_SUBJECT = 'Testing
15
16    PRIVATE STATIC Vehicle__c createVehicle(){
17        Vehicle__c Vehicle = new Vehicle__C(name = 'SuperTruck');
18        return Vehicle;
19    }
```

```

20     PRIVATE STATIC Product2 createEq(){
21         product2 equipment = new product2(name =
22             'SuperEquipment',
23                                     lifespan_months__C = 10,
24                                     maintenance_cycle__C =
25                                     10,
26                                     replacement_part__c =
27                                     true);
28     }
29     PRIVATE STATIC Case createMaintenanceRequest(id vehicleId, id
30     equipmentId){
31         case cs = new case(Type=REPAIR,
32                             Status=STATUS_NEW,
33                             Origin=REQUEST_ORIGIN,
34                             Subject=REQUEST_SUBJECT,
35                             Equipment__c=equipmentId,
36                             Vehicle__c=vehicleId);
37     }
38     PRIVATE STATIC Equipment_Maintenance_Item__c
39     createWorkPart(id equipmentId,id requestId){
40         Equipment_Maintenance_Item__c wp = new
41         Equipment_Maintenance_Item__c(Equipment__c = equipmentId,
42         Maintenance_Request__c = requestId);
43     }
44     @istest
45     private static void testMaintenanceRequestPositive(){
46         Vehicle__c vehicle = createVehicle();
47         insert vehicle;
48         id vehicleId = vehicle.Id;
49
50         Product2 equipment = createEq();
51         insert equipment;

```



```

53         id equipmentId = equipment.Id;
54
55         case somethingToUpdate =
56             createMaintenanceRequest(vehicleId,equipmentId);
57             insert somethingToUpdate;
58
59             Equipment_Maintenance_Item__c workP =
60             createWorkPart(equipmentId,somethingToUpdate.id);
61             insert workP;
62
63             test.startTest();
64             somethingToUpdate.status = CLOSED;
65             update somethingToUpdate;
66             test.stopTest();
67
68             Case newReq = [Select id, subject, type, Equipment__c,
69                             Date_Reported__c, Vehicle__c, Date_Due__c
70                             from case
71                             where status =:STATUS_NEW];
72
73             Equipment_Maintenance_Item__c workPart = [select id
74                                                         from
75                                                         Equipment_Maintenance_Item__c
76                                                         where
77                                                         Maintenance_Request__c =:newReq.Id];
78
79             system.assert(workPart != null);
80             system.assert(newReq.Subject != null);
81             system.assertEquals(newReq.Type, REQUEST_TYPE);
82             SYSTEM.assertEquals(newReq.Equipment__c, equipmentId);
83             SYSTEM.assertEquals(newReq.Vehicle__c, vehicleId);
84             SYSTEM.assertEquals(newReq.Date_Reported__c,
85                                 system.today());
86     }
87
88     @istest
89     private static void testMaintenanceRequestNegative(){
90         Vehicle__C vehicle = createVehicle();
91         insert vehicle;
92         id vehicleId = vehicle.Id;

```

```

87
88     product2 equipment = createEq();
89     insert equipment;
90     id equipmentId = equipment.Id;
91
92     case emptyReq =
createMaintenanceRequest(vehicleId,equipmentId);
93     insert emptyReq;
94
95     Equipment_Maintenance_Item__c workP =
createWorkPart(equipmentId, emptyReq.Id);
96     insert workP;
97
98     test.startTest();
99     emptyReq.Status = WORKING;
100     update emptyReq;
101     test.stopTest();
102
103     list<case> allRequest = [select id
104                             from case];
105
106     Equipment_Maintenance_Item__c workPart = [select id
107                                                from
Equipment_Maintenance_Item__c
108                                                where
Maintenance_Request__c = :emptyReq.Id];
109
110     system.assert(workPart != null);
111     system.assert(allRequest.size() == 1);
112 }
113
114 @istest
115 private static void testMaintenanceRequestBulk(){
116     list<Vehicle__C> vehicleList = new list<Vehicle__C>();
117     list<Product2> equipmentList = new list<Product2>();
118     list<Equipment_Maintenance_Item__c> workPartList = new
list<Equipment_Maintenance_Item__c>();
119     list<case> requestList = new list<case>();
120     list<id> oldRequestIds = new list<id>();
121

```

```

122     for(integer i = 0; i < 300; i++){
123         vehicleList.add(createVehicle());
124         equipmentList.add(createEq());
125     }
126     insert vehicleList;
127     insert equipmentList;
128
129     for(integer i = 0; i < 300; i++){
130
131         requestList.add(createMaintenanceRequest(vehicleList.get(i).id,
132             equipmentList.get(i).id));
133     }
134     insert requestList;
135
136     for(integer i = 0; i < 300; i++){
137
138         workPartList.add(createWorkPart(equipmentList.get(i).id,
139             requestList.get(i).id));
140     }
141     insert workPartList;
142
143     test.startTest();
144     for(case req : requestList){
145         req.Status = CLOSED;
146         oldRequestIds.add(req.Id);
147     }
148     update requestList;
149     test.stopTest();
150
151     list<case> allRequests = [select id
152         from case
153         where status =: STATUS_NEW];
154
155     list<Equipment_Maintenance_Item__c> workParts = [select
156         id
157         from
158         Equipment_Maintenance_Item__c
159         where
160         Maintenance_Request__c in: oldRequestIds];
161

```

```
155         system.assert(allRequests.size() == 300);
156     }
157 }
```

```
1  MaintenanceRequestHelper.apxc :-
2
3
4
5  public with sharing class MaintenanceRequestHelper {
6      public static void updateWorkOrders(List<Case> updWorkOrders,
7      Map<Id,Case> nonUpdCaseMap) {
8          Set<Id> validIds = new Set<Id>();
9
10         For (Case c : updWorkOrders){
11             if (nonUpdCaseMap.get(c.Id).Status != 'Closed' &&
12             c.Status == 'Closed'){
13                 if (c.Type == 'Repair' || c.Type == 'Routine
14
15                     validIds.add(c.Id);
16
17             }
18         }
19
20         if (!validIds.isEmpty()){
21             List<Case> newCases = new List<Case>();
22             Map<Id,Case> closedCasesM = new Map<Id,Case>([SELECT
23             Id, Vehicle__c, Equipment__c,
24             Equipment__r.Maintenance_Cycle__c,(SELECT
25             Id,Equipment__c,Quantity__c FROM Equipment_Maintenance_Items__r)
26             FROM
27             Case WHERE Id IN :validIds]);
28             Map<Id,Decimal> maintenanceCycles = new
29             Map<ID,Decimal>();
30             AggregateResult[] results = [SELECT
31             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];
26
27     for (AggregateResult ar : results){
28         maintenanceCycles.put((Id)
ar.get('Maintenance_Request__c'), (Decimal) ar.get('cycle'));
29     }
30
31     for(Case cc : closedCasesM.values()){
32         Case nc = new Case (
33             ParentId = cc.Id,
34             Status = 'New',
35             Subject = 'Routine Maintenance',
36             Type = 'Routine Maintenance',
37             Vehicle__c = cc.Vehicle__c,
38             Equipment__c =cc.Equipment__c,
39             Origin = 'Web',
40             Date_Reported__c = Date.Today()
41
42         );
43
44         If (maintenanceCycles.containsKey(cc.Id)){
45             nc.Date_Due__c =
Date.today().addDays((Integer) maintenanceCycles.get(cc.Id));
46         }
47
48         newCases.add(nc);
49     }
50
51     insert newCases;
52
53     List<Equipment_Maintenance_Item__c> clonedWPs = new
List<Equipment_Maintenance_Item__c>();
54     for (Case nc : newCases){
55         for (Equipment_Maintenance_Item__c wp :
closedCasesM.get(nc.ParentId).Equipment_Maintenance_Items__r){
56             Equipment_Maintenance_Item__c wpClone =
wp.clone();
57             wpClone.Maintenance_Request__c = nc.Id;

```

```

58             ClonedWPs.add(wpClone);
59
60         }
61     }
62     insert ClonedWPs;
63 }
64 }
65 }
66 MaintenanceRequest.apxt :-
67
68
69 trigger MaintenanceRequest on Case (before update, after update)
70 {
71     if(Trigger.isUpdate && Trigger.isAfter){
72         MaintenanceRequestHelper.updateWorkOrders(Trigger.New,
73             Trigger.OldMap);
74     }
75 }

```

### **CHALLENGE 5-Test callout logic**

Build tests for your callout using the included class for the callout mock (**WarehouseCalloutServiceMock**) and callout test class (**WarehouseCalloutServiceTest**) in the package. You must have 100% test coverage to pass this challenge and assert values to prove that your logic is working as expected.

### **Solution:**

- Go to the developer console use below code

```

1 WarehouseCalloutService.apxc :-
2
3
4 public with sharing class WarehouseCalloutService {
5
6     private static final String WAREHOUSE_URL = 'https://th-

```

```

7
8     //@future(callout=true)
9     public static void runWarehouseEquipmentSync(){
10
11         Http http = new Http();
12         HttpRequest request = new HttpRequest();
13
14         request.setEndpoint(WAREHOUSE_URL);
15         request.setMethod('GET');
16         HttpResponse response = http.send(request);
17
18
19         List<Product2> warehouseEq = new List<Product2>();
20
21         if (response.getStatusCode() == 200){
22             List<Object> jsonResponse =
23             (List<Object>)JSON.deserializeUntyped(response.getBody());
24             System.debug(response.getBody());
25
26             for (Object eq : jsonResponse){
27                 Map<String,Object> mapJson =
28                 (Map<String,Object>)eq;
29                 Product2 myEq = new Product2();
30                 myEq.Replacement_Part__c = (Boolean)
31                 mapJson.get('replacement');
32                 myEq.Name = (String) mapJson.get('name');
33                 myEq.Maintenance_Cycle__c = (Integer)
34                 mapJson.get('maintenanceperiod');
35                 myEq.Lifespan_Months__c = (Integer)
36                 mapJson.get('lifespan');
37                 myEq.Cost__c = (Decimal) mapJson.get('lifespan');
38                 myEq.Warehouse_SKU__c = (String)
39                 mapJson.get('sku');
40                 myEq.Current_Inventory__c = (Double)
41                 mapJson.get('quantity');
42                 warehouseEq.add(myEq);
43             }
44
45             if (warehouseEq.size() > 0){
46                 upsert warehouseEq;
47             }
48         }
49     }

```

```

40         System.debug('Your equipment was synced with the
41         System.debug(warehouseEq);
42     }
43
44 }
45 }
46 }
47
48
49 WarehouseCalloutServiceTest.apxc :-
50
51
52 @isTest
53
54 private class WarehouseCalloutServiceTest {
55     @isTest
56     static void testWareHouseCallout(){
57         Test.startTest();
58         // implement mock callout test here
59         Test.setMock(HTTPCalloutMock.class, new
WarehouseCalloutServiceMock());
60         WarehouseCalloutService.runWarehouseEquipmentSync();
61         Test.stopTest();
62         System.assertEquals(1, [SELECT count() FROM Product2]);
63     }
64 }
65
66
67 WarehouseCalloutServiceMock.apxc :-
68
69
70 @isTest
71 global class WarehouseCalloutServiceMock implements
HttpCalloutMock {
72     // implement http mock callout
73     global static HttpResponse respond(HttpRequest request){
74
75         System.assertEquals('https://th-superbadge-
));

```



```

76         System.assertEquals('GET', request.getMethod());
77
78         // Create a fake response
79         HttpResponse response = new HttpResponse();
80         response.setHeader('Content-Type', 'application/json');
81
82         response.setBody(' [{"_id": "55d66226726b611100aaf741", "replacement
83
84         response.setStatusCode(200);
85         return response;
86     }
87 }

```

## CHALLENGE 6-Test scheduling logic

Build unit tests for the class **WarehouseSyncSchedule** in a class named **WarehouseSyncScheduleTest**. You must have 100% test coverage to pass this challenge and assert values to prove that your logic is working as expected.

- Go to the developer console use below code

```

1  WarehouseSyncSchedule.apxc :-
2
3  global class WarehouseSyncSchedule implements Schedulable {
4      global void execute(SchedulableContext ctx) {
5
6          WarehouseCalloutService.runWarehouseEquipmentSync();
7      }
8  }
9
10 WarehouseSyncScheduleTest.apxc :-
11
12 @isTest
13 public class WarehouseSyncScheduleTest {
14

```

```

15     @isTest static void WarehousescheduleTest(){
16         String scheduleTime = '00 00 01 * * ?';
17         Test.startTest();
18         Test.setMock(HttpCalloutMock.class, new
WarehouseCalloutServiceMock());
19         String jobID=System.schedule('Warehouse Time To Schedule

20         Test.stopTest();
21         //Contains schedule information for a scheduled job.
CronTrigger is similar to a cron job on UNIX systems.
22         // This object is available in API version 17.0 and
later.
23         CronTrigger a=[SELECT Id FROM CronTrigger where
NextFireTime > today];
24         System.assertEquals(jobID, a.Id,'Schedule ');
25
26
27     }
28 }

```

## 2. Superbadge

# Process Automation Specialist

Showcase your mastery of business process automation without writing a line of code.

[https://trailhead.salesforce.com/content/learn/superbadges/superbadge\\_process\\_automation?trailmix\\_creator\\_id=trailblazerconnect&trailmix\\_slug=salesforce-developer-catalyst](https://trailhead.salesforce.com/content/learn/superbadges/superbadge_process_automation?trailmix_creator_id=trailblazerconnect&trailmix_slug=salesforce-developer-catalyst)

## CHALLENGE 1:

### Validation rule on Lead

Search for Validation rule and create a new under Leads

**Rule Name:** Anything

**Error Condition Formula :**

OR(AND(LEN(State) > 2,

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:NM:NY:NC:ND:OH:OK:OR:PA:RI:SC:SD:TN:TX:UT:VT:VA:WA:WV:WI:WY", State)) ), NOT(OR(Country = "US", Country = "USA", Country = "United States", ISBLANK(Country))))

### Create two Queues:

Search in quick box and select lead as object and create the below queues.

**Queue Name:** Rainbow Sales ; **AND** Assembly System Sales

### Assignment Rule:

Search from quick box and create a new.

**Rule Name:** Anything

Create two rule entries and fill like below.

## Challenge 2: Automate Accounts

Create 4 Roll Up Summary fields as below:

**Field 1:** Label: **Number of deals**

Summary Type: **COUNT**

Summarized Object: **Opportunity**

Filter Criteria: **None**

**Field 2:** Label: **Number of won deals**

Summary Type: **COUNT**

Summarized Object: **Opportunity**

Filter Criteria: **Stage EQUALS Closed Won**

**Field 3:** Label: **Last won deal date**

Summary Type: **MAX**

Field to Aggregate: **Opportunity: Close Date**

Summarized Object: **Opportunity**

Filter Criteria: **Stage EQUALS Closed Won**

**Field 4: Label: Amount of won deals**

Summary Type: **SUM**

Field to Aggregate: **Opportunity: Amount**

Summarized Object: **Opportunity**

Filter Criteria: **Stage EQUALS Closed Won**

And 2 Formula Fields with below:

**Field 5: Label: Deal win percent**

Return Type: **Percent**

Decimal Places: 2

Formula: *(Number\_of\_won\_deals\_\_c / Number\_of\_deals\_\_c)*

**Field 6: Label: Call for Service**

Return Type: **Text**

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")*

**Create 2 validation rules as below**

**Validation Rule 1 : Rule Name :** US\_Address (*Anything*)

**Error Condition Formula :**

*OR(AND(LEN(BillingState) > 2,  
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:NM:NY:NC:ND:OH:OK:OR:PA:RI:SC:SD:TN:TX:UT:VT:VA:WA:WV:WI:WY", BillingState ))  
) ,AND(LEN(ShippingState) > 2,  
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:NM:NY:NC:ND:OH:OK:OR:PA:RI:SC:SD:TN:TX:UT:VT:VA:WA:WV:WI:WY", ShippingState))  
) ,NOT(OR(BillingCountry = "US",BillingCountry = "USA",BillingCountry = "United States",  
ISBLANK(BillingCountry))),  
NOT(OR(ShippingCountry = "US",ShippingCountry = "USA",ShippingCountry = "United States", ISBLANK(ShippingCountry))))*

*Copy*

**Error Message :** You can not 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

**VALIDATION RULE 2 : Rule Name :** Name Change

**Error Condition Formula :**

**Error Message :** You can't change the Account name for "Customer – Direct" or

“Customer – Channel”

**Error Location :** Account Name

Sometimes when validation is right and it doesn't work rightly just delete and recreate it from scratch.

## Challenge 3: Create Robot Setup Object

[Create a custom object](#) **Robot Setup** with a Master-Detail relationship to the **opportunity** include Autonumber the record name, starting with 0 using name format: ROBOT SETUP-{0000}.

Use the following field names.

Date, Date\_\_c : Date type

Notes, Notes\_\_c : Text type

Day of the Week, Day\_of\_the\_Week\_\_c : Number

## Challenge 4: Create Sales Process and Validate Opportunities

```
IF(( Amount > 100000 && Approved__c <> True && ISPICKVAL( StageName,'Closed Won' ) ),True,False)
```

Copy

### CHALLENGE 5:

**Node 1 Criteria.:** Opportunity.Account Type = customer and Opportunity.account id not equal to null

**Node 2 Criteria.:** Opportunity.Account Type = Prospect, Opportunity stage = prospecting and Opportunity.account id not equal to null

**Node 3 Criteria.:** Opportunity Stage = Negotiation/Review and Opportunity Amount > 100,000

**Node 4 Criteria.:** Opportunity Stage = Closed Won

### CHALLENGE 5:

Add 5 elements , Save and Activate the flow.

Now search **Lightning App Builder**

Add **New page:** Select Record Type

**Label:** *Product\_Quick\_Search*

**Object:** *Opportunity*

Pick any template

And Drag and drop Flows from Left palette, select the flow we made and Save!

## Challenge 7: Automate Setups

This is probably the most simple step to be stuck on for days!

Let's solve it to claim our badge super fast!

Search for the field "Day of the Week" on [robot object](#) and change the field type from Number to formula field of return type: text and use the below formula.

If you don't find the formula field in the edit option of the field, you can delete and recreate the field with the same name as well.

Formula being :

Case ( WEEKDAY( Date\_\_c ),

1, "Sunday",

2, "Monday",

3, "Tuesday",

4, "Wednesday",

5, "Thursday",

6, "Friday",

7, "Saturday",

Text(WEEKDay(Date\_\_c)))

Go to the Process we created in step 5. Clone this Process. Go to action on the last node where we set up robo record. Change formula of date field from

**[Opportunity].CloseDate + 180..to..** below formula.

```
1 CASE(MOD([Opportunity].CloseDate + 180 - DATE(1900, 1, 7), 7), 0, [Opportunity].CloseDate + 181, 6, [Opportunity].CloseDate + 182, [Opportunity].CloseDate + 180)
```

DONE :)

COMPLETED BOTH BADGES.