



# Salesforce Interview Preparation Toolkit

## Formula and Validation Rules in Salesforce CRM

### Description:

BISP is committed to provide BEST learning material to the beginners and advance learners. In the same series, we have prepared a complete end-to-end Hands-on Beginner's Guide for Salesforce. The document focuses on some common interview questions related to Formulas and Validation Rules. [Join our professional training program and learn from experts.](#)

### History:

| Version | Description | Change | Author                 | Publish Date              |
|---------|-------------|--------|------------------------|---------------------------|
| 0.1     | Initial     | Draft  | Chandra Prakash Sharma | 10 <sup>th</sup> Apr 2013 |
| 0.1     | Review#1    |        | Amit Sharma            | 10 <sup>th</sup> Apr 2013 |

## Question : 1

SAP\_Account\_Id\_\_c and Navison\_Account\_Id\_\_c are two Text fields, Sell\_to\_\_c and Ship\_to\_\_c are two checkboxes. The rule should ensure that a record which has either SAP\_Account\_Id\_\_c or Navison\_Account\_Id\_\_c filled in (or both), can be saved only if either Sell\_to\_\_c and Ship\_to\_\_c (or both) are checked.

### Solution :

SAP Account Edit

Save Save & New Cancel

**Error: Invalid Data.**  
Review all error messages below to correct your data.

Information = Required Information

SAP Account Name  Owner yogesh sharma

SAP\_Account\_Id

Navison\_Account\_Id

Sell\_to

ship\_to

**Error: Please checked at least one checkbox.**

Save Save & New Cancel

Go to **Setup > Create > Objects** > Select object name(Ex: Sap Account), then go to down select Validation rule Click on **New** button, you can see below.

| Action                                     | Rule Name       | Error Location | Error Message  | Active | Modified By                      |
|--|-----------------|----------------|--|--------|----------------------------------|
| <a href="#">Edit</a>   <a href="#">Del</a> | For Sap Account | ship_to        | Please Check both Check box and Fill both Text box Field.. | ✓      | yogesh sharma, 1/24/2014 4:41 PM |

Then write here validation rule you can see below.

Example:  More Examples ...

Display an error if Discount is more than 30%

If this formula expression is **true**, display the text defined in the Error Message area

```
IF((AND(Sell_to__c=false ,ship_to__c=false)),  
(AND(Sell_to__c=false ,ship_to__c=false) ||  
AND(ISBLANK(SAP_Account_Id__c),ISBLANK(  
Navison_Account_Id__c))),  
False  
)
```

Functions

-- All Function Categories --

- ABS
- AND
- BEGINS
- BLANKVALUE
- BR
- CASE

ABS(number)  
Returns the absolute value of a number, a number without its sign

[Help on this function](#)

**Note :** If you need Both check box check use this Validation.

OR( ISBLANK( SAP\_Account\_Id\_\_c ) , ISBLANK( Navison\_Account\_Id\_\_c ) ,IF( Sell\_to\_\_c = false, true ,false) ,IF( ship\_to\_\_c = false, true ,false) )

### Question : 2

Create a validation rule that when My\_Check\_\_c is unchecked, the TextField1\_\_c and TextField2\_\_c should have no values.

### Solution :

check for check Box Edit

Save Save & New Cancel

Error: Invalid Data.  
Review all error messages below to correct your data.

Information ! = Required Information

check for check Box Name  Owner yogesh sharma

TextField1

TextField2

My\_Check

Error: Please checked Checkbox.

Save Save & New Cancel

Below is validation Rule ..

### check for check Box Validation Rule

[Back to check for check Box](#)



#### Validation Rule Detail

Edit Clone

|                         |  |                |                                     |
|-------------------------|--|----------------|-------------------------------------|
| Rule Name               | chbox_my   | Active         | <input checked="" type="checkbox"/> |
| Error Condition Formula | OR(My_Check__c== FALSE , ( OR( ISBLANK( TextField1__c ) , ISBLANK( TextField2__c ) ) ) ) |                |                                     |
| Error Message           | Please checked Checkbox.   | Error Location | My_Check                            |
| Description             |  |                |                                     |
| Created By              | yogesh sharma, 2/3/2014 11:21 AM   | Modified By    | yogesh sharma, 2/3/2014 1:56 PM     |

Edit Clone

### Code :

```
OR(My_Check__c== FALSE ,  
(OR( ISBLANK( TextField1__c ) , ISBLANK( TextField2__c ) ) ) )
```

### Question 3 :

#### Validation rule for currency with 2 decimal values

Example : Valid: 12.00, 12.10, 12.01, 12.56

Not Valid: 12, 12.1, 12.0,12.203

#### Solution :

Example: `Discount_Percent__c > 0.30` More Examples ...

Display an error if Discount is more than 30%

If this formula expression is **true**, display the text defined in the Error Message area

Insert Field    Insert Operator ▾

`NOT(Regex(Price__c,\"[0-9]+.[0-9]{2}\"))`

Check Syntax

Functions

-- All Function Categories -- ▾

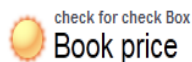
- ABS
- AND
- BEGINS
- BLANKVALUE
- BR
- CASE

Insert Selected Function

ABS(number)  
Returns the absolute value of a number, a number without its sign

[Help on this function](#)

`NOT(Regex(Price__c,\"[0-9]+.[0-9]{2}\"))`



Book price



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#### check for check Box Detail

[Edit](#) [Delete](#) [Clone](#)

check for check Box Name    Book price

Owner    [yogesh sharma \[Change\]](#)

Price    102.34

Created By    [yogesh sharma](#), 1/27/2014 1:54 PM

Last Modified By    [yogesh sharma](#), 1/27/2014 1:54 PM

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### Question 4 :

I need to apply to formula to the field which depends on some other field. I created a picklist field which contains BOX, Class-A, Class-B, Class-C. If anyone selected BOX in that picklist field then automatically Ticket fare has to reflect as 100,if they selected Class-A then 75 has to reflect and so on.

#### Solution :

Simple Formula    Advanced Formula

Insert Field    Insert Operator

BISP  
Business Intelligence Solution Providers Inc.

Functions  
-- All Function Categories --  
ABS  
AND  
BEGINS  
BLANKVALUE  
BR  
CASE  
Insert Selected Function

Ticket Fare (Text) =

```
IF(ISPICKVAL( Seats_Category__c, 'Box'),'100',IF(ISPICKVAL(Seats_Category__c, 'Class-A'),'75',IF(ISPICKVAL(Seats_Category__c, 'Class-B'),'50',IF(ISPICKVAL(Seats_Category__c, 'Class-C'),'25','0'))))
```

**Code :**

```
IF(ISPICKVAL( Seats_Category__c, 'Box'),'100',IF(ISPICKVAL(Seats_Category__c, 'Class-A'),'75',IF(ISPICKVAL(Seats_Category__c, 'Class-B'),'50',IF(ISPICKVAL(Seats_Category__c, 'Class-C'),'25','0'))))
```

**Result :**



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[Open Activities \(0\)](#) | [Activity History \(0\)](#)

**check for check Box Detail**

Edit Delete Clone

check for check Box Name    Mysql\_try

Owner    [yogesh sharma](#) [Change]

|                |         |
|----------------|---------|
| Seats_Category | Class-C |
| Ticket Fare    | 25      |

Created By    [yogesh sharma](#)    1/27/2014 3:55 PM

Last Modified By    [yogesh sharma](#)    1/27/2014 3:55 PM

Edit Delete Clone

**Question 5: Compare 2 checkboxes to complete a text field.**

Need to compare the contents of 2 checkbox fields. If they both are checked, I want the new field to display "Digital and Physical".

If the digital checkbox field is checked, but the physical one is not, then I want to display "Digital Only".

If the physical checkbox field is checked but the digital one is not, then I want to display "Physical Only".

If neither fields are checked, then I want to display "Neither".

**Solution :**

|                              |                                     |
|------------------------------|-------------------------------------|
| check for check Box Name     | myac                                |
| Channel_Digital_Distribution | <input checked="" type="checkbox"/> |
| Channel_Physical_Fulfillment | <input checked="" type="checkbox"/> |
| Show Value                   | Digital and Physical                |
| Created By                   | voqesh sharma, 2/4/2014 10:22 AM    |

|                              |                                     |
|------------------------------|-------------------------------------|
| check for check Box Name     | myac                                |
| Channel_Digital_Distribution | <input checked="" type="checkbox"/> |
| Channel_Physical_Fulfillment | <input type="checkbox"/>            |
| Show Value                   | Digital Only                        |
| Created By                   | voqesh sharma, 2/4/2014 10:44 AM    |

|                              |                                     |
|------------------------------|-------------------------------------|
| check for check Box Name     | myac                                |
| Channel_Digital_Distribution | <input type="checkbox"/>            |
| Channel_Physical_Fulfillment | <input checked="" type="checkbox"/> |
| Show Value                   | Physical Only                       |
| Created By                   | voqesh sharma, 2/4/2014 10:45 AM    |

|                              |                                  |
|------------------------------|----------------------------------|
| check for check Box Name     | myac                             |
| Channel_Digital_Distribution | <input type="checkbox"/>         |
| Channel_Physical_Fulfillment | <input type="checkbox"/>         |
| Show Value                   | Neither                          |
| Created By                   | voqesh sharma, 2/4/2014 10:46 AM |

### Validation Rule :

|  |                  |
|--|------------------|
| Simple Formula   | Advanced Formula |
| Insert Field   | Insert Operator  |
| Show Value (Text) =<br><code>IF( AND( Channel_Digital_Distribution__c == False, Channel_Physical_Fulfillment__c == False) , "Neither", IF( AND( Channel_Digital_Distribution__c == True , Channel_Physical_Fulfillment__c == True) , "Digital and Physical", IF( Channel_Physical_Fulfillment__c == True , "Physical Only", IF(Channel_Digital_Distribution__c == True , " Digital Only" , "False") ) ) )</code> |                  |

### Code :

```
IF( AND( Channel_Digital_Distribution__c == False, Channel_Physical_Fulfillment__c == False) , "Neither", IF( AND( Channel_Digital_Distribution__c == True , Channel_Physical_Fulfillment__c == True) , "Digital and Physical", IF( Channel_Physical_Fulfillment__c == True , "Physical Only", IF(Channel_Digital_Distribution__c == True , " Digital Only" , "False") ) ) )
```

### Question 6 : Calculate Case Age excluding weekends.

Create one formula field (returns number) which will calculate Case Age (In days) such that it will keep incrementing until case is closed. If the case is closed it will stop counting. This excludes weekends.

### Solution :

### Hi-Level Detail

[Edit](#) [Delete](#) [Clone](#)



Owner [yogesh sharma \[Change\]](#)

|                        |   |
|------------------------|---|
| Hi-Level Name          | Mysql_try                                       |
| Start Date             | 2/4/2014  |
| End Date               | 3/27/2014                                       |
| Age excluding weekends | 45  |
| Created By             | <a href="#">yogesh sharma, 2/4/2014 3:38 PM</a> |

Last Modified By [yogesh sharma, 2/4/2014 3:38 PM](#)

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### Formula :

[Simple Formula](#) [Advanced Formula](#)

[Insert Field](#)

[Insert Operator](#) ▼



Age excluding weekends (Number) =

```
DAY( End_Date__c )+ DAY(Start_Date__c)-CASE(MOD( Start_Date__c - DATE(1985,6,24), 7),  
0 , CASE( MOD( End_Date__c - Start_Date__c , 7),1,0,2,0,3,0,4,0,5,1,6,2,0),  
1 , CASE( MOD( End_Date__c - Start_Date__c , 7),0,0,1,0,2,0,3,0,4,0,5,2,2),  
2 , CASE( MOD( End_Date__c - Start_Date__c , 7),0,0,1,0,2,0,3,1,2),  
3 , CASE( MOD( End_Date__c - Start_Date__c , 7),0,0,1,0,2,1,2),  
4 , CASE( MOD( End_Date__c - Start_Date__c , 7),0,0,1,1,2),  
5 , CASE( MOD( End_Date__c - Start_Date__c , 7),0,1,2),  
6 , CASE( MOD( End_Date__c - Start_Date__c , 7),6,2,1),  
999)  
+  
(FLOOR(( End_Date__c - Start_Date__c )/7)*2)
```

### Question 7 : validation rules to validate email address format.

Since it is a text field, there is possibility that user will enter wrong email address for e.g.: abc2ht.com (missing '@'). is there any validation formula rule that can validate email address format can share here.?

### Solution :

check for check Box Validation Rule

[Back to check for check Box](#)



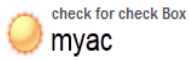
### Validation Rule Detail

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|                         |  |                |   |
|-------------------------|--|----------------|---|
| Rule Name               | ValidationForEmail   | Active         | <input checked="" type="checkbox"/>               |
| Error Condition Formula | NOT(REGEX( Email_Id__c ,"[a-zA-Z0-9_-]+@[a-zA-Z]+.[a-zA-Z]{2,4}")) |                |   |
| Error Message           | Please Enter Valid Mail Id.  | Error Location | Email Id  |
| Description             |  |                |   |
| Created By              | <a href="#">yogesh sharma, 1/28/2014 11:00 AM</a>                  | Modified By    | <a href="#">yogesh sharma, 1/28/2014 11:17 AM</a> |

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### Code :



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[Open Activities \(0\)](#) | [Activity History \(0\)](#)

### check for check Box Detail

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check for check Box Name myac

Owner [yogesh sharma \[Change\]](#)

Email Id **Chandra@bisp.com**

Created By [yogesh sharma](#), 1/28/2014 11:25 AM

Last Modified By [yogesh sharma](#), 1/28/2014 11:25 AM

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### Question 8 : Limit number of selections from multi-select picklist.

There a way to restrict users to only picking 3 selections from a multi-select picklist that contains 20 options.?

### Solution 8 :

**City Edit** [Save](#) [Save & New](#) [Cancel](#)

**Error: Invalid Data.**  
Review all error messages below to correct your data.

**Information**

City Name  Owner yogesh sharma

Multi\_Picklist **Error: Only Select Three Option.**

| Available | Chosen |
|-----------|--------|
| E         | A      |
| F         | B      |
| G         | C      |
| H         | D      |
| I         |        |

[Save](#) [Save & New](#) [Cancel](#)

**City Detail** [Edit](#) [Delete](#) [Clone](#)

City Name myac

**Multi\_Picklist** **A; B; C**

Created By [yogesh sharma](#), 2/5/2014 2:25 PM

[Edit](#) [Delete](#) [Clone](#)



## Validation Rule Detail

Edit Clone



|                         |   |                |                                     |
|-------------------------|---|----------------|-------------------------------------|
| Rule Name               | MultiSelect   | Active         | <input checked="" type="checkbox"/> |
| Error Condition Formula | IF(INCLUDES(Multi_Picklist__c,"A"),1,0) +<br>IF(INCLUDES( Multi_Picklist__c, "B"),1,0) +<br>IF(INCLUDES( Multi_Picklist__c, "C"),1,0) +<br>IF(INCLUDES( Multi_Picklist__c, "D"),1,0) +<br>IF(INCLUDES( Multi_Picklist__c, "E"),1,0) > 3 |                |                                     |
| Error Message           | Only Select Three Option.   | Error Location | Multi_Picklist                      |
| Description             |   |                |                                     |
| Created By              | yoqesh sharma, 2/5/2014 2:24 PM   | Modified By    | yoqesh sharma, 2/5/2014 2:24 PM     |

Edit Clone

### Code :

```
IF(INCLUDES(Multi_Picklist__c, "A"),1,0) +  
IF(INCLUDES( Multi_Picklist__c, "B"),1,0) +  
IF(INCLUDES( Multi_Picklist__c, "C"),1,0) +  
IF(INCLUDES( Multi_Picklist__c, "D"),1,0) +  
IF(INCLUDES( Multi_Picklist__c, "E"),1,0) > 3
```

### Question 9 : Text field allows [a-z][A-Z] and space bar only.

I have created one custom text(Text01\_\_c) field. This field allows characters [a-z][A-Z] and space bar only. Any formula or validation rule or workflow rule. It not allows numeric's [0-9] and special character.

#### Solution :

```
NOT(REGEX(Text01__c, "[a-zA-Z ]*"))
```

### Question 10 : Validation Rule Help Please.

Trying to create an error when an opportunity stage is dead that you have to pick a reason why from a picklist. That part I got... now trying to limit it to 2 departments which is another picklist.

#### Solution :

The screenshot shows the validation rule editor interface with the following content:

```
AND (  
  OR (  
    ISPICKVAL( StageName, "Closed Lost"),  
    ISPICKVAL( StageName, "Dead")),  
  ISPICKVAL( Reason_Lost_or_Dead_2__c, "" ),  
  OR (  
    ISPICKVAL( CCI_Division_Region__c, "CCI Networks"),  
    ISPICKVAL( CCI_Division_Region__c, "CCI Distribution")  
  )  
)
```

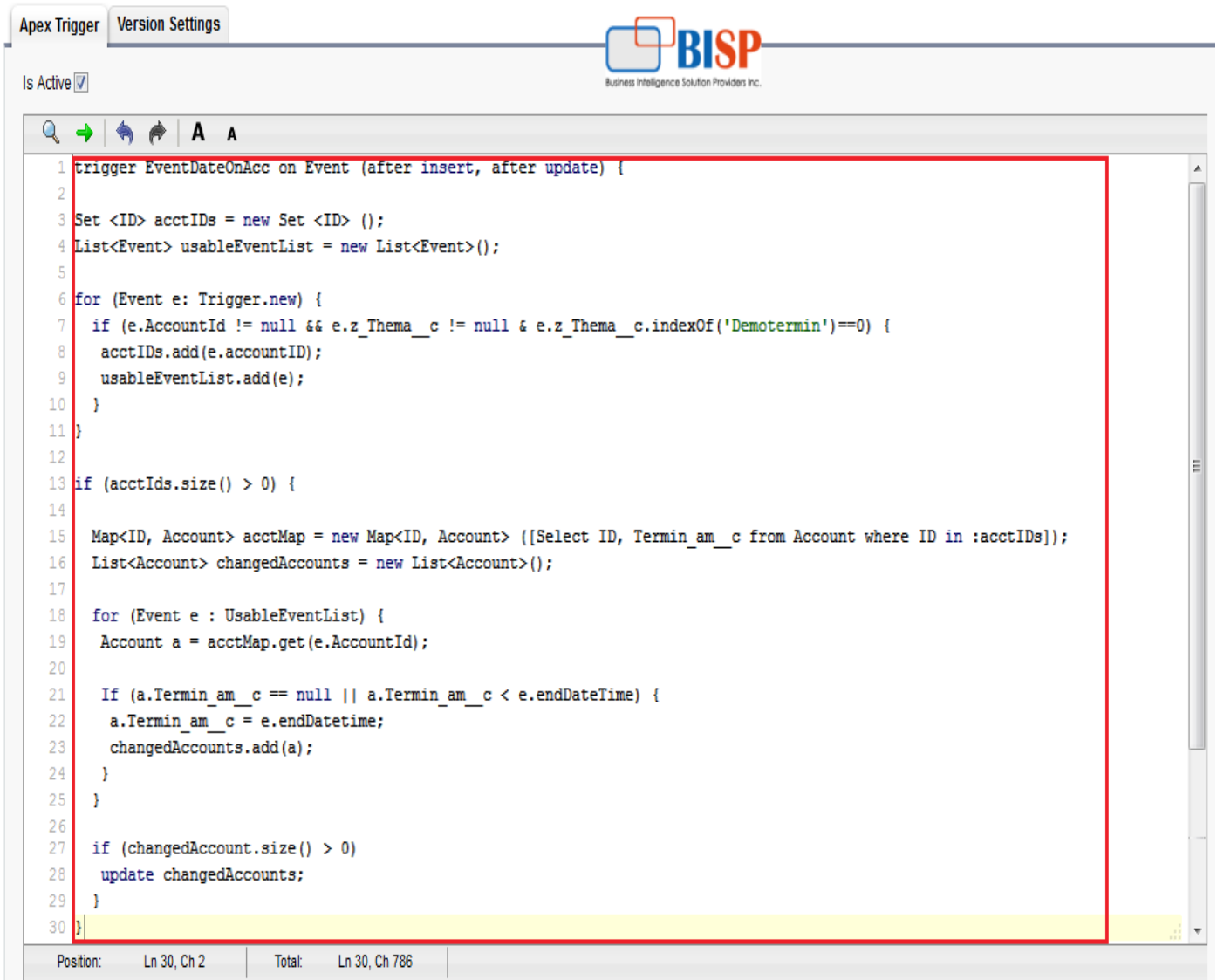
Buttons: Insert Field, Insert Operator, Check Syntax

## Question 11 : Number of days between Event and CloseDate.

We want to know how many days it takes from visiting the customer until the opportunity is closed. We use events only for these visits, so every account only has one event. What I need to do is to copy the date of this event either to an opportunity or account to add another custom field to calculate the days between start date (I already cloned this field in the event to use it in formulas) and close date.

Another problem is, that CloseDate is only Date and not DateTime like my cloned StartDate. Any chance to calculate it anyway.?

**Solution :** Here Apex Trigger Code.



```
1 trigger EventDateOnAcc on Event (after insert, after update) {
2
3 Set <ID> acctIDs = new Set <ID> ();
4 List<Event> usableEventList = new List<Event>();
5
6 for (Event e: Trigger.new) {
7     if (e.AccountId != null && e.z_Thema__c != null & e.z_Thema__c.indexOf('Demotermin')==0) {
8         acctIDs.add(e.accountID);
9         usableEventList.add(e);
10    }
11 }
12
13 if (acctIDs.size() > 0) {
14
15     Map<ID, Account> acctMap = new Map<ID, Account> ([Select ID, Termin_am__c from Account where ID in :acctIDs]);
16     List<Account> changedAccounts = new List<Account>();
17
18     for (Event e : UsableEventList) {
19         Account a = acctMap.get(e.AccountId);
20
21         If (a.Termin_am__c == null || a.Termin_am__c < e.endDateTime) {
22             a.Termin_am__c = e.endDateTime;
23             changedAccounts.add(a);
24         }
25     }
26
27     if (changedAccount.size() > 0)
28         update changedAccounts;
29 }
30 }
```

Position: Ln 30, Ch 2 | Total: Ln 30, Ch 786

Apex Class : Here you can write apex test class.

## Apex Class



Apex Class Edit

Save

Quick Save

Cancel

Apex Class

Version Settings

Search, navigation, and formatting icons

```
1 @isTest
2 private class TestEventDateOnAccTrigger {
3
4 @isTest
5 static void test () {
6
7     Account acc = new Account (Name='Test Account');
8     insert acc;
9
10    Event evt = new Event (<... set fields here>);
11    insert evt;
12
13    evt.endDateTime = DateTime.newInstance (<set new time here>);
14    update evt;
15
16 }
17 }
18
```

### Question 12 : Last modified date workflow rule.

Created a custom field on Case object Last modified by owner date/time. I also created a formula field and a workflow rule to insert date and time whenever Only the Case Owner modify the status field. Now i am trying to create another workflow rule that if Case Owner doesn't modify case status with in 3 days then it should send email notification to manager that the status of this case hasn't been changed by case owner in last 3 days.

#### Solution :

1. Create a formula field / return type checkbox on case.

**Error Condition Formula**

Example:  [More Examples ...](#)

Display an error if Discount is more than 30%

If this formula expression is **true**, display the text defined in the Error Message area

**IF (Today () - DATEVALUE (StatusLastModifByCaseOwner\_\_c) > 3, true, false)**

**Functions**

-- All Function Categories --

- ABS
- AND
- BEGINS
- BLANKVALUE
- BR
- CASE

ABS(number)  
Returns the absolute value of a number, a number without its sign

[Help on this function](#)

2. Create a workflow rule with entry criteria: above checkbox is true - add wf rule - email to send the notification

### Question 13: Can we have a formula field , which will be updated based on two other fields ?

In Leads Page, I want to have a Sales Score Text field (formula field ), which needs to be updated by first checking the campaign field is empty or not and has to update the Sales Score field based on other Campaign Score field (Number field).

**Solution :**

The screenshot shows a 'City Edit' form with the following fields and values:

- City Name: myac
- Campaign\_Field\_Name: (empty)
- Campaign\_Score\_Field: 125487

An error message is displayed below the Campaign\_Field\_Name field: "error : Campaign field name is empty". The BISP logo is visible in the top right corner.

The screenshot shows a formula editor window with the following fields and values:

- Insert Field: (dropdown menu)
- Insert Operator: (dropdown menu)
- Formula: `IF( ISBLANK( Campaign_Field_Name__c ),Campaign_Score_Field__c ,\"NA\")`
- Check Syntax: (button)

The BISP logo is visible in the bottom right corner.

**Code :**

```
IF(ISBLANK(Campaign_Field_Name__c),Campaign_Score_Field__c,\"NA\")
```