Before Vs After Trigger

Before Trigger:

- When you save a record (insert / update) Salesforce fires a DML statement to its database, internally.
- All the code written in the "before update" triggers, executes BEFORE that DML is committed to Salesforce Database.
- In case of update or validate record values before they're saved to the database in the same object.
- Hence if you are trying to update any value in the record, on which the trigger is fired, you need not write an update call, specifically.
- Fields like id,formula fields won't be available in before insert triggers as well.

After Trigger:

- Insert/Update related object, not the same object.
- Notification Email.
- used to access field values that are set by the system (such as a record's Id or LastModifiedDate field)

Here you can see a simple example to differentiate the values we get in before and after insert trigger.

Trigger:

```
1    trigger AccountTrigger on Account (before insert,after insert)
2  ▾ {
3  ▾     if (Trigger.isBefore && Trigger.isInsert) {
4            System.debug('Before Insert Trigger.New '+Trigger.new);
5            System.debug('Before Insert Trigger.NewMap '+Trigger.newMap);
6            System.debug('Before Insert Trigger.old '+Trigger.old);
7            System.debug('Before Insert Trigger.oldMap '+Trigger.oldMap);
8            AccountTriggerHandler.CreateAccounts(Trigger.new);
9            System.debug('After Function Call');
10           System.debug('Before Insert Trigger.New '+Trigger.new);
11           System.debug('Before Insert Trigger.NewMap '+Trigger.newMap);
12           System.debug('Before Insert Trigger.old '+Trigger.old);
13           System.debug('Before Insert Trigger.oldMap '+Trigger.oldMap);
14
15       }
16 ▾     if (Trigger.isAfter && Trigger.isInsert) {
17           System.debug('After Insert Trigger.New '+Trigger.new);
18           System.debug('After Insert Trigger.NewMap '+Trigger.newMap);
19           System.debug('After Insert Trigger.old'+Trigger.old);
20           System.debug('After Insert Trigger.oldMap '+Trigger.oldMap);
21           AccountTriggerHandler.printAccounts(Trigger.new);
22           System.debug('After Function Call');
23           System.debug('After Insert Trigger.New '+Trigger.new);
24           System.debug('After Insert Trigger.NewMap '+Trigger.newMap);
25           System.debug('After Insert Trigger.old'+Trigger.old);
26           System.debug('After Insert Trigger.oldMap '+Trigger.oldMap);
27       }
28 }
```

Trigger Handler:

```
1  ▾ public class AccountTriggerHandler {
2     public static void CreateAccounts(List<Account> acclist)
3  ▾    {
4           for(Account account : acclist)
5  ▾        {
6              if(account.ShippingState!=account.BillingState)
7  ▾            {
8                 account.ShippingState = account.BillingState;
9                 account.grandparent__c=account.Id;
10             }
11          }
12      }
13      public static void printAccounts(List<Account> acclist)
14 ▾    {
15          for(Account account : acclist)
16 ▾        {
17             System.debug('Account Details '+account);
18          }
19      }
20 }
```

After inserting two Accounts from Anonymous Window, Following values i
m getting.

Execution Log

Details

[4]|DEBUG|Before Insert Trigger.New (Account:{Id=null, IsDeleted=false, MasterRecordId=null, Name=Test Account 1, Type=null, ParentId=null, BillingStreet=null, Billi

[5]|DEBUG|Before Insert Trigger.NewMap null

[6]|DEBUG|Before Insert Trigger.old null

[7]|DEBUG|Before Insert Trigger.oldMap null

[9]|DEBUG|After Function Call

[10]|DEBUG|Before Insert Trigger.New (Account:{Id=null, IsDeleted=false, MasterRecordId=null, Name=Test Account 1, Type=null, ParentId=null, BillingStreet=null, Bill

[11]|DEBUG|Before Insert Trigger.NewMap null

[12]|DEBUG|Before Insert Trigger.old null

[13]|DEBUG|Before Insert Trigger.oldMap null

[17]|DEBUG|After Insert Trigger.New (Account:{Id=0016F000031EI3tQAC, IsDeleted=false, MasterRecordId=null, Name=Test Account 1, Type=null, ParentId=null, Billin

[18]|DEBUG|After Insert Trigger.NewMap {0016F000031EI3tQAC=Account:{Id=0016F000031EI3tQAC, IsDeleted=false, MasterRecordId=null, Name=Test Account 1, Typ

[19]|DEBUG|After Insert Trigger.oldnull

[20]|DEBUG|After Insert Trigger.oldMap null

[17]|DEBUG|Account Details Account:{Id=0016F000031EI3tQAC, IsDeleted=false, MasterRecordId=null, Name=Test Account 1, Type=null, ParentId=null, BillingStreet=r

[17]|DEBUG|Account Details Account:{Id=0016F000031EI3uQAC, IsDeleted=false, MasterRecordId=null, Name=Test Account 2, Type=null, ParentId=null, BillingStreet=r

[22]|DEBUG|After Function Call

[23]|DEBUG|After Insert Trigger.New (Account:{Id=0016F000031EI3tQAC, IsDeleted=false, MasterRecordId=null, Name=Test Account 1, Type=null, ParentId=null, Billin

[24]|DEBUG|After Insert Trigger.NewMap {0016F000031EI3tQAC=Account:{Id=0016F000031EI3tQAC, IsDeleted=false, MasterRecordId=null, Name=Test Account 1, Typ

[25]|DEBUG|After Insert Trigger.oldnull

[26]|DEBUG|After Insert Trigger.oldMap null

- Here you can see id field is null is before insert.
- Trigger.new is returning a list of Account records.
- Trigger.NewMap is returning a Map<id,Account>.
- **Note : The records that fire the after trigger are read-only.**
- **So if it is a before insert trigger, you can't query those records. Some thing like:**
- **List<Account> accList = [Select Id, Name From Account Where Id in :Trigger.New];**
- **won't work in before insert trigger because the records are not there yet. But it will work in before update trigger.**