

Project on A CRM Application on E-commerce Activities.

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Creating Developer Account

Creating a developer org in salesforce.

1. Go to <https://developer.salesforce.com/signup>

2. On the sign up form, enter the
following details :

1) First name & Last name

2) Email

3) Role : Developer

4) Company : College Name

5) County : India

6) Postal Code : pin code

7) Username : should be a combination of your name and company

This need not be an actual email id, you can give anything in the format :
username@organization.com

Click on sign me up after filling these.

Account Activation

1. Go to the inbox of the email that you used while signing up. Click on the verify account to activate your account. The email may take 5-10mins.
2. Click on Verify Account.
3. Give a password and answer a security question and click on change password.
4. Then you will redirect to your salesforce setup page.

Create Translists Object

- From the setup page -> Click on Object Manager -> Click on Create -> Click on Custom Object.
- 1) Enter the label name-> Translist
 - 2) Plural label name->Translists
 - 3) Enter Record Name Label and Format

Record Name ->Translists Name

Data Type -> Name

- Click on Allow reports and Track Field History,
- Allow search ->Save.
- Here we created translists object to store all the transaction data that is done in a particular commerce site. And this data, that is acquired is useful to identify the potential customers and therefore used to retain the valuable customers.

USE CASE :

By using Translists object, we can store all the transaction records inside this object. And the most important application is we can identify the interested customers and retain them.

Create Details of customer Object

From the setup page ? Click on Object Manager ? Click on Create ? Click on Custom Object.

1) Enter the label name->
Details of customer

2) Plural label name->
Details of customers

3) Enter Record Name Label and Format

Record Name -> Details of customer
Name

Data Type -> Name

- Click on Allow reports and Track Field History,
- Allow search -> Save.

USE CASE :

Using the DetailsOfCustomers object, we can get the details of customers like Name, contact number, mailid and other personal details and we can effectively communicate with the customers and retain the valuable customers.

Create Item Object

From the setup page -> Click on Object Manager ->Click on Create ->Click on Custom Object.

1) Enter the label name-> Item

2) Plural label name-> Items

3) Enter Record Name Label and Format

Record Name -> Item Name

Data Type -> Name

- Click on Allow reports and Track Field History,
- Allow search -> Save.
- Here we created translists object to store all the transaction data that is done in a particular commerce site. And this data, that is acquired is useful to identify the potential customers and therefore used to retain the valuable customers.

USE CASE :

Using the Item object, we can store the details of the products available in live stock and the most important advantage is that we can perform Demand Forecasting i.e we can get to know the live analysis of how many products are sold and which of them is most widely sold and which is not.

Creating A Custom Tab For Translists

Go to setup page -> type Tabs in Quick Find bar -> click on tabs -> New (under custom object tab)

Select Object (Translists) -> Select the tab style -> Next (Add to profiles page) keep it as default -> Next (Add to Custom App) uncheck the include tab ->Save.

Make sure that append tab to users' existing personal customizations is checked.

Note : Similarly, create tabs for Items and products.

Creating Fields For Translists Object

Steps to Create a Field in an Object:

While still on your salesforce account, navigate to the gear icon present in the top right corner. You will notice Setup and click on setup.

You will now be navigated to the setup page, and click on object manager and search for object “translists”.

Click on “Fields & Relationships” in the left panel.

Click on New and choose the data type that is required by the field you need.

Click next and fill the following details in the mentioned.

Click Next, Next and click on “Save and

New".

Note :Repeat the same steps to create the fields TransId, listname, ContactNo, Mailid, DateofTrans, subTot, discount, grandtot.

Fields in Translists objects follow below data types:

S No

Field Label

Data Type

TransId

Number(18,0)

listname

Text(25)

ContactNo

Phone

MailId

EMail

DateofTrans

Date

SubTot

Number(18,2)

Discount

Number(18,0)

GrandTotal

Formula(Number(18,2))

Lookup Relationship Fields :

Itemrelated

Lookup(Items)

detailsofcustomer

Lookup(detailsofcustomer)

Formula Fields :

Formula fields are custom fields that automatically provide results based on records and related records. They are a valuable and powerful tool provided by Salesforce to the Admins as they are updated automatically in real-time whenever a record is accessed.

In this project, GrandTotalfield uses formula field as a return type, where GrandTotal field is the total amount , after deduction of discount from total expense.

Insert Operator : In this , we use arithmetic and logical operators like Add, Subtract, Multiply, Division, greater than, less than, equals e.t.c.

Insert Field: Using this button, we get a list of all the fields of current object and we can use them in the formula.

Functions : It contains the basic functionalities which can be used in any formula field, such as ASCII, Today, Abs

e.t.c.

Create a formula field for Grand total field:

Click on insert field and add Subtot_c field.

Click on insert operator and insert the operator (-).

In the insert operator , insert "(" and "(".

Add the field subtot_c and add operator “*”.

Add other field discount_c and “)”, “)”.

Add operator “/” and value 100.

Click on check syntax and make sure no errors are found.

Then, click on save.

In this , we used the formula :

GrandTotal (Number)

$=\$B\$1 - (\$B\$1 * C\$2)/100$

Creating Fields For Detailsofcustomers Object

- 1) While still on your salesforce account, navigate to the gear icon present in the top right corner. You will notice Setup and click on setup.
- 2) You will now be navigated to the setup page, and click on object manager and search for object “Detailsofcustomer”.
- 3) Click on “Fields & Relationships” in the left panel.
- 4) Click on New and choose the data type (that is required by the field you need.
- 5) Click next and fill the following details in the mentioned.
- 6) Click Next, Next and click on “Save and New”.

Note : Similarly create the fields

contno, detailsofcustomer name, mailid
and tid.

Field Label	Data Type
Detailsofcustomername	text(80)
mailid	Email
Contact no	phone

Creating fields for item object

- 1) While still on your salesforce account, navigate to the gear icon present in the top right corner. You will notice Setup and click on setup.
- 2) You will now be navigated to the setup page, and click on object manager and search for object “Items”.
- 3) Click on “Fields & Relationships” in the left panel.
- 4) Click on New and choose the data type (that is required by the field you need).
- 5) Click next and fill the following details in the mentioned.
- 6) Click Next, Next and click on “Save and New”.

Note : Follow the above steps to create the fields proiname, proid, price, manfdate.

S No

Field Label

Data Type

1

price

Number

2

manfdate

Date

3

prodname

Text

Creating an App(Aws)

Go to setup, by clicking the gear icon present in the top right corner.

Navigate to Home bar and in the quick find box, search for App.

Click on APP MANAGER.

You can notice the screen like this. Now click on New Lightning App. You will find like this below.

Enter the App name(Here we entered Aws), the developer name gets automatically populated. If an image is required, you can browse the image and upload it.

Click Next, Next and you can see a Navigation Items window like this:

In the filter list, enter translists,transorders,Reports and Dashboards,details of customer, Items . Then navigate them to selected items.

Click on Next , and you can see User Profiles. This option is used when we want only certain profiles to access them.

Enter System Administrator in the filter box and add the system Administrator to the selected profile list.

Click on Save and Finish.

Now navigate to the App launcher and search for Aws and you can find the Aws app.

Create A Record For Items Object

Go to the App Launcher present in the top left corner in the trailhead page.

- We will find many apps present in the app launcher, visit any app present in the app launcher.
- You will find the products tab present in the app page, click on the tab.
- Then click on NEW to insert a new record into the products object.
- Create a Item Record - Prodnname : Oreo
Price: 100
- Create a Item Record - prodname : raspberry

Price : 200

- Create a Item Record - prodbname : cranberry

Price : 300

- Create a Item Record - prodbname : shakes

Price : 400

Create A Record For Translists Object

Go to the App Launcher present in the top left corner in the trailhead page.

We will find many apps present in the app launcher, visit any app present in the app launcher.

You will find the Translists tab present in the app page, click on the tab.

Then click on NEW to insert a new record into the translists object.

You will find the user interactive page like this:

After inserting a record in the tranlists object, you can click on the record created and you can see the following view :

Similarly, you can click on the Item record and go to related, we can find the related translists records to that item

Note : While Creating the translists record, please insert Item

Apex

Identifying Potential Customers

Now that we have the transaction data and performed related operations on the data acquired, it's time we identify those who are interested i.e, potential or valuable customers for us.

For this, we have to find the grand sum of all the transactions made by the single account and so for the rest of the accounts.

On doing so, we get all sum or total of all the transaction expense made by the individual accounts.

Then we need to keep a threshold value i.e minimum cut off sum value to identify the potential customers for us.

Advantages of Identifying Potential Customers :

We can now retain the loyal customers from the total customers and benefit them for maintaining effective CRM to

retain them.

Upon identifying them, we can now provide them with best offers and product recommendations to enhance them about how effective a good marketing can be done, compared to others.

Program to identify Potential customers :

So we need to run a program , to identify the potential customers in a company , by finding the grand total expenses of an individual account (sum of total expenses of an account).

Steps involved in writing the program :

Login to the respective trailhead account and navigate to the gear icon in the top right corner.

Click on Developer console. Now you will see a new console window.

In the tool bar, you can see FILE. Click on it and navigate to new and create New apex class.

Enter a class name(here class name is grandsum) and click enter. You will find that a new class “Grandsum” is creates with public access specifier.

Method to find the Grandsum of Accounts :

After creating the class, now create a new method called “sumofgrand”, with public access specifier and a static notation.

Now, in this method we need to perform the operation of finding the total grandsum of all the accounts.

Triggers :

A trigger is a set of Apex code that runs before or after DML(Data Manipulation Language) events.

A DML event could be a variety of data processing tasks that include the standard insert, update, and delete commands.

With Apex triggers, you can automate tasks that would otherwise be nearly impossible to accomplish using only the Salesforce user interface. Triggers enable you to create custom scripts that you can implement according to your needs, and the only limitation is your coding skills.

There are two Salesforce Apex trigger types:

Before triggers. These are helpful in

cases that require a validation process before accepting a change. They run before any database changes. After triggers. These are helpful in cases where you need to modify your database records and when the necessary value is stored in other records. They run after any database changes. Both types will help you perform custom tasks and manage records effectively. They can help you perform bulk actions as they can handle several records simultaneously.

How to create a new trigger :

While still in the trailhead account, navigate to the gear icon in the top right corner.

Click on developer console and you will be navigated to a new console window.

Click on File menu in the tool bar, and click on new? Trigger.

Enter the trigger name and the object to be triggered.

Syntax For creating trigger :

The syntax for creating trigger is :

Trigger [trigger name] on [object name](
Before/After event)

{

}

In this project , trigger is called whenever the particular records sum exceed the threshold i.e minimum business requirement value. Then the code in the trigger will get executed.

Trigger code:

trigger accmail on translists__c (After
insert)

{

 if(trigger.isAfter)

{

 if(trigger.isInsert)

{

 handlerTransist.doc(trigger.new);

 translists__c trr= new
 translists__c();

}

}

}

Handler Class:

Code Snippet :

```
public class handlerTransist {  
    Public static void  
    doc(List<translists__c> tr){  
        List<Detailsofcustomer__c> dc=  
        new List<Detailsofcustomer__c>();  
        for(translists__c t:tr)
```

```
{
```

```
    Detailsofcustomer__c d= new  
    Detailsofcustomer__c();
```

```
    d.tid__c=t.transid__c;
```

```
    d.contno__c=t.ContactNo__c;
```

```
    d.Name = t.Name;
```

```
    dc.add(d);
```

```
}
```

```
insert dc;
```

```
}
```

```
}
```

Here in the trigger, whenever a record is inserted then automatically record is created in “Detailsofcustomer” object (Since they have lookup relationship).

The Detailsofcustomer object fetches only the customer details like contactno, name and transactionid.

Schedule The Class

Code Snippet:

```
public class testclass implements  
Schedulable {
```

```
    public void  
execute(SchedulableContext ctx)
```

```
{
```

```
    List<translists__c> d = [select  
transid__c from translists__c order by  
transid__c desc];
```

```
    List<translists__c> t = [select  
transid__c,Itemrelated__c,name,mailid__  
c from translists__c  
order by  
transid__c desc];
```

```
    Set<translists__c> s = new  
set<translists__c>(d);
```

```
    list<translists__c> ls= new  
List<translists__c>();
```

```
    list<translists__c> p = [ select
```

Itemrelated_c from translists_c];

list<translists_c> tc = new
list<translists_c>();

for (translists_c c : s)

{

for (translists_c ts : t)

{

if (c.transid_c ==
ts.transid_c && !ls.contains(ts))

{

ls.add(ts);

integer c1=0;

string s1=ts.

Itemrelated_c;

for(translists_c tr:t)

{

```
if(tr Itemrelated__c!=s1 )
```

```
{
```

```
    tc.add(tr);
```

```
}
```

```
}
```

```
Id relatedRecordId = tc[0].  
Itemrelated__c;
```

```
string id1 =  
tc[0].Itemrelated__c;
```

```
string id2 =  
tc[1].Itemrelated__c;
```

```
string id3 =  
tc[2].Itemrelated__c;
```

```
Item__c s2 = [SELECT Name
```

```
FROM item__c WHERE Id = :id1];
```

```
Item__c s3 = [SELECT  
Name FROM item__c WHERE Id = :id2];
```

```
Item__c s4 = [SELECT Name  
FROM item__c WHERE Id = :id3];
```

```
Messaging.SingleEmailMessage email =  
new Messaging.SingleEmailMessage();
```

```
email.setToAddresses( new  
List<String>{ts.mailid__c});
```

```
email.setSubject('Welcome  
to our company');
```

```
email.setPlainTextBody('Dear  
' + ts.name + '' + ',\n\nWelcome to our  
company!'+'You have been seen as a  
valuable customer to us. Please  
continue your journey with us, while we  
try to provide you with valuable
```

```
resources+'\n'+
```

'We are proud to associate with valuable customers like you and we look forward to collaborate with you by providing more and more exciting discount coupons or even maybe product offers too.' + '\n'

+ 'So why taking a step back, take a leap of faith and shop with us more, while we provide with the valuable products and offers'+'\n'+'\n'+'\n'+

```
Messaging.sendEmail(new  
List<Messaging.SingleEmailMessage>{e  
mail});
```

```
system.debug(s4);
```

```
break;
```

```
}
```

```
break;
```

}

}

}

}

Schedule the Apex class:
Go to Home page in your salesforce account.

In the search bar, enter Apex and click on Apex Classes.
Click on Schedule Apex and enter the Job name.

Now click on the search icon present near the Apex class.

In the Schedule Apex section , select Saturday . Select a preferred time(12:00 AM) from the choice list and select a Start and End date.

Click on Save. Now enter Apex in the search box and select Apex jobs.

You can see that the batch job is in queue and will run whenever the day mentioned comes.

Create Report For Translists

Go to the app ? click on the reports tab

- 1) Click New Report.
- 2) Click on All category and find “translists” object.
- 3) Click on start Report.
- 4) In the columns list, add the fields transid, contact no, subtot, discount and grandtot. And in the Groups Column, add transid field to filter the records based on number of transactions.
- 5) After adding the columns, click on the Toggle icon highlighted. You can see only the fields selected and all the records.
- 6) Upon adding the columns, now click Save and enter the name of the report.
- 7) Click on Save and Run.

USE CASES :

The important application on creating a report on Translists object is that now we can get to know which customer is

very benificial to us by calculating the expenditure of his overall transactions.

Create Report For Items

Go to the app ? click on the reports tab

- 1) Click New Report.
- 2) Click on All category and find “Items” object.
- 3) Click on start Report.
- 4) On the left panel, you can see Group Rows and Columns. Add the following items shown in the image below.
- 5) Click on save and you will see there a new window about asking the name of the report. Save the report with a name. Click Run.

Create A Dashboard On Translists Report

Go to the app ? click on the Dashboards tabs.

Click on New Dashboard.

Enter the Name of the dashboard and description(optional).

Upon clicking create, you will notice an empty dashboard. Click on New component.

Click on “+ Component”, and click on translists report.

6) Click on select and in the add component section, select all the fields required for the dashboard. Click on add component and add display as pie chart view.

7) You will view the translists report on the dashboard page. Click on done and Save.

8) Add another component on translists

reports, select Gauge representation and add the component.

9) Select the Measure as Record count(to maintain the number of transaction count) and select the checkboxes Show Percentages, Show Values and Show Ranges.

10) Add segment ranges as 0,10,30,50 and add the component.

USE CASE:

After creating dashboard for the translists object , we can get to know the aggregate expenditure of the customer and thus we can effectively communicate with them and get to know the valuable customers.

Create a dashboard on item report

Enter the name of the dashboard.

- 1) Click on new Dashboard.
- 2) Enter the name of the dashboard.
- 3) Upon clicking create, you will notice an empty dashboard. Click on New component.
- 4) Click on “+ Component”, and click on translists report.
- 5) Click on select and in the add component section, select all the fields required for the dashboard. Click on add component and add display as pie chart view.(if possible select dark mode for better experience).
- 6) Click on add. You can now see the pie chart dashboard of how many of those items are most sold and count of the items.

*****END*****

