

CELEBAL TECHNOLOGIES

SUMMER INTERNSHIP PROJECT

ON

REAL TIME LOYALTY MANAGEMENT SYSTEM

Submitted By

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1.Abstract:

In the area of service providing, customer relation is important for every company. All businesses strive to improve customer loyalty to keep clients purchasing and make them promote their brand to new audiences. From understanding the likes and dislikes of every customer, to suggesting a product or service based on their likes, customer relation management system has set to define a relationship of trust between the company and the customer. There are a number of ways to build customer loyalty -: loyalty program, VIP tiers, event based mails and feedback forms.

This project presents a real time loyalty management system on Salesforce. The idea behind this project is to reward the customer by loyalty points generated by a calculation engine based on the purchase made by the customer, in a certain supermarket. The platform can be used to generate some other useful insights from the data of customer which can be further used to boost the sales.

Keywords: Customer relation, Salesforce, loyalty points.

2.Introduction:

The project aims to build a loyalty points management system on Salesforce platform. Salesforce is a customer relation management platform. A CRM in Salesforce works by managing the standard objects, and maintaining the relationships between them, and the standard in-built functionalities. It is built on the following different types of cloud: - Sales cloud, Service cloud, Marketing cloud, custom cloud, Analytics, Salesforce automation.

We worked on sales cloud. Sales Cloud mainly works based on Lead, Account, Contact & Opportunity objects. Leads can be further converted into account, contact and opportunity objects -an important built-in functionality of the Sales Cloud. If any custom fields are added to the lead object, it is also possible to set the mapping for them.

The custom fields will be the column of detail we want to keep of a purchase made by a customer inside an object. Next will be defining relationships between the fields, inserting formulas where required. The object is the shortcuts inside the application which lets you access the records and fields inside it. The record is the individual customer entry in the table.

3.Objective:

- Real time transactional data will be generated in SFDC.
- This real time data needs to be processed against a calculation engine.
- The data generated after processing the data will be credited into the customer's account, in the form of loyalty points.

3.1.Sub-Objectives:

- To create custom fields and relationships.
- To create objects.
- To upload the data, analyse it.
- Create a calculation engine.
- Generate loyalty point

4.Literature Review:

Salesforce:

- Salesforce is a customer relationship Management platform (CRM), the most important tool in effective loyalty management.
- Loyalty Management is built on the Salesforce platform so businesses can design a variety of different programs that meet their unique needs.
- Salesforce is one of the best cloud-based CRM platforms. It is an integrated CRM platform that provides a single shared view of each customer for all the departments within an organization, such as Marketing, Sales, Commerce, and Service.

Why SFDC?

- It is a number one on-demand CRM.
- Force.com platform – Reduce development cost. We can deliver applications in a very short time.
- App Exchange – It is a very good marketplace to sell our custom applications and to buy applications from App Exchange.

- It is available on the cloud – No need to install any software and No hardware required.

5.Methodology:

- **Create an application**

- ✓ Create an application named “Loyalty Management”. This is where the all fields and objects will be created.
- ✓ To create an application : Setup->Build->Create->App

- **Create object**

- ✓ Create object named “Customer details”. Inside this object will be our fields and records.
- ✓ Object is created by : Setup->Build->Create->Objects

- **Create Custom fields and relationships**

- ✓ To create fields, go to Objects->Customer details->New field. We can also define any dependencies between the fields under the “field dependencies” option.
- ✓ We defined 15 fields according to our data set. The fields are:
 - S.no,
 - Invoice id,
 - Branch,
 - City,
 - Product unit,
 - Unit price,
 - Quantity,
 - Tax,
 - Total Price,
 - Date,
 - Time,
 - Payment,
 - Cogs,
 - Phone number,
 - Loyalty points.

- **Upload the data set.**

- Calculate loyalty points.

6.Working:

The screenshot shows the Salesforce Customer Detail Edit page. The browser address bar displays the URL: <https://celebaltechnologies-b.my.salesforce.com/a03/e7retURL=%2Fa03%3Ffc%3D00B5g00000Lw5tN>. The page title is "New Customer Detail". The form is titled "Customer Detail Edit" and includes a "Save" button, a "Save & New" button, and a "Cancel" button. The form fields are as follows:

- Customer Detail Name:
- Date:
- Payment:
- Branch:
- City:
- Phone Number:
- Product Unit:

Available: Health and beauty, Electronic accessories, Home and lifestyle, Sports and travel, Food and beverages. Chosen:
- Unit Price:
- Quantity:
- Time:

The form also includes a "Recycle Bin" button and a "Help for this Page" link. The footer of the page shows the copyright information: "Copyright © 2000-2021 Salesforce.com, Inc. All rights reserved. | Privacy Statement | Security Statement | Terms of Use | 508 Compliance | Get the Salesforce mobile app."

Custom Objects Setup Page

Customer Detail Name

Name

Text(80)

Last Modified By

LastModifiedBy

Lookup(User)

Owner

Owner

Lookup(User Group)

Custom Fields & Relationships

| Action | Field Label | API Name | Data Type | Indexed | Controlling Field | Modified By |
|----------------------|----------------|-------------------|---------------------------------------|---------|-------------------|--------------------------------------|
| Edit Del Replace | Branch | Branch__c | Picklist | | | Anusha Goel 7/2/2021, 1:04 AM |
| Edit Del Replace | City | City__c | Picklist | | | Anusha Goel 7/2/2021, 1:10 AM |
| Edit Del | Cogs | Cogs__c | Formula (Number) | | | Anamol Verma 7/2/2021, 1:14 AM |
| Edit Del | Date | Date__c | Text(30) | | | Anamol Verma 7/2/2021, 12:41 AM |
| Edit Del | gross income | gross_income__c | Formula (Number) | | | Anamol Verma 7/2/2021, 1:28 AM |
| Edit Del | Invoice ID | Invoice_ID__c | Auto Number (Unique Case Insensitive) | | | Anusha Goel 7/2/2021, 1:17 AM |
| Edit Del | Loyalty Points | Loyalty_Points__c | Formula (Number) | | | Anamol Verma 7/2/2021, 1:14 AM |
| Edit Del Replace | Payment | Payment__c | Picklist | | | Anamol Verma 7/2/2021, 12:51 AM |
| Edit Del | Phone Number | Phone_Number__c | Phone | | | Anamol Verma 7/2/2021, 12:12 AM |
| Edit Del Replace | Product Unit | Product_Unit__c | Picklist (Multi-Select) | | | Anusha Goel 7/2/2021, 12:17 AM |
| Edit Del | Quantity | Quantity__c | Number(18, 0) | | | Anusha Goel 7/2/2021, 12:20 AM |
| Edit Del | S.no | S_no__c | Auto Number | | | Anusha Goel 7/2/2021, 12:03 AM |
| Edit Del | Tax | Tax__c | Formula (Number) | | | Anamol Verma 7/2/2021, 1:10 AM |
| Edit Del | Time | Time__c | Time | | | Aryan Aryan Arora 7/2/2021, 12:31 AM |
| Edit Del | Total Price | Total_Price__c | Formula (Number) | | | Anamol Verma 7/2/2021, 1:21 AM |
| Edit Del | Unit Price | Unit_Price__c | Number(10, 8) | | | Anusha Goel 7/2/2021, 12:19 AM |

Deleted Fields (4)

Related Lookup Filters

No related lookup filters defined.

Validation Rules

No validation rules defined.

Customer Details Page

Home Contacts Customers Loyalty Points Customer Details

Create New...

Full View Edit | Delete | Create New View

Shortcut

Unresolved Items

Recent Items

salesforce.com (Sample)

Anamol Verma

Aryan Aryan Arora

Anu Goel

Chatter Expert

anamol

anusha

Acme - 130 Widgets (Sample)

Acme - 1100 Widgets (Sample)

Recycle Bin

| Action | S.no | Invoice ID | Branch | City | Product Unit | Unit Price | Quantity | Tax | Total Price |
|------------|------|--------------|--------|-----------|------------------------|-------------|----------|---------|-------------|
| Edit Del | 1 | 750-67-8428 | A | Yangon | Health and beauty | 74.69000000 | 7 | 13.4442 | 616.9394 |
| Edit Del | 10 | 692-92-5582 | B | Mandalay | Food and beverages | 54.84000000 | 3 | 9.8712 | 194.1336 |
| Edit Del | 100 | 733-01-9107 | B | Mandalay | Home and lifestyle | 82.70000000 | 6 | 14.8860 | 585.5160 |
| Edit Del | 1000 | 849-09-3807 | A | Yangon | Fashion accessories | 88.34000000 | 7 | 15.9012 | 729.6884 |
| Edit Del | 1001 | PO# 00000001 | A | Mandalay | Electronic access... | 34.89760000 | 5 | 6.2816 | 205.8958 |
| Edit Del | 1002 | PO# 00000002 | A | Mandalay | Health and beauty; ... | 56.98400000 | 8 | 10.2571 | 537.9290 |
| Edit Del | 1004 | PO# 00000004 | A | Mandalay | Health and beauty; ... | 50.00000000 | 8 | 9.0000 | 472.0000 |
| Edit Del | 1006 | PO# 00000006 | C | Yangon | Health and beauty | 15.00000000 | 3 | 2.7000 | 53.1000 |
| Edit Del | 101 | 163-56-7055 | C | Naypyitaw | Fashion accessories | 48.71000000 | 1 | 8.7678 | 57.4778 |
| Edit Del | 102 | 189-98-2939 | C | Naypyitaw | Fashion accessories | 78.55000000 | 9 | 14.1390 | 834.2010 |
| Edit Del | 103 | 551-21-3069 | C | Naypyitaw | Electronic accessor... | 23.07000000 | 9 | 4.1526 | 245.0034 |
| Edit Del | 104 | 212-62-1842 | A | Yangon | Food and beverages | 58.26000000 | 6 | 10.4968 | 412.4808 |
| Edit Del | 105 | 716-39-1409 | B | Mandalay | Health and beauty | 30.35000000 | 7 | 5.4630 | 250.6910 |
| Edit Del | 106 | 704-48-3927 | A | Yangon | Electronic accessor... | 88.67000000 | 10 | 15.9606 | 1,046.3060 |
| Edit Del | 107 | 628-34-3388 | C | Naypyitaw | Fashion accessories | 27.38000000 | 6 | 4.9284 | 193.8504 |
| Edit Del | 108 | 630-74-5166 | A | Yangon | Sports and travel | 62.13000000 | 6 | 11.1834 | 439.8804 |
| Edit Del | 109 | 588-01-7461 | C | Naypyitaw | Food and beverages | 33.98000000 | 9 | 6.1164 | 360.8676 |
| Edit Del | 11 | 351-62-0822 | B | Mandalay | Fashion accessories | 14.48000000 | 4 | 2.6064 | 68.3456 |
| Edit Del | 110 | 861-77-0145 | C | Naypyitaw | Electronic accessor... | 81.97000000 | 10 | 14.7546 | 967.2460 |
| Edit Del | 111 | 470-08-0045 | C | Mandalay | Sports and travel | 48.40000000 | 2 | 2.0880 | 28.0160 |

1-100 of 1004 0 Selected

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What is Elasticsearch... Introducing Express... (6) LeetCode - The... Apache Kafka Anamol Verma (ana... Sim8085 - A 8085... Data Structures | DS... Data Structures - G... Machine Learning... Machine Learning...

https://celebaltechnologies-b.my.salesforce.com/0115g000001xIRu?setupid=CustomObjects

Track Field History
Enable Licensing
Deployment Status Deployed
Allow Search
Help Settings Standard salesforce.com Help Window
Modified By Aryan Aryan Arora 7/6/2021, 11:49 AM

Created By Anamol Verma 7/1/2021, 11:57 PM

Standard Fields

| Action | Field Label | Field Name | Data Type | Controlling Field | Indexed |
|--------|----------------------|----------------|--------------------|-------------------|---------|
| | Created By | CreatedBy | Lookup(User) | | |
| Edit | Customer Detail Name | Name | Text(80) | | ✓ |
| | Last Modified By | LastModifiedBy | Lookup(User) | | |
| Edit | Owner | Owner | Lookup(User,Group) | | ✓ |

Custom Fields & Relationships

| Action | Field Label | API Name | Data Type | Indexed | Controlling Field | Modified By |
|----------------------|----------------|-------------------|---------------------------------------|---------|-------------------|--------------------------------------|
| Edit Del Replace | Branch | Branch__c | Picklist | | | Anusha Goel 7/2/2021, 1:04 AM |
| Edit Del Replace | City | City__c | Picklist | | | Anusha Goel 7/2/2021, 1:10 AM |
| Edit Del | Cogs | Cogs__c | Formula (Number) | | | Anamol Verma 7/2/2021, 1:14 AM |
| Edit Del | Date | Date__c | Text(30) | | | Anamol Verma 7/2/2021, 12:41 AM |
| Edit Del | gross income | gross_income__c | Formula (Number) | | | Anamol Verma 7/2/2021, 1:28 AM |
| Edit Del | Invoice ID | Invoice_ID__c | Auto Number (Unique Case Insensitive) | ✓ | | Anusha Goel 7/2/2021, 1:17 AM |
| Edit Del | Loyalty Points | Loyalty_Points__c | Formula (Number) | | | Anamol Verma 7/2/2021, 1:14 AM |
| Edit Del Replace | Payment | Payment__c | Picklist | | | Anamol Verma 7/2/2021, 12:51 AM |
| Edit Del | Phone Number | Phone_Number__c | Phone | | | Anamol Verma 7/2/2021, 12:12 AM |
| Edit Del Replace | Product Unit | Product_Unit__c | Picklist (Multi-Select) | | | Anusha Goel 7/2/2021, 12:17 AM |
| Edit Del | Quantity | Quantity__c | Number(18, 0) | | | Anusha Goel 7/2/2021, 12:20 AM |
| Edit Del | S.no | S_no__c | Auto Number | | | Anusha Goel 7/2/2021, 12:03 AM |
| Edit Del | Tax | Tax__c | Formula (Number) | | | Anamol Verma 7/2/2021, 1:10 AM |
| Edit Del | Time | Time__c | Time | | | Arjan Arjan Arora 7/2/2021, 12:31 AM |
| Edit Del | Total Price | Total_Price__c | Formula (Number) | | | Anamol Verma 7/2/2021, 1:21 AM |

Type here to search

32°C Mostly clear 11:09 PM 7/17/2021

It's Better in Lightning
Move to Lightning Experience and give your users a productivity boost.

Tell Me More Check Readiness

Quick Find / Search... Expand All | Collapse All

Salesforce Mobile Quick Start

Home

Administer

Release Updates
Manage Users
Manage Apps
Company Profile
Data Classification
Security Controls
Domain Management
Communication Templates
Translation Workbench
Data Management
Mobile Administration
Desktop Administration
Outlook Integration and Sync
Gmail Integration and Sync
Email Administration
Google Apps
Analytics

Custom Object

Customer Detail

Standard Fields (8) | Custom Fields & Relationships (16) | Validation Rules (0) | Page Layouts (1) | Field Sets (0) | Compact Layouts (1) | Search Layouts (0) | Buttons, Links, and Actions (0) | Record Types (0) | Apex Sharing Reasons (0) | Apex Sharing Recalculation (0) | Object Limits (10)

Custom Object Definition Detail

Edit Delete

| | | | |
|----------------|--------------------|----------------------------|--------------------------------------|
| Singular Label | Customer Detail | Description | |
| Plural Label | Customer Details | Enable Reports | <input type="checkbox"/> |
| Object Name | Customer_Detail | Track Activities | <input type="checkbox"/> |
| API Name | Customer_Detail__c | Allow in Chatter Groups | <input type="checkbox"/> |
| | | Allow Sharing | <input checked="" type="checkbox"/> |
| | | Allow Bulk API Access | <input checked="" type="checkbox"/> |
| | | Allow Streaming API Access | <input checked="" type="checkbox"/> |
| | | Track Field History | <input type="checkbox"/> |
| | | Enable Licensing | <input type="checkbox"/> |
| | | Deployment Status | Deployed |
| | | Allow Search | <input checked="" type="checkbox"/> |
| | | Help Settings | Standard salesforce.com Help Window |
| | | Modified By | Arjan Arjan Arora 7/6/2021, 11:49 AM |

Created By Anamol Verma 7/1/2021, 11:57 PM

Standard Fields

| Action | Field Label | Field Name | Data Type | Controlling Field | Indexed |
|--------|----------------------|----------------|--------------------|-------------------|---------|
| | Created By | CreatedBy | Lookup(User) | | |
| Edit | Customer Detail Name | Name | Text(80) | | ✓ |
| | Last Modified By | LastModifiedBy | Lookup(User) | | |
| Edit | Owner | Owner | Lookup(User,Group) | | ✓ |

Type here to search

32°C Mostly clear 11:12 PM 7/17/2021

7.Result and future scope:

- Loyalty management system was build successfully.
- Loyalty points are assigned according to the customer purchases.
- Further, it can be used for more analysis (such as how many did payment by E-wallet) and better customer relation management.
- It can also be integrated with Kakfa using Salesforce Streaming API.

8.References:

1. <https://www.predictiveanalyticstoday.com/top-loyalty-management-software/>
2. <https://trailhead.salesforce.com/en/content/learn/modules/big-data-strategy/choose-the-right-big-data-solution>
3. https://youtu.be/BA-407HF_fM
4. <https://youtu.be/I3Dk3i4GpU8>
5. <https://suyati.com/blog/how-salesforce-crm-works-and-uses/#:~:text=A%20CRM%20in%20Salesforce%20works%20by%20managing%20the,based%20on%20Lead%2C%20Account%2C%20Contact%20%26%20Opportunity%20objects.>