Lab Exercise 5- Creating Formula Fields on a Data Lake Object (DLO)

Objective:

Learn how to create and validate formula fields in Salesforce Data Cloud to perform calculations, conditional logic, and data transformation at the DLO level.

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1. Lab Overview

Step	Task	Concept Learned
1	Create and upload a sample CSV dataset	DLO creation and ingestion
2	Create basic formula fields	Arithmetic and derived metrics
3	Create conditional and text formulas	IF, CONCAT, TEXT functions
4	Validate formula outputs	Using Data Explorer
5	Apply real-world logic	Region category, commission, discount

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2. Dataset Setup

Create a simple CSV file named **Purchase_Transactions.csv** with the following

data:

transaction_id	customer_id	purchase_date	amount	region	payment_mode
T1001	C001	2025-10-10	850	East	Credit Card
T1002	C002	2025-10-12	450	West	Debit Card
T1003	C001	2025-10-15	25	East	*(blank)*
T1004	C003	2025-10-18	1200	North	NetBanking
T1005	C004	2025-10-19	300	South	UPI

Upload this file into **Salesforce Data Cloud → Data Manager → Data Streams**

to create a DLO named:

Purchase_Transactions_DLO

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3. Creating Formula Fields in the DLO Schema

Formula 1: Discount Calculation

Objective: Apply a 10% discount to each transaction amount.

Formula:

```
amount * 0.9
```

New Field Name: discounted_amount___c

Data Type: Number

Expected Result:

amount	discounted_amount
850	765
450	405
25	22.5

Formula 2: Transaction Type (Conditional Logic)

Objective: Identify high-value transactions (> ₹500).

Formula:

```
IF(amount > 500, "High Value", "Regular")
```

New Field Name: transaction_type__c

Data Type: Text

Expected Result:

amount	transaction_type
850	High Value
450	Regular
25	Regular
1200	High Value
300	Regular

Formula 3: Extract Purchase Month

Objective: Get the month number from the purchase date.

Formula:

```
TEXT(MONTH(purchase_date))
```

New Field Name: purchase_month__c

Data Type: Text

Expected Result:

purchase_date	purchase_month
2025-10-10	10
2025-10-12	10

Formula 4: Combine Customer and Transaction IDs

Objective: Create a unique transaction label for reporting.

Formula:

```
customer_id & "-" & transaction_id
```

New Field Name: transaction_label__c

Data Type: Text

Expected Result:

customer_id	transaction_id	transaction_label
C001	T1001	C001-T1001
C002	T1002	C002-T1002

Formula 5: Data Cleansing for Payment Mode

Objective: Replace null or blank payment modes with "Unknown."

Formula:

```
IF(ISBLANK(payment_mode), "Unknown", payment_mode)
```

New Field Name: cleaned_payment_mode__c

Data Type: Text

Expected Result:

payment_mode	cleaned_payment_mode
Credit Card	Credit Card
(blank)	Unknown

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4. Advanced (Optional) Formula Fields

Formula 6: Commission Calculation

Objective: Calculate 5% commission for high-value transactions (> ₹500).

Formula:

```
IF(amount > 500, amount * 0.05, 0)
```

New Field Name: commission_amount__c

Data Type: Number

Formula 7: Region Category

Objective: Group regions into business zones.

Formula:

```
IF(

  OR(region = "East", region = "West"), "Zone 1",

  IF(OR(region = "North", region = "South"), "Zone 2", "Other")

)
```

New Field Name: region_category__c

Data Type: Text

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5. Validation Steps in Data Cloud

1. Go to **Data Explorer** → Select **Purchase_Transactions_DLO**

2. Click **Preview Data**

3. Verify that:

   o Each formula field appears in the schema

   o Computed values display correctly for sample rows

4. Use **Filter** or **Sort** to confirm formulas (e.g., all high-value > ₹500 are flagged)