# Introduction to Database Project CESD215

Section: DL2

# **Annual Donation Tracking System**

## **Group mumbers:**

Shahd Alamri 2311047 Rimas Almuntashiri 2311631 Sadeem Awak 2310922 Maryam Boureima 2317479 In a charitable organization, there are many problems that affect both the donor and the beneficiary organization. That's why we decided to design a database that helps these organisations.

## Some of the problems that we focus on:

- 1. Lack of transparency and credibility: The inability to provide accurate reports on funds received and used may lead to the erosion of trust between the organization and donors. This may lead to a decrease in the number of donors or a cessation of support.
- 2. Difficulty in financial planning: If an organization cannot track annual donations, it will be difficult to prepare accurate budgets or plan future programs. This may lead to interruption or decline of activities or projects.
- 3. Mismanagement of resources: When donations are not properly tracked, funds may be spent inefficiently or poorly directed. This may harm the success of beneficiary projects and programmes.
- 4. Repeated loss of support: Donors who do not receive periodic reports on the impact of their donations or are ignored may stop providing support over time.
- 5. Complexity of oversight and accounting: Institutions that rely on donations are usually obligated to submit periodic reports on how funds are used. Failure to track donations may result in compliance issues with legal and regulatory requirements.

# 1. Donor

Donor ID:	Unique identifier for each donor.	
Name:	Full name of the donor.	
Address:	Donor's address.	
Phone Number:	Donor's contact number.	
Email:	Donor's email address.	
Marital Status:	Donor's marital status.	
Date of Birth:	Donor's birth date.	

## 2. Donation

Donation ID:	Unique identifier for each donation.		
Donation Type:	Type of donation (e.g., money, materials, food).		
Amount/Value:	The value or amount of the donation.		
Donation Date:	Date when the donation was made.		
Donation Status:	Status of the donation (e.g., completed, pending).		

# 3. Recipient

Recipient ID:	Unique identifier for each recipient.	
Name:	Full name of the recipient.	
Address:	Recipient's address.	
Phone Number:	Recipient's contact number.	
Eligibility Status:	Recipient's eligibility status for aid.	

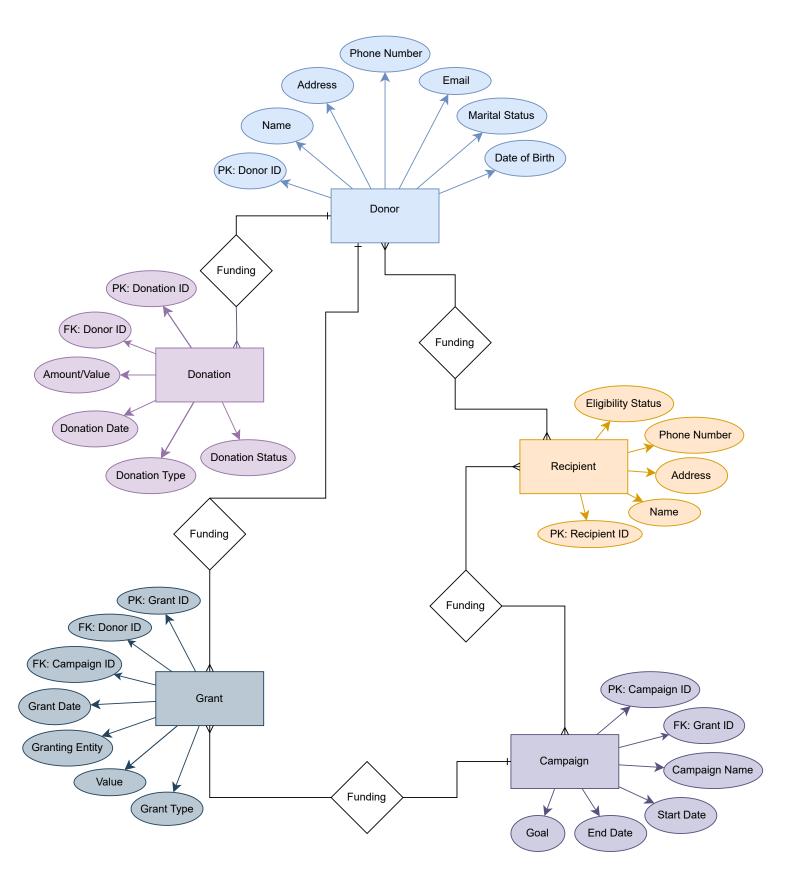
# 4. Campaign

Campaign ID:	Unique identifier for each campaign.	
Campaign Name:	Name of the campaign.	
Start Date:	Start date of the campaign.	
End Date:	End date of the campaign.	
Goal:	The objective or target of the campaign.	

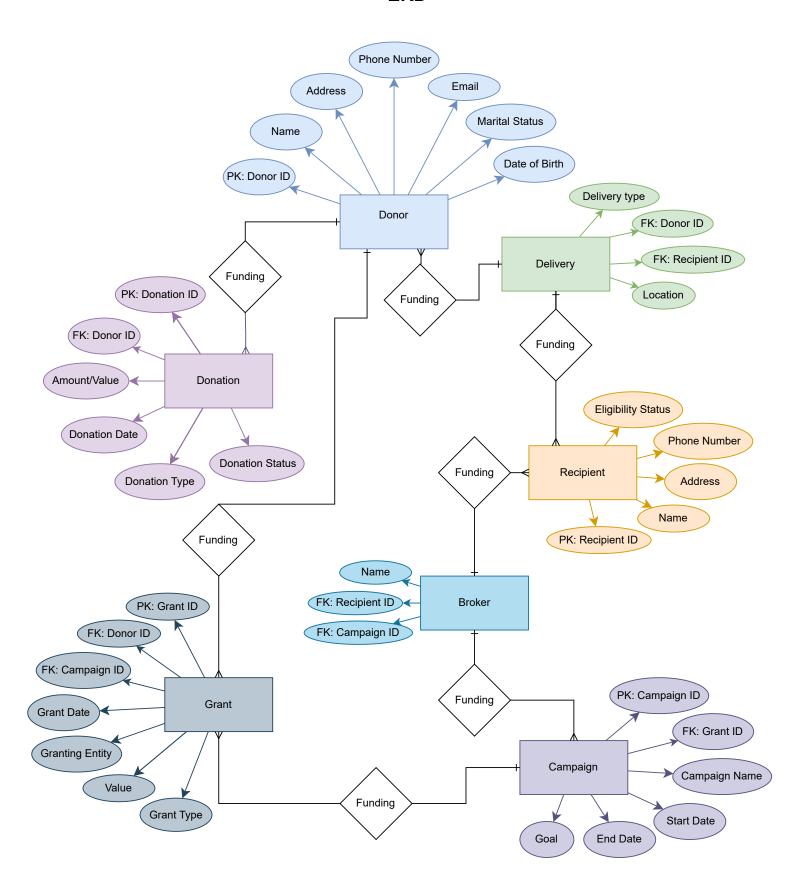
# 5. Grant

Grant ID:	Unique identifier for each grant.	
Grant Type:	Type of grant.	
Value:	The value of the grant.	
Granting Entity:	The entity providing the grant.	
Grant Date:	The date when the grant was awarded.	

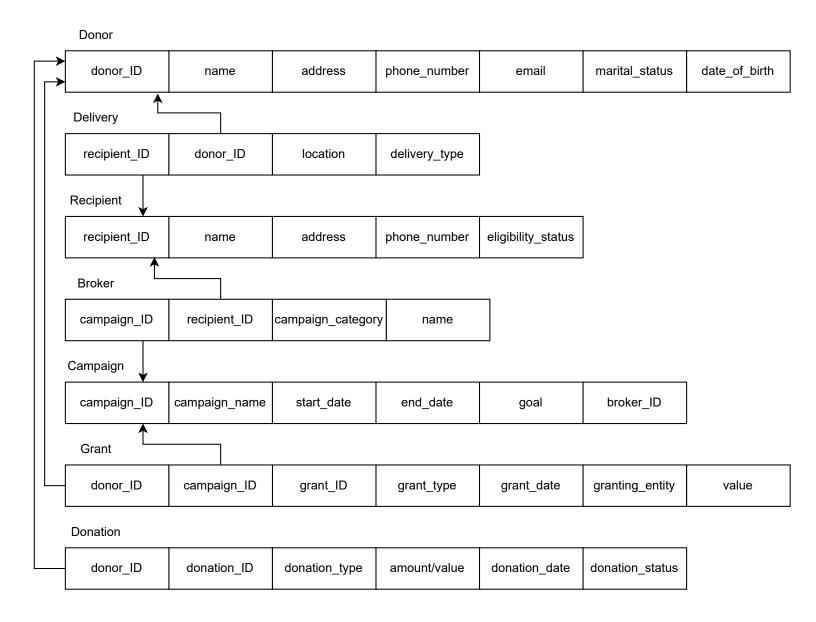
## conceptual ER



## **ERD**



## Relation



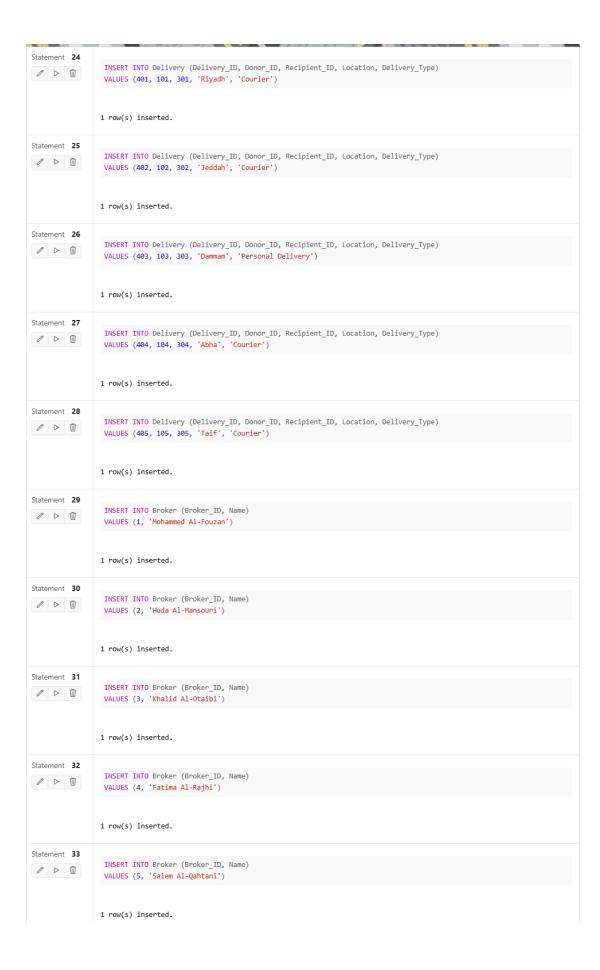
## **SQL Code**

```
Statement 1
                CREATE TABLE Donor (
0 D III
                   Donor_ID NUMBER(10) PRIMARY KEY,
                    Name VARCHAR2(100) NOT NULL,
                   Email VARCHAR2(100),
                    Address VARCHAR2(255),
                    Phone_Number VARCHAR2(15),
                    Marital_Status VARCHAR2(20),
                    Date_of_Birth DATE
                Table created.
Statement 2
                CREATE TABLE Donation (
Donation_ID NUMBER(10) PRIMARY KEY,
                    Donor_ID NUMBER(10),
                    Donation_Type VARCHAR2(50),
                    Amount_Value NUMBER(10),
                   Donation_Date DATE,
                    Donation_Status VARCHAR2(20),
                    FOREIGN KEY (Donor_ID) REFERENCES Donor(Donor_ID)
                Table created.
Statement 3
                CREATE TABLE Recipient (
Recipient_ID NUMBER(10) PRIMARY KEY,
                    Name VARCHAR2(100),
                    Address VARCHAR2(255),
                    Phone_Number VARCHAR2(15),
                    Eligibility_Status VARCHAR2(50)
                Table created.
Statement 4
                CREATE TABLE Delivery (
Delivery_ID NUMBER(10) PRIMARY KEY,
                    Donor_ID NUMBER(10),
                    Recipient_ID NUMBER(10),
                    Location VARCHAR2(255),
                    Delivery_Type VARCHAR2(50),
                    FOREIGN KEY (Donor_ID) REFERENCES Donor(Donor_ID),
                    FOREIGN KEY (Recipient_ID) REFERENCES Recipient(Recipient_ID)
                Table created.
Statement 5
                CREATE TABLE Campaign (
Campaign_ID NUMBER(10) PRIMARY KEY,
                    Campaign_Name VARCHAR2(100) NOT NULL,
                    Goal NUMBER(10),
                    Start_Date DATE,
                    End_Date DATE,
                    Broker_ID NUMBER(10)
                Table created.
```

```
Statement 6
                          CREATE TABLE Broker (
 0 D III
                               Broker_ID NUMBER(5) PRIMARY KEY,
                                Name VARCHAR2(100)
                         Table created.
Statement 7
                          CREATE TABLE Campaign_Category (
 0 > 11
                               Category_ID NUMBER(10) PRIMARY KEY,
                                Campaign_ID NUMBER(10),
                                Category_Name VARCHAR2(100),
                                FOREIGN KEY (Campaign_ID) REFERENCES Campaign(Campaign_ID)
                         Table created.
Statement 8
                          CREATE TABLE DonorGrant (
 Grant_ID NUMBER(10) PRIMARY KEY,
                                Donor_ID NUMBER(10),
                                Grant_Type VARCHAR2(50),
                                Value NUMBER(10),
                                Granting_Entity VARCHAR2(100),
                                Grant Date DATE,
                                FOREIGN KEY (Donor_ID) REFERENCES Donor(Donor_ID)
                         Table created.
                   INSERT INTO Donor (Donor ID, Name, Email, Address, Phone Number, Marital Status, Date of Birth)
VALUES (101, 'Ahmed Al-Shehri', 'ahmed.shehri@example.com', 'Riyadh, Saudi Arabia', '0501234567', 'Single', TO_DATE('1990-02-25', 'YYYY-MM-00'))
 0 D II
                   1 row(s) inserted.
Statement 10
                   INSERT INTO Donor (Donor_ID, Name, Email, Address, Phone_Number, Marital_Status, Date_of_Birth)
VALUES (102, 'Sara Al-Fahad', 'sara.fahad@example.com', 'Jeddah, Saudi Arabia', '0551237890', 'Married', TO_DATE('1985-10-14', 'YYYY-MM-DD'))
 0 D I
                   1 row(s) inserted.
Statement 11
                   INSERT INTO Donor (Donor_ID, Name, Email, Address, Phone_Number, Marital_Status, Date_of_Birth)
VALUES (103, 'Faisal Al-Qahtani', 'faisal.qahtani@example.com', 'Dammam, Saudi Arabia', '0531234567', 'Single', TO_DATE('1995-05-21', 'YYYY-MM-DD'))
 0 D 🗓
                   1 row(s) inserted.
Statement 12
                   INSERT INTO Donor (Donor_ID, Name, Email, Address, Phone_Number, Marital_Status, Date_of_Birth)

VALUES (104, 'Layla Al-Ahmadi', 'layla.ahmadi@example.com', 'Abha, Saudi Arabia', '0541237890', 'Married', TO_DATE('1992-08-30', 'YYYY-MM-DD'))
 0 D III
                   1 row(s) inserted.
Statement 13
                   INSERT INTO Donor (Donor_ID, Name, Email, Address, Phone_Number, Marital_Status, Date_of_Birth)
VALUES (105, 'Omar Al-Zahrani', 'omar.zahrani@example.com', 'Taif, Saudi Arabia', '0569871234', 'Divorced', TO_DATE('1988-11-12', 'YYYY-MM-00'))
 0 D 1
                   1 row(s) inserted.
```

```
Statement 14
                 INSERT INTO Donation (Donation_ID, Donor_ID, Donation_Type, Amount_Value, Donation_Date, Donation_Status)
0 D I
                VALUES (201, 101, 'Cash', 5000, TO_DATE('2023-01-15', 'YYYY-MM-DD'), 'Completed')
                1 row(s) inserted.
Statement 15
                {\tt INSERT\ INTO\ Donation\_ID,\ Donor\_ID,\ Donation\_Type,\ Amount\_Value,\ Donation\_Date,\ Donation\_Status)}
0 D II
                VALUES (202, 102, 'Clothes', 1000, TO_DATE('2023-02-20', 'YYYY-MM-DD'), 'Pending')
                1 row(s) inserted.
Statement 16
                INSERT INTO Donation (Donation_ID, Donor_ID, Donation_Type, Amount_Value, Donation_Date, Donation_Status)
VALUES (203, 103, 'Food', 200, TO_DATE('2023-03-10', 'YYYY-MM-DD'), 'Completed')
                1 row(s) inserted.
Statement 17
                INSERT INTO Donation (Donation_ID, Donor_ID, Donation_Type, Amount_Value, Donation_Date, Donation_Status)
VALUES (204, 104, 'Electronics', 3000, TO_DATE('2023-04-05', 'YYYY-NM-DD'), 'Pending')
                1 row(s) inserted.
Statement 18
                {\tt INSERT\ INTO\ Donation\_ID,\ Donor\_ID,\ Donation\_Type,\ Amount\_Value,\ Donation\_Date,\ Donation\_Status)}
VALUES (205, 105, 'Cash', 7000, TO_DATE('2023-05-22', 'YYYY-MM-DD'), 'Completed')
                1 row(s) inserted.
Statement 19
                INSERT INTO Recipient (Recipient_ID, Name, Address, Phone_Number, Eligibility_Status)
VALUES (301, 'Khaled Al-Mansour', 'Mecca, Saudi Arabia', '0558765432', 'Eligible')
                1 row(s) inserted.
Statement 20
                INSERT INTO Recipient (Recipient ID, Name, Address, Phone Number, Eligibility Status)
VALUES (302, 'Noor Al-Bishi', 'Jizan, Saudi Arabia', '0561234567', 'Eligible')
                1 row(s) inserted.
Statement 21
                 INSERT INTO Recipient (Recipient_ID, Name, Address, Phone_Number, Eligibility_Status)
VALUES (303, 'Yusuf Al-Harbi', 'Al-Khobar, Saudi Arabia', '0557654321', 'Eligible')
                1 row(s) inserted.
Statement 22
                 INSERT INTO Recipient (Recipient_ID, Name, Address, Phone_Number, Eligibility_Status)
VALUES (304, 'Maha Al-Farsi', 'Tabuk, Saudi Arabia', '0546781234', 'Pending')
                1 row(s) inserted.
Statement 23
                 INSERT INTO Recipient (Recipient_ID, Name, Address, Phone_Number, Eligibility_Status)
VALUES (305, 'Ali Al-Rashid', 'Najran, Saudi Arabia', '0536547890', 'Eligible')
                1 row(s) inserted.
```





DONORNAME	DONOREMAIL	DONATIONTYPE	DONATIONAMOUNT	DONATIONDATE	DONATIONSTATUS
Ahmed Al-Shehri	ahmed.shehri@example.com	Cash	5000	15-JAN-23	Completed
Sara Al-Fahad	sara.fahad@example.com	Clothes	1000	20-FEB-23	Pending
Faisal Al-Qahtani	faisal.qahtani@example.com	Food	200	10-MAR-23	Completed
Layla Al-Ahmadi	layla.ahmadi@example.com	Electronics	3000	05-APR-23	Pending
Omar Al-Zahrani	omar.zahrani@example.com	Cash	7000	22-MAY-23	Completed

Download CSV

5 rows selected.



SELECT

Delivery.Delivery\_ID AS Delivery\_ID, Donor.Name AS DonorName,

Recipient.Name AS RecipientName, Delivery.Location AS DeliveryLocation, Delivery.Delivery\_Type AS DeliveryType

FROM

Delivery

INNER JOIN

ON

Delivery.Donor\_ID = Donor.Donor\_ID

INNER JOIN

Recipient

ON

Delivery.Recipient\_ID = Recipient.Recipient\_ID

DELIVERY_ID	DONORNAME	RECIPIENTNAME	DELIVERYLOCATION	DELIVERYTYPE
401	Ahmed Al-Shehri	Khaled Al-Mansour	Riyadh	Courier
402	Sara Al-Fahad	Noor Al-Bishi	Jeddah	Courier
403	Faisal Al-Qahtani	Yusuf Al-Harbi	Dammam	Personal Delivery
404	Layla Al-Ahmadi	Maha Al-Farsi	Abha	Courier
405	Omar Al-Zahrani	Ali Al-Rashid	Taif	Courier

## Download CSV

5 rows selected.



SELECT Donor\_ID, Name, Email, Address, Phone\_Number, Marital\_Status, Date\_of\_Birth FROM Donor
ORDER BY Name

DONOR_ID	NAME	EMAIL	ADDRESS	PHONE_NUMBER	MARITAL_STATUS	DATE_OF_BIRTH
101	Ahmed Al-Shehri	ahmed.shehri@example.com	Riyadh, Saudi Arabia	0501234567	Single	25-FEB-90
103	Faisal Al-Qahtani	faisal.qahtani@example.com	Dammam, Saudi Arabia	0531234567	Single	21-MAY-95
104	Layla Al-Ahmadi	layla.ahmadi@example.com	Abha, Saudi Arabia	0541237890	Married	30-AUG-92
105	Omar Al-Zahrani	omar.zahrani@example.com	Taif, Saudi Arabia	0569871234	Divorced	12-NOV-88
102	Sara Al-Fahad	sara.fahad@example.com	Jeddah, Saudi Arabia	0551237890	Married	14-0CT-85

Download CSV

5 rows selected.





SELECT Donation\_ID, Donor\_ID, Donation\_Type, Amount\_Value, Donation\_Date, Donation\_Status FROM Donation ORDER BY Donation\_Date DESC

DONATION_ID	DONOR_ID	DONATION_TYPE	AMOUNT_VALUE	DONATION_DATE	DONATION_STATUS
205	105	Cash	7000	22-MAY-23	Completed
204	104	Electronics	3000	05-APR-23	Pending
203	103	Food	200	10-MAR-23	Completed
202	102	Clothes	1000	20-FEB-23	Pending
201	101	Cash	5000	15-JAN-23	Completed

Download CSV

5 rows selected.

## Statement 43



SELECT Name, Email, Phone\_Number FROM Donor WHERE Donor\_ID = (SELECT Donor\_ID FROM Donation WHERE Donation\_ID = 201)

NAME	EMAIL	PHONE_NUMBER
Ahmed Al-Shehri	ahmed.shehri@example.com	0501234567

Download CSV

### Statement 44



SELECT

Donation\_Type, COUNT(Donation\_ID) AS TotalDonations, SUM(Amount\_Value) AS TotalAmount

FROM

Donation

GROUP BY

Donation\_Type

ORDER BY

TotalAmount DESC

DONATION_TYPE	TOTALDONATIONS	TOTALAMOUNT
Cash	2	12000
Electronics	1	3000
Clothes	1	1000
Food	1	200

Download CSV

4 rows selected.

```
p_DonationType IN VARCHAR2
)
AS
Statement 45
                                CREATE OR REPLACE PROCEDURE GetDonationsByType (
 CURSOR donation_cursor IS
                                                                         d.Donation_ID,
d.Amount_Value,
donor.Name AS Donor_Name,
                                                                            d.Donation_date,
d.Donation_Status
                                                            Donation d
                                                                           Donor donor ON d.Donor_ID = donor.Donor_ID
                                                                          d.Donation_type = p_DonationType;
                                 BEGIN
                                              DBMS_OUTPUT.PUT_LINE('Fitching donations of type: ' || p_DonationType);
DBMS_OUTPUT.PUT_LINE('-----').
                                               FOR record IN donation_cursor LOOP
                                                       record IN donation_cursor LODP

DBMS_OUTPUT_INT_LINE('Donation ID: ' || record.Donation_ID || ', Amount: ' || record.Amount_Value || ', Donor: ' || record.Donor_Name ||
', Date: ' || TO_CHAR(record.Donation_Date, 'YYYY-NM-DD') || ', Status: ' || record.Donation_Status);
Statement 46
                                 EXEC GetDonationsByType('cash')
 0 D T
                               Statement processed.
Fitching donations of type: cash
                                CREATE OR REPLACE PROCEDURE GetAllDonors
 0 D III
                                               CURSOR donor_cursor IS
SELECT
                                                                          Donor_ID,
                                                                            Name,
Email,
                                                                           Address,
Phone. Number,
Marital_Status,
TO_CHAR(Date_of_Birth, 'YWY-MH-DD') AS Date_of_Birth
                                             FOR record IN donor_cursor LOOP
                                             FUNK record IN donor_cursor LOOP

DBMS_OUTPUT_FUNE('Donor ID: ' || record.Donor_ID || ', Name: ' || record.Name || ', Email: ' || NVL(record.Email, 'N/A') || ', Address: ' || NVL(record.Address, 'N/A') || ', Phone: ' || NVL(record.Phone_Number, 'N/A') || ', Marital Status: ' || NVL(record.Marital_Status, 'N/A') || ', Date of Birth: ' || NVL(record.Date_of_Birth, 'N/A'));

END LOOP;
                                END;
Statement 48
                               EXEC GetAllDonors
  0 0 1
                               Statement processed.
Feching all donors...
                              Donor ID: 101, Name: Ahmed Al-Shehri, Email: ahmed.shehri@example.com, Address: Riyadh, Saudi Arabia, Phone: 0501234567, Marital Status: Single, Date of Birth: 1998-02-25
Donor ID: 102, Name: Sara Al-Fahad, Email: sara-fahad@example.com, Address: Damama, Saudi Arabia, Phone: 0551227890, Marital Status: Married, Date of Birth: 1998-10-14
Donor ID: 103, Name: Faisal Al-Qahtani, Email: faisal.qahtani@example.com, Address: Damama, Saudi Arabia, Phone: 0551227890, Marital Status: Single, Date of Birth: 1998-05-25
Donor ID: 105, Name: Omar Al-Ambad, Email: Jayla.ahmadi@example.com, Address: Abha, Saudi Arabia, Phone: 0541237800, Marital Status: Single, Date of Birth: 1998-08-20
Donor ID: 105, Name: Omar Al-Zahrani, Email: omar.zahrani@example.com, Address: Abha, Saudi Arabia, Phone: 0569871234, Marital Status: Divorced, Date of Birth: 1988-11-12
```

```
CREATE OR REPLACE PROCEDURE GetInPersonDeliveries
0 D III
                           CURSOR delivery_cursor IS
SELECT
                                                d.Delivery_ID,
donor.Name AS Donor_Name,
recipient.Name AS Recipient_Name,
                                       d.Location
                                      FROM Delivery d
                                      Donor donor ON d.Donor_ID = donor.Donor_ID

JOIN

Recipient recipient ON d.Recipient_ID = recipient.Recipient_ID
                                                d.Delivery_Type = 'In-Person';
                     BEGIN
                             DBMS_OUTPUT.PUT_LINE('Fetching deliveries with type: In-Person...');
DBMS_OUTPUT.PUT_LINE('-----
                              DBMS_OUTPUT.PUT_LINE('Delivery ID: ' || record.Delivery_ID || ', Donor: ' || record.Donor_Name || ', Recipient_Name ' || record.Recipient_Name || ', location: ' || record.location);
END LOOP;
                     Procedure created.
Statement 50
                       EXEC GetInPersonDeliveries
0 0 1
                     Statement processed.
Fetching deliveries with type: In-Person...
Statement 51
                       CREATE OR REPLACE PROCEDURE GetAllCampaigns
0 D III
                                 CURSOR campaign_cursor IS
                                                  Campaign_ID,
                                                      Campaign_Name,
                                                    Campaign_Name,
Goal,
TO_CHAR(Start_Date, 'YYYY-NM-DD') AS Start_Date,
TO_CHAR(End_Date, 'YYYY-NM-DD') AS End_Date,
NVL(TO_CHAR(Broker_ID), 'N/A') AS Broker_ID
                                          FROM
                                 DBMS_OUTPUT.PUT_LINE('Fetching all campaigns...');
                                 DBMS_OUTPUT.PUT_LINE('----');
                                 FOR record IN campaign_cursor LOOP
                                  PBM record IN Campaign_cursor LOUP

DBMS_QUTPUT.PUT_LINE('Campaign ID: ' || record.Campaign_ID || ', Name: ' || record.Campaign_Name || ', Goal: ' || record.Goal || ', Start Date: ' || record.Start_Date || ', End Date: ' || record.End_Date || ', Broker ID: ' || NVL(record.Broker_ID, 'N/A'));
                                 END LOOP;
                      Procedure created.
```

```
Statement 52
```



EXEC GetAllCampaigns

```
Statement processed.
Fetching all campaigns...

Campaign ID: 501, Name: Winter Clothes Drive, Goal: 10000, Start Date: 2023-10-01, End Date: 2023-12-31, Broker ID: 1
Campaign ID: 502, Name: Food for All, Goal: 20000, Start Date: 2023-09-01, End Date: 2023-11-30, Broker ID: 2
Campaign ID: 503, Name: Education Fundraiser, Goal: 30000, Start Date: 2023-08-01, End Date: 2024-01-31, Broker ID: 3
Campaign ID: 504, Name: Medical Aid Support, Goal: 15000, Start Date: 2023-11-01, End Date: 2024-02-28, Broker ID: 4
Campaign ID: 505, Name: Clean Water Initiative, Goal: 25000, Start Date: 2023-07-15, End Date: 2023-12-15, Broker ID: 5
```

#### Statement 53



```
CREATE OR REPLACE PROCEDURE UpdateDonorInfo (
    p_Donor_ID IN NUMBER,
    p_Name IN VARCHAR2,
    p_Email IN VARCHAR2,
    p_Phone_Number IN VARCHAR2
)

AS

BEGIN

UPDATE Donor

SET Name = p_Name,
    Email = p_Email,
    Phone_Number = p_Phone_Number

WHERE Donor_ID = p_Donor_ID;

DBMS_OUTPUT.PUT_LINE('Donor information updated for ID: ' || p_Donor_ID);

END;
```

#### Procedure created.

#### Statement 54



```
BEGIN
    UpdateDonorInfo(
        p_Donor_ID => 101,
        p_Name => 'Ahmed Al-Shehri Updated',
        p_Email => 'ahmed.Shehri.updated@example.com',
        p_Phone_Number => '0509876543'
);
END;
```

Statement processed.

Donor information updated for ID: 101

