**Exercise 1: Control Structures**

**Scenario 1:** The bank wants to apply a discount to loan interest rates for customers above 60 years old.

**Question:** Write a PL/SQL block that loops through all customers, checks their age, and if they are above 60, apply a 1% discount to their current loan interest rates.

**PL/SQL Block :-**

DECLARE

CURSOR cur\_senior\_customers IS

SELECT CustomerID, DOB

FROM Customers;

v\_customer\_id Customers.CustomerID%TYPE;

v\_dob Customers.DOB%TYPE;

v\_age NUMBER;

BEGIN

FOR rec IN cur\_senior\_customers LOOP

v\_customer\_id := rec.CustomerID;

v\_dob := rec.DOB;

-- Calculate age

v\_age := FLOOR(MONTHS\_BETWEEN(SYSDATE, v\_dob) / 12);

-- If age > 60, apply 1% discount to loan interest

IF v\_age > 60 THEN

UPDATE Loans

SET InterestRate = InterestRate \* 0.99

WHERE CustomerID = v\_customer\_id;

DBMS\_OUTPUT.PUT\_LINE('Updated InterestRate for Customer ID: ' || v\_customer\_id || ', Age: ' || v\_age);

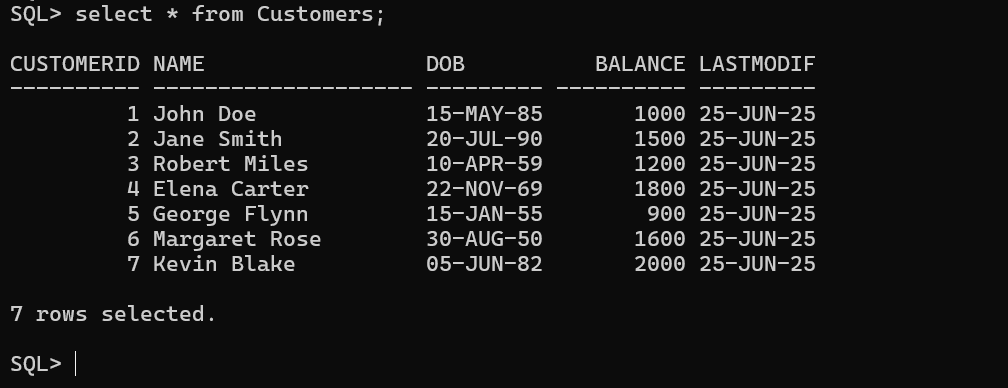
END IF;

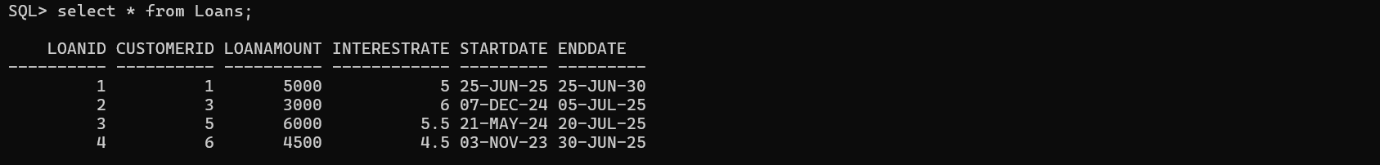
END LOOP;

END;

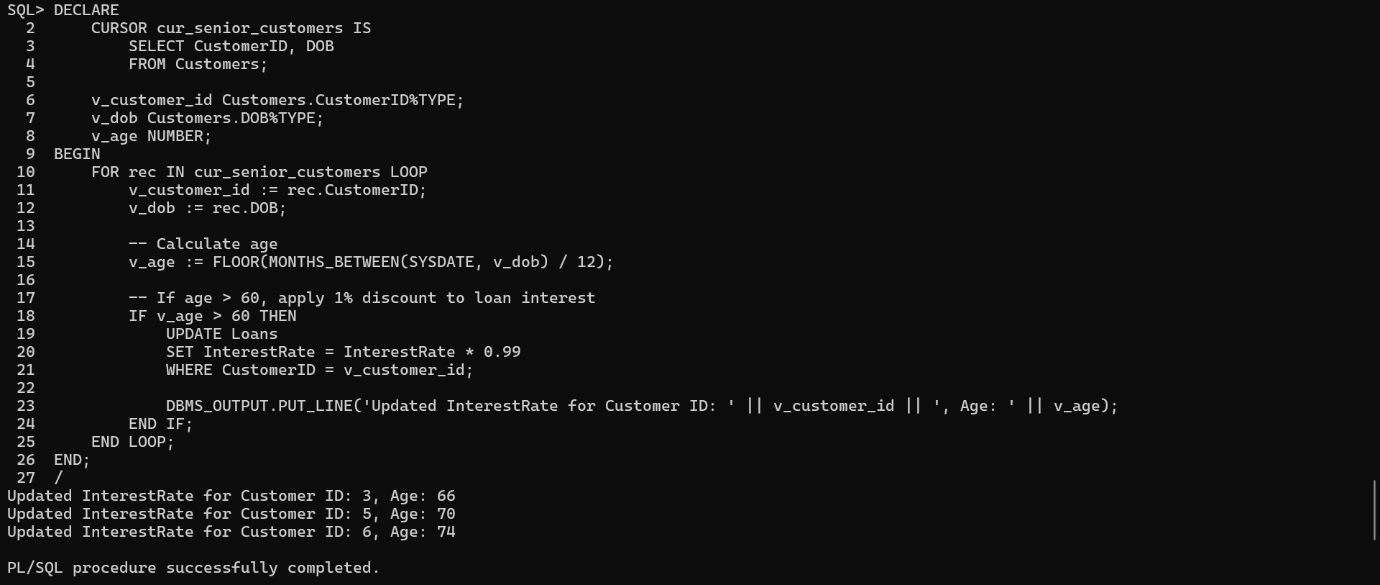
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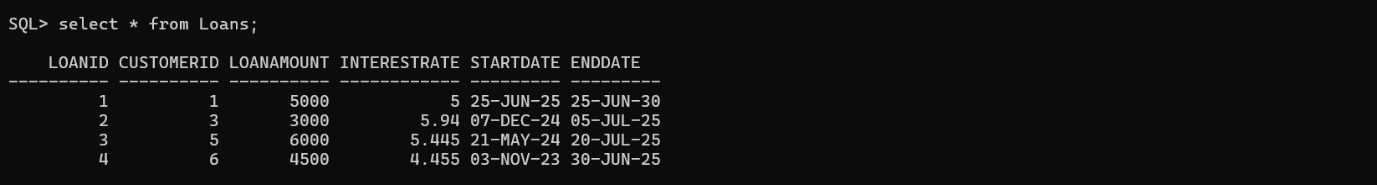
**Table :-**

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**Output :-**

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**Scenario 2:** A customer can be promoted to VIP status based on their balance.

**Question:** Write a PL/SQL block that iterates through all customers and sets a flag IsVIP to TRUE for those with a balance over $10,000.

**PL/SQL Block :-**

BEGIN

FOR rec IN (SELECT CustomerID, Balance FROM Customers) LOOP

IF rec.Balance > 10000 THEN

UPDATE Customers

SET IsVIP = 'TRUE'

WHERE CustomerID = rec.CustomerID;

DBMS\_OUTPUT.PUT\_LINE('Customer ' || rec.CustomerID || ' promoted to VIP.');

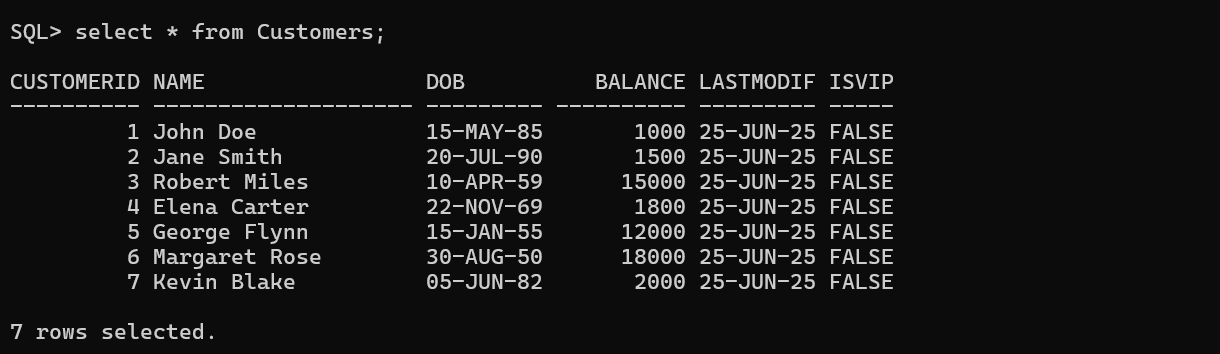
END IF;

END LOOP;

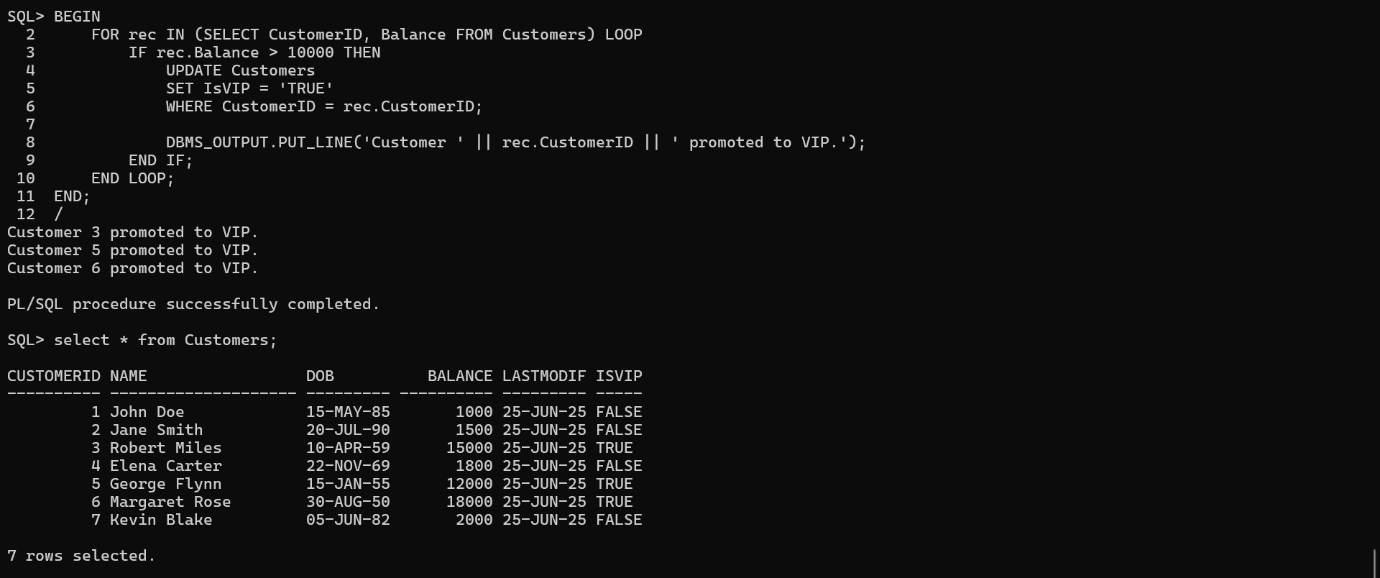
END;

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**Table :-**

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**Output :-**

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**Scenario 3:** The bank wants to send reminders to customers whose loans are due within the next 30 days.

**Question:** Write a PL/SQL block that fetches all loans due in the next 30 days and prints a reminder message for each customer.

**PL/SQL Block :-**

BEGIN

FOR loan\_rec IN (

SELECT l.LoanID, l.CustomerID, l.EndDate, c.Name

FROM Loans l

JOIN Customers c ON l.CustomerID = c.CustomerID

WHERE l.EndDate BETWEEN SYSDATE AND SYSDATE + 30

) LOOP

DBMS\_OUTPUT.PUT\_LINE(

' Reminder: Customer "' || loan\_rec.Name ||

'" (Customer ID: ' || loan\_rec.CustomerID ||

') has Loan ID ' || loan\_rec.LoanID ||

' due on ' || TO\_CHAR(loan\_rec.EndDate, 'DD-MON-YYYY')

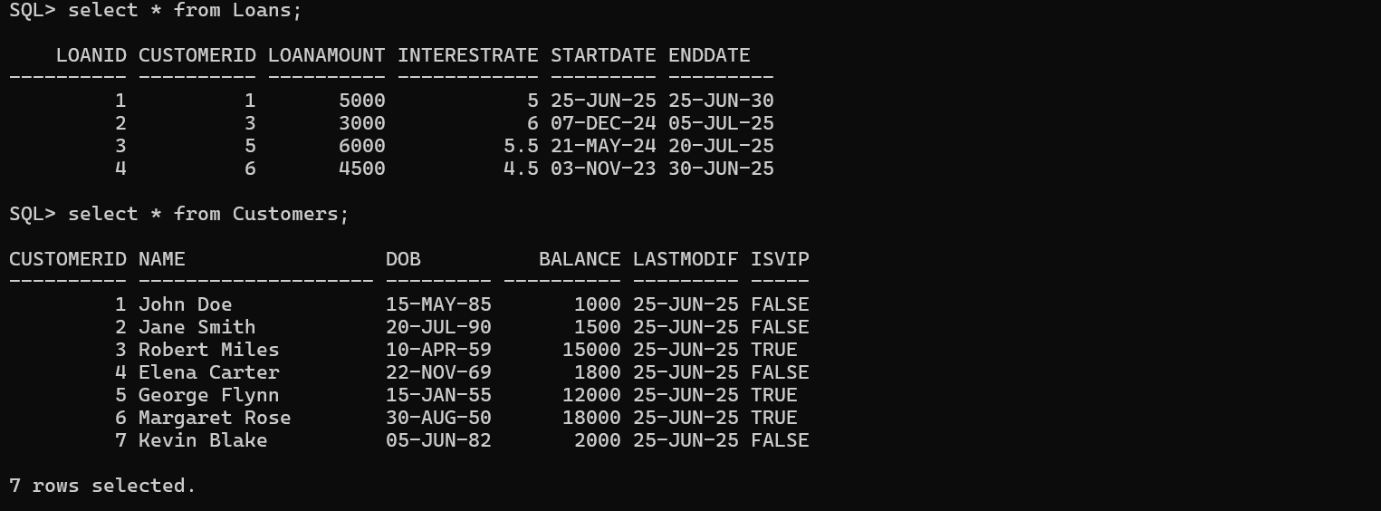
);

END LOOP;

END;

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**Tables :-**

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**Output :-**

