

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.

Solution:

```
-----  
  
BEGIN  
  
  FOR cust_rec IN (  
    SELECT customer_id  
    FROM customers  
    WHERE age > 60  
  )  
  LOOP  
    UPDATE customers  
    SET interest_rate = interest_rate - 1  
    WHERE customer_id = cust_rec.customer_id;  
  END LOOP;  
  
  COMMIT;  
  
  DBMS_OUTPUT.PUT_LINE('✅ Discount applied to customers above 60 years old.');  
END;  
  
/
```

OUTPUT:



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.

Solution:

BEGIN

FOR vip_rec **IN** (

SELECT customer_id

FROM customers

WHERE balance > 10000

)

LOOP

UPDATE customers

SET isvip = 'TRUE'

WHERE customer_id = vip_rec.customer_id;

END LOOP;




COMMIT;

DBMS_OUTPUT.PUT_LINE(' **VIP status updated for customers with balance > \$10,000.');**

END;

/

OUTPUT:

Query result	Script output	DBMS output	Explain Plan
 	 VIP status updated for customers with balance > \$10,000. PL/SQL procedure successfully completed. Elapsed: 00:00:00.012		

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.

Solution:

DECLARE

v_name customers.name%TYPE;

BEGIN

FOR loan_rec **IN** (

SELECT loan_id, customer_id, due_date

FROM loans

WHERE due_date <= SYSDATE + 30

)

LOOP

-- Fetch customer name using customer_id

SELECT name **INTO** v_name

FROM customers

WHERE customer_id = loan_rec.customer_id;

-- Print reminder

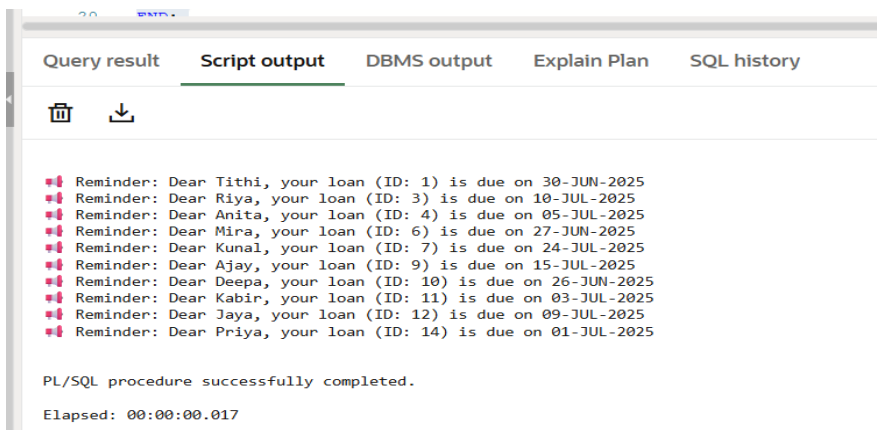
DBMS_OUTPUT.PUT_LINE(' Reminder: Dear ' || v_name ||
' , your loan (ID: ' || loan_rec.loan_id || ') is due on ' ||
TO_CHAR(loan_rec.due_date, 'DD-MON-YYYY'));

END LOOP;

END;

/

Output:



```
Query result  Script output  DBMS output  Explain Plan  SQL history

Reminder: Dear Tithi, your loan (ID: 1) is due on 30-JUN-2025
Reminder: Dear Riya, your loan (ID: 3) is due on 10-JUL-2025
Reminder: Dear Anita, your loan (ID: 4) is due on 05-JUL-2025
Reminder: Dear Mira, your loan (ID: 6) is due on 27-JUN-2025
Reminder: Dear Kunal, your loan (ID: 7) is due on 24-JUL-2025
Reminder: Dear Ajay, your loan (ID: 9) is due on 15-JUL-2025
Reminder: Dear Deepa, your loan (ID: 10) is due on 26-JUN-2025
Reminder: Dear Kabir, your loan (ID: 11) is due on 03-JUL-2025
Reminder: Dear Jaya, your loan (ID: 12) is due on 09-JUL-2025
Reminder: Dear Priya, your loan (ID: 14) is due on 01-JUL-2025

PL/SQL procedure successfully completed.

Elapsed: 00:00:00.017
```