Exercise 1: Control Structures

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

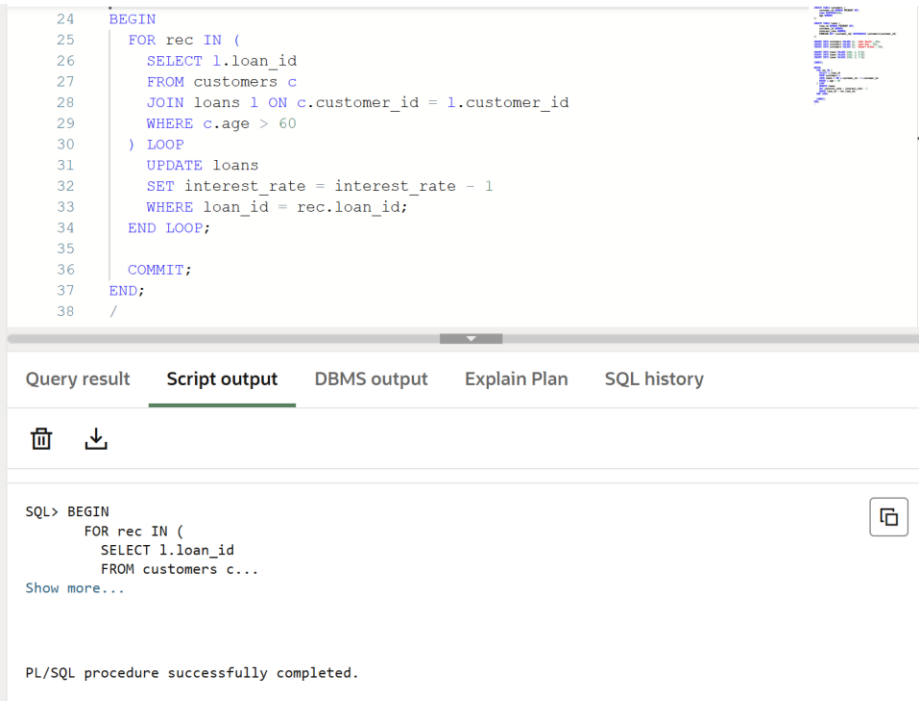
Question: Write a PL/SQL block that loops through all customers, checks their age, and if they are above 60, apply a 1% discount to their current loan interest rates.

Code:

```
BEGIN
 FOR rec IN (
  SELECT l.loan_id
  FROM customers c
  JOIN loans l ON c.customer_id = l.customer_id
  WHERE c.age > 60
 ) LOOP
  UPDATE loans
  SET interest_rate = interest_rate - 1
  WHERE loan_id = rec.loan_id;
 END LOOP;

 COMMIT;
END;
/
```

Output:



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

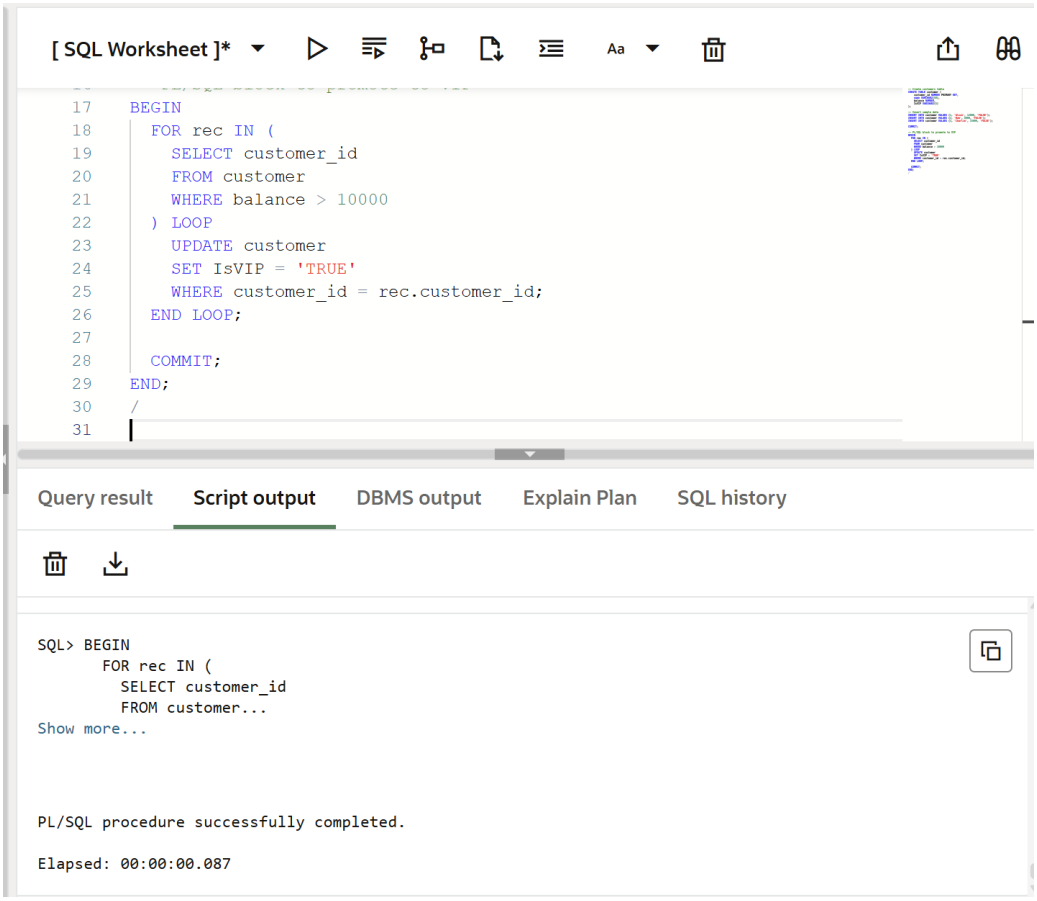
Question: Write a PL/SQL block that iterates through all customers and sets a flag IsVIP to TRUE for those with a balance over $10,000.

Code:

```
BEGIN
 FOR rec IN (
  SELECT customer_id
  FROM customer
  WHERE balance > 10000
 ) LOOP
  UPDATE customer
  SET IsVIP = 'TRUE'
  WHERE customer_id = rec.customer_id;
 END LOOP;

 COMMIT;
END;
/
```

Output:



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.

Code:

```
BEGIN
 FOR rec IN (
  SELECT c.name, l.due_date
  FROM loans l
  JOIN customers c ON c.customer_id = l.customer_id
  WHERE l.due_date BETWEEN SYSDATE AND SYSDATE + 30
 ) LOOP
  DBMS_OUTPUT.PUT_LINE('Reminder: Dear ' || rec.name ||
                ', your loan is due on ' || TO_CHAR(rec.due_date, 'DD-MON-YYYY'));
 END LOOP;
END;
/
```

Output: