Exercise 1: Control Structures

PL/SQL CODE:

```
-- Scenario 1: Apply 1% interest discount for customers above 60 years
BEGIN
  FOR cust IN (SELECT CustomerID, DOB FROM Customers) LOOP
    IF MONTHS_BETWEEN(SYSDATE, cust.DOB) / 12 > 60 THEN
      UPDATE Loans
      SET InterestRate = InterestRate - 1
      WHERE CustomerID = cust.CustomerID;
    END IF;
  END LOOP;
  COMMIT;
END;
-- Scenario 2: Set IsVIP = 'Y' for customers with balance > 10000
BEGIN
  FOR cust IN (SELECT CustomerID, Balance FROM Customers) LOOP
    IF cust.Balance > 10000 THEN
      UPDATE Customers
      SET IsVIP = 'Y'
      WHERE CustomerID = cust.CustomerID;
    END IF;
  END LOOP;
  COMMIT;
END;
-- Scenario 3: Print loan due reminders within next 30 days
SET SERVEROUTPUT ON
BEGIN
  FOR loan IN (
    SELECT LoanID, CustomerID, EndDate
    FROM Loans
    WHERE EndDate BETWEEN SYSDATE AND SYSDATE + 30
```

```
DECLARE

v_name VARCHAR2(100);

BEGIN

SELECT Name INTO v_name FROM Customers WHERE CustomerID = loan.CustomerID;

DBMS_OUTPUT.PUT_LINE('Reminder: Dear' || v_name || ', your loan (ID: ' || loan.LoanID || ') is due on ' ||
TO_CHAR(loan.EndDate, 'YYYY-MM-DD'));

END;

END;

END LOOP;

END;

/

select * from Accounts;
select * from CUSTOMERS;
select * from Loans;
```

Scenario 1:

Loan Table:

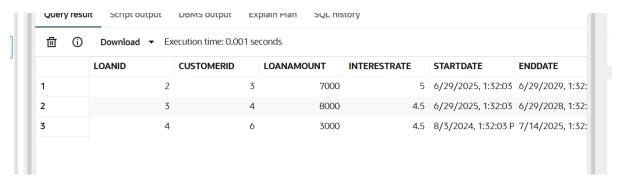
Query resu	ult Script output	DBMS output Ex	pla core.util.apex_layout.r	esize		
1 0	Download ▼ Ex	ecution time: 0.005 se	conds			
	LOANID	CUSTOMERID	LOANAMOUNT	INTERESTRATE	STARTDATE	ENDDATE
1	2	3	7000	6	6/29/2025, 1:32:03	6/29/2029, 1:32
2	3	4	8000	5.5	6/29/2025, 1:32:03	6/29/2028, 1:32
3	4	6	3000	4.5	8/3/2024, 1:32:03 P	7/14/2025, 1:32

Customer Table:

Query resu	lt Script output	DBMS output Ex	plain Plan SQL his	tory		
i i	Download ▼ Execution time: 0.001 seconds					
	CUSTOMERID	NAME	DOB	BALANCE	LASTMODIFIED	ISVIP
1	4	Senior Two	10/10/1948, 12:00:0	2500	6/29/2025, 1:32:03	(null)
2	5	Richie Rich	11/11/1988, 12:00:0	20000	6/29/2025, 1:32:03	(null)
3	6	Soon Due	8/25/1975, 12:00:00	6000	6/29/2025, 1:32:03	(null)
4	1	John Doe	5/15/1985, 12:00:00	1000	6/29/2025, 1:14:03	(null)
5	2	Jane Smith	7/20/1990, 12:00:00	1500	6/29/2025, 1:14:03	(null)
4	7	Eldor Ono	1/1/10E0 12:00:00	Z 000	4 /20 /202E 1.Z0.00	(mull)

Output:

Loan Table



Customer Table



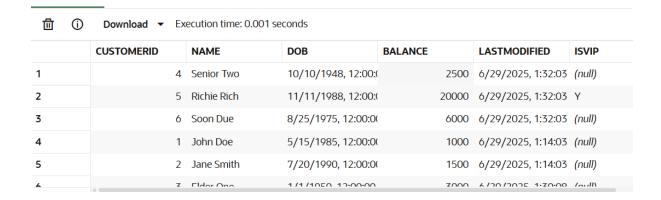
Scenario 2:

Customer Table:

Query res	ult Script output	DBMS output	Explain Plan SQL his	tory			
☐ ① Download ▼ Execution time: 0.001 seconds							
	CUSTOMERID	NAME	DOB	BALANCE	LASTMODIFIED	ISVIP	
1	2	4 Senior Two	10/10/1948, 12:00:0	2500	6/29/2025, 1:32:03	(null)	
2	Ę	5 Richie Rich	11/11/1988, 12:00:0	20000	6/29/2025, 1:32:03	(null)	
3		6 Soon Due	8/25/1975, 12:00:00	6000	6/29/2025, 1:32:03	(null)	
4		1 John Doe	5/15/1985, 12:00:00	1000	6/29/2025, 1:14:03	(null)	
5	7	2 Jane Smith	7/20/1990, 12:00:00	1500	6/29/2025, 1:14:03	(null)	
4	,	Z Eldor Ono	1/1/1050 12:00:00	Z000	4 /20 /202E 1.Z0.00	(null)	

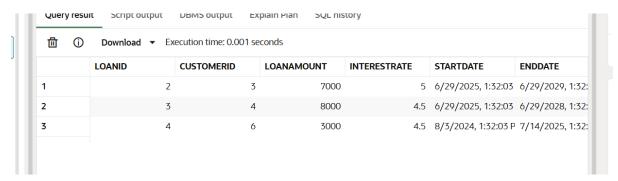
OUTPUT:

Customer Table:



Scenario 3:

Loan Table:



OUTPUT:

Reminder: Dear Soon Due, your loan (ID: 4) is due on 2025-07-14

PL/SQL procedure successfully completed.

Elapsed: 00:00:00.011