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
  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 LOOP;

END;

/

select * from Accounts;

select * from CUSTOMERS;

select * from Loans;
```

Scenario 1:

Loan Table:

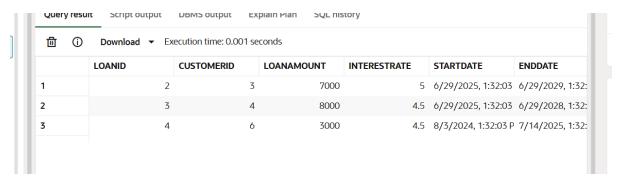
Query result Script output DBMS output Expla core.util.apex_layout.resize								
☐ Obwnload ► Execution time: 0.005 seconds								
	LOANID	CUSTOMERID	LOANAMOUNT	INTERESTRATE	STARTDATE	ENDDATE		
1	2	3	7000	6	6/29/2025, 1:32:03	6/29/2029, 1:32		
2	3	4	8000	5.5	6/29/2025, 1:32:03	6/29/2028, 1:32		
3	4	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				
☐ ① 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	Fldor Ono	1/1/1050 12:00:00	Z000	4 /20 /202E 1.70.00	(null)		

Output:

Loan Table



Customer Table



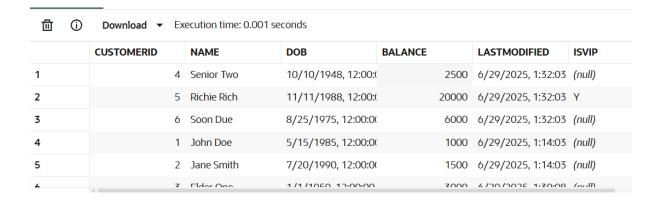
Scenario 2:

Customer Table:

Query resu	lt Script output	DBMS output Ex	plain Plan SQL his	tory				
⑪ ① 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	1/1/1050 12:00:00	7000	4 /20 /202E 1.Z0.00	/mull\		

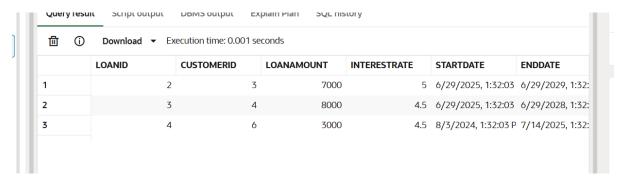
OUTPUT:

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