**Exercise 1: Control Structures**

**Scenario 1:**

declare

cursor cust is

select c.CUSTOMERID , trunc(Months\_between(sysdate,c.DOB)/12) as age  from CUSTOMERS c;

v\_age number;

v\_id Loans.CUSTOMERID%TYPE;

begin

    open cust;

    Loop

    FETCH cust into v\_id,v\_age;

    EXIT WHEN cust%NOTFOUND;

    if v\_age>60 THEN

    update Loans set INTERESTRATE = INTERESTRATE - 1 where CUSTOMERID = v\_id;

    dbms\_output.PUT\_LINE('applied 1% discount to '||v\_id||' age '||v\_age);

    end if;

    End LOOP;

End;

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**Scenario 2:**

ALTER TABLE Customers ADD IsVIP VARCHAR2(5);

DECLARE

CURSOR cust is

select c.CUSTOMERID , c.BALANCE   from customers c;

v\_id customers.CUSTOMERID%TYPE;

v\_bal customers.BALANCE%TYPE;

BEGIN

    open cust;

    loop

        fetch cust into v\_id,v\_bal;

        exit when cust%notfound;

        if v\_bal > 10000 THEN

            UPDATE CUSTOMERS set ISVIP='yes' where CUSTOMERID = v\_id;

            dbms\_output.put\_line('VIP set true for '||v\_id || ' with balance '||v\_bal);

        end if;

    end loop;

end;

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**Scenario 3:**

DECLARE

    CURSOR due\_loans IS

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

        FROM Loans l

        JOIN Customers c ON l.CustomerID = c.CustomerID

        WHERE l.EndDate <= SYSDATE + 30;

    v\_loan\_id   Loans.LoanID%TYPE;

    v\_cust\_id   Loans.CustomerID%TYPE;

    v\_end\_date  Loans.EndDate%TYPE;

    v\_name      Customers.Name%TYPE;

BEGIN

    FOR rec IN due\_loans LOOP

        v\_loan\_id  := rec.LoanID;

        v\_cust\_id  := rec.CustomerID;

        v\_end\_date := rec.EndDate;

        v\_name     := rec.Name;

        DBMS\_OUTPUT.PUT\_LINE(

            'Reminder: Loan ID ' || v\_loan\_id ||

            ' for customer ' || v\_name ||

            ' (ID: ' || v\_cust\_id || ') is due on ' || TO\_CHAR(v\_end\_date, 'YYYY-MM-DD')

        );

    END LOOP;

END;

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