**Exercise 1: Control Statements**

**Create table**

/\* ---------- CUSTOMERS ---------- \*/

CREATE TABLE customers (

customer\_id NUMBER GENERATED BY DEFAULT AS IDENTITY

CONSTRAINT pk\_customers PRIMARY KEY,

age NUMBER(3)

CONSTRAINT ck\_customers\_age CHECK (age >= 0),

balance NUMBER(15,2) DEFAULT 0,

isvip CHAR(1) DEFAULT 'N'

CONSTRAINT ck\_customers\_isvip CHECK (isvip IN ('Y','N'))

);

/\* ---------- LOANS ---------- \*/

CREATE TABLE loans (

loan\_id NUMBER GENERATED BY DEFAULT AS IDENTITY

CONSTRAINT pk\_loans PRIMARY KEY,

customer\_id NUMBER

CONSTRAINT fk\_loans\_customer

REFERENCES customers (customer\_id)

ON DELETE CASCADE,

interest\_rate NUMBER(5,2)

CONSTRAINT ck\_loans\_rate CHECK (interest\_rate > 0),

due\_date DATE

);

1. **Customer older than 60 years**

DECLARE

CURSOR c\_senior IS

SELECT customer\_id

FROM customers

WHERE age > 60;

BEGIN

FOR r IN c\_senior LOOP

UPDATE loans

SET interest\_rate = interest\_rate - 1

WHERE customer\_id = r.customer\_id;

END LOOP;

COMMIT; -- keep if you want the change to be permanent

END;

/

1. **Promote customers with balance > $10 000 to VIP**

DECLARE

CURSOR c\_rich IS

SELECT customer\_id

FROM customers

WHERE balance > 10000 -- threshold

AND NVL(isvip,'N') = 'N'; -- only if not already VIP

BEGIN

FOR r IN c\_rich LOOP

UPDATE customers

SET isvip = 'Y'

WHERE customer\_id = r.customer\_id;

END LOOP;

COMMIT;

END;

/

1. **Remind customers whose loans are due in the next 30 days**

SET SERVEROUTPUT ON;

DECLARE

CURSOR c\_due IS

SELECT loan\_id,

customer\_id,

due\_date

FROM loans

WHERE due\_date BETWEEN TRUNC(SYSDATE)

AND TRUNC(SYSDATE) + 30;

BEGIN

FOR r IN c\_due LOOP

DBMS\_OUTPUT.PUT\_LINE(

'Reminder -> Dear Customer #' || r.customer\_id ||

', your loan #' || r.loan\_id ||

' is due on ' || TO\_CHAR(r.due\_date, 'DD-MON-YYYY') ||

'. Please pay on time.'

);

END LOOP;

END;

/