

Task 7 PL/SQL Procedure for loops

29/9/21

Aim:

To write PL/SQL Programs using loops for printing Prime numbers
customer IDs and for demonstrating loop control in different scenarios

Procedure:

1. Start a PL/SQL block or Procedure.
2. Use a cursor (if required) to fetch customer IDs from a table.
3. For each ID, check whether it is a Prime number using a loop.
4. Use FOR loop / WHILE loop to demonstrate Prime number checking.
5. Print the result using DBMS_OUTPUT, PUT_LINE.
6. End the block.

Example 1: using WHILE loop with cursor

Prime check using WHILE loop

CREATE OR REPLACE PROCEDURE Print-Prime-CustomerIDs

CURSOR cust - cus IDs

SELECT customer - id FROM customers;

v-id NUMBER;

v-is-Prime BOOLEAN;

v-is NUMBER;

BEGIN

OPEN cust - cus;

LOOP

FETCH cust - cus INTO v-id;

EXIT WHEN cust - cus % NOT FOUND;

-- Prime check using WHILE loop

IF v-id < 2 THEN

v-is-Prime := FALSE;

ELSE

v-is-Prime := TRUE;

v-is := 2;

END (GET (v-id)) LOOP

Example 2: using for loop to find N prime numbers

CREATE OR REPLACE PROCEDURE Print_First_N_Primes (n number)

V-num NUMBER := 2;

V-count NUMBER := 0;

V-is-Prime BOOLEAN;

BEGIN

WHILE V-count < n LOOP

V-is-Prime := TRUE;

- Prime check using for loop

for i IN 2, TRUNC (SQRT (V-num)) LOOP

IF MOD (V-num - i) = 0 THEN

V-is-Prime := FALSE;

exit;

end IF;

end loop;

This procedure prints the first N numbers using a for loop
for example

BEGIN

Print_First_N_Primes (10); -- Print first 10 prime numbers
END;

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