

22-06-2024

Writing Control Structures

- **Conditional IF statements:**
 - IF-THEN-END IF
 - IF-THEN-ELSE-END IF
 - IF-THEN-ELSIF-END IF

IF Statements

1. IF UPPER(v_last_name) = 'GIETZ' THEN

 v_mgr := 102;

END IF;

IF-THEN-ELSE Statements

2. DECLARE

 v_hire_date DATE := '12-Dec-1990';

 v_five_years BOOLEAN;

BEGIN

IF MONTHS_BETWEEN(SYSDATE, v_hire_date)/12 > 5 THEN

 v_five_years := TRUE;

ELSE

 v_five_years := FALSE;

END IF;

END;

CASE Expressions

3. SET SERVEROUTPUT ON

DEFINE p_grade = a

DECLARE

 v_grade CHAR(1) := UPPER('&p_grade');

 v_appraisal VARCHAR2(20);

BEGIN

```

v_appraisal :=
CASE v_grade
    WHEN 'A' THEN 'Excellent'
    WHEN 'B' THEN 'Very Good'
    WHEN 'C' THEN 'Good'
    ELSE 'No such grade'

END;

DBMS_OUTPUT.PUT_LINE ('Grade: '|| v_grade || '
Appraisal '|| v_appraisal);

```

Iterative Control: LOOP Statements

- **There are three loop types:**
 - **Basic loop**
 - **FOR loop**
 - **WHILE loop**

Basic Loops

4.DECLARE

```

v_country_id locations.country_id%TYPE := 'CA';
v_location_id locations.location_id%TYPE;
v_counter NUMBER(2) := 1;
v_city locations.city%TYPE := 'Montreal';

BEGIN

SELECT MAX(location_id) INTO v_location_id FROM locations
WHERE country_id = v_country_id;

```

LOOP

```

INSERT INTO locations(location_id, city, country_id)
VALUES((v_location_id + v_counter),v_city, v_country_id );
v_counter := v_counter + 1;
EXIT WHEN v_counter > 3;

END LOOP;

END;

```

WHILE Loops

5.DECLARE

```
v_country_id locations.country_id%TYPE := 'CA';
v_location_id locations.location_id%TYPE;
v_city locations.city%TYPE := 'Montreal';
v_counter NUMBER := 1;

BEGIN

SELECT MAX(location_id) INTO v_location_id FROM locations
WHERE country_id = v_country_id;

WHILE v_counter <= 3 LOOP

INSERT INTO locations(location_id, city, country_id)
VALUES((v_location_id + v_counter), v_city, v_country_id );

v_counter := v_counter + 1;

END LOOP;

END;

/
```

FOR Loops

6. DECLARE

```
v_country_id locations.country_id%TYPE := 'CA';
v_location_id locations.location_id%TYPE;
v_city locations.city%TYPE := 'Montreal';

BEGIN

SELECT MAX(location_id) INTO v_location_id
FROM locations
WHERE country_id = v_country_id;

FOR i IN 1..3 LOOP

INSERT INTO locations(location_id, city, country_id)
VALUES((v_location_id + i), v_city, v_country_id );

END LOOP;

END;
```