PL/SQL Exercise 1: Control Structures

In this exercise, you will learn PL/SQL control structures like IF-THEN-ELSE, CASE, and LOOPS (WHILE, etc.). These are important for decision making and repetitive tasks in database programming.

### Example 1: IF-THEN-ELSE Statement (Grading System)

Code:

```
DECLARE
   v_marks NUMBER := 75;
BEGIN
  IF v_marks >= 90 THEN
     DBMS_OUTPUT.PUT_LINE('Grade: A');
  ELSIF v_marks >= 75 THEN
     DBMS_OUTPUT.PUT_LINE('Grade: B');
  ELSE
     DBMS_OUTPUT.PUT_LINE('Grade: C');
  END IF;
END;
```

Output:
Grade: B

Screenshot:

```
1    DECLARE
2        v_marks NUMBER := 75;
3    BEGIN
4        IF v_marks >= 90 THEN
5            DBMS_OUTPUT.PUT_LINE('Grade: A');
6        ELSIF v_marks >= 75 THEN
7            DBMS_OUTPUT.PUT_LINE('Grade: B');
```

Query result   **Script output**   DBMS output   Explain Plan   SQL history

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Grade: B   ⧉

PL/SQL procedure successfully completed.

Elapsed: 00:00:00.006

Example 2: WHILE LOOP (Number Print)

Code:

```
DECLARE
  i NUMBER := 1;
BEGIN
  WHILE i <= 5 LOOP
    DBMS_OUTPUT.PUT_LINE('Number: ' || i);
    i := i + 1;
  END LOOP;
END;
```

Output:
Number: 1
Number: 2
Number: 3
Number: 4
Number: 5

Screenshot:

```
4        WHILE i <= 5 LOOP
5            DBMS_OUTPUT.PUT_LINE('Number: ' || i);
6            i := i + 1;
7        END LOOP;
8    END;
9    |
```

Query result   **Script output**   DBMS output   Explain Plan   SQL history

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```
Number: 1
Number: 2
Number: 3
Number: 4
Number: 5

PL/SQL procedure successfully completed.
```

Example 3: CASE Statement (Day Check)

Code:

```
DECLARE
  v_day VARCHAR2(10) := 'WEDNESDAY';
BEGIN
  CASE v_day
    WHEN 'MONDAY' THEN DBMS_OUTPUT.PUT_LINE('Start of the week');
    WHEN 'FRIDAY' THEN DBMS_OUTPUT.PUT_LINE('Weekend is near');
    WHEN 'SUNDAY' THEN DBMS_OUTPUT.PUT_LINE('Rest day');
    ELSE DBMS_OUTPUT.PUT_LINE('Midweek day');
  END CASE;
END;
```
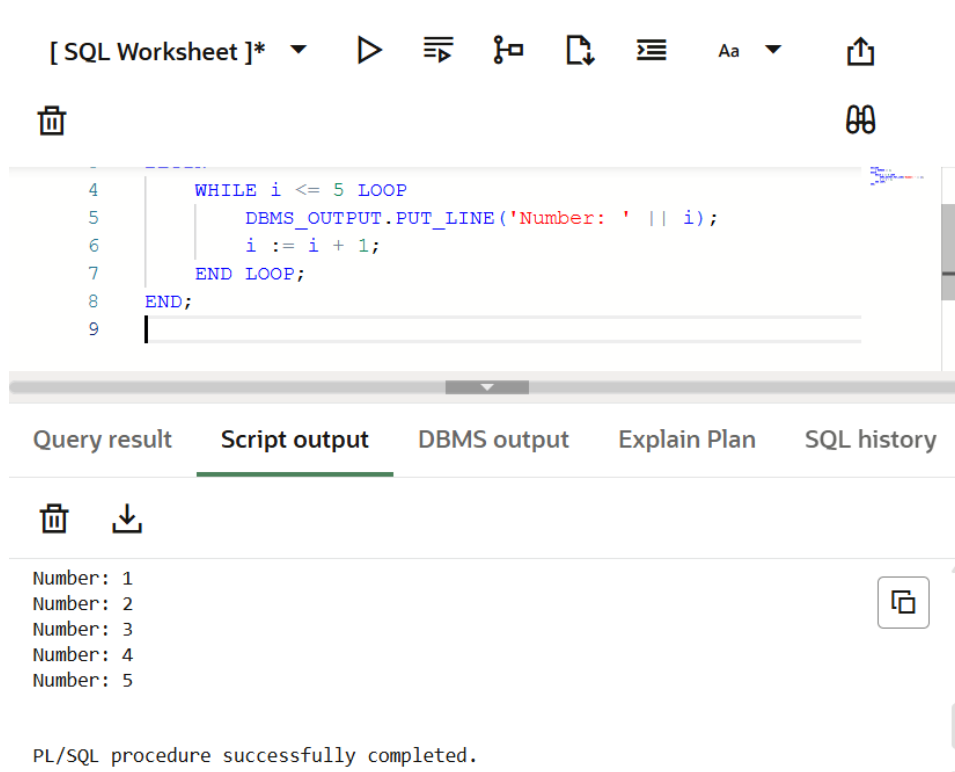
Output:
Midweek day

Screenshot:

```
  6              WHEN 'FRIDAY' THEN DBMS_OUTPUT.PUT_LINE('Weekend
  7              WHEN 'SUNDAY' THEN DBMS_OUTPUT.PUT_LINE('Rest day
  8              ELSE DBMS_OUTPUT.PUT_LINE('Midweek day');
  9          END CASE;
 10      END;
 11
```

Query result   **Script output**   **DBMS output**   **Explain Plan**   **SQL history**

```
Midweek day

PL/SQL procedure successfully completed.

Elapsed: 00:00:00.006
```