IF ELSE, CASE, LOOP

in PLSQL

G. M. Shahariar
Lecturer
Department of CSE
Ahsanullah University of Science & Technology

Your Task

- Open SQLPLUS
- Log In using credentials
- Open Notepad++
- Create a new file
- Name it
- Save it as sql file
- Follow me, repeat after me.

IF THEN

Problem

Check if a number is even.

If the number is even, print EVEN.

Use IF...THEN syntax to solve the problem.

“IF…THEN” Syntax

```
SET SERVEROUTPUT ON;

DECLARE
        ……..
BEGIN
      IF …….. THEN

            ……..

      END IF;
END;
/
```

IF THEN ... ELSE

Problem

Check whether a number is even or odd.

If the number is Even, print EVEN.

If the number is Odd, print ODD.

Use IF...THEN...ELSE syntax to solve the problem.

“IF…THEN ELSE” Syntax

```
SET SERVEROUTPUT ON;

DECLARE
        ……..
BEGIN
      IF ……..  THEN

            ……..
      ELSE
            ……..

      END IF;
END;
/
```

IF THEN … ELSIF THEN … ELSE

Problem

Mod a number by 3.

There can be three possible results –

If the result is 0, print ZERO
If the result is 1, print ONE
If the result is 2, print TWO

Use IF..THEN..ELSIF…THEN…ELSE syntax to solve the problem.

"IF…THEN…ELSIF….THEN…ELSE" Syntax

```
SET SERVEROUTPUT ON;
DECLARE
        ……..
BEGIN
        IF …….. THEN
                ……..
        ELSIF…….. THEN
                ……..
        ELSE
                ……..
        END IF;
END;
/
```

› Open Another sql file in Notepad++

CASE … WHEN THEN… ELSE

Problem

Mod a number by 3.

There can be three possible results –

If the result is 0, print ZERO
If the result is 1, print ONE
If the result is 2, print TWO

Use CASE…WHEN…THEN…ELSE syntax to solve the problem.

“CASE…WHEN…THEN…ELSE” Syntax

```
SET SERVEROUTPUT ON;
DECLARE
        ……..
BEGIN
        CASE
            WHEN …….. THEN
                    ……..
            WHEN …….. THEN
                    ……..
            ELSE
                    ……..
        END CASE;
END;
/
```

Another CASE…WHEN…THEN…ELSE Syntax !

“CASE…WHEN…THEN…ELSE” Syntax

```
SET SERVEROUTPUT ON;
DECLARE
      ……..
BEGIN
      CASE ……..
          WHEN …….. THEN
                ……..
          WHEN …….. THEN
                ……..
          ELSE
                ……..
      END CASE;
END;
/
```

› Open Another sql file in Notepad++

LOOP

Problem

Print 1 2 3 4 5.

Use LOOP, WHILE LOOP, FOR LOOP.

Observe the breaking condition in each case.

“PL/SQL LOOP” Syntax

```
SET SERVEROUTPUT ON;
DECLARE
        ……..
BEGIN
    LOOP
        ……
        ……
        IF ……THEN
            EXIT;
        END IF;

    END LOOP;
END;
/
```

› Another LOOP Syntax

› Change in break condition

“PL/SQL LOOP” Syntax

```
SET SERVEROUTPUT ON;
DECLARE
        ……..
BEGIN
    LOOP
        ……..
        ……..
        EXIT WHEN ……..
    END LOOP;
END;
/
```

WHILE LOOP

“WHILE LOOP” Syntax

```
SET SERVEROUTPUT ON;

DECLARE

            ……..

BEGIN

      WHILE ……..

      LOOP

            ……..

            ……..

      END LOOP;

END;

/
```

FOR LOOP

“FOR LOOP” Syntax

```
SET SERVEROUTPUT ON;

DECLARE

            ……..

BEGIN

      FOR……..  IN ……..  LOOP

            ……..

            ……..

      END LOOP;

END;

/
```

Type

```
clear screen;
```

in SQLPLUS

User Input in PLSQL

```
SET VERIFY OFF;
SET SERVEROUTPUT ON;

DECLARE
        A number := &x;
        B number := &y;
        C number := 0;
BEGIN
        C := A+B;
        DBMS_OUTPUT.PUT_LINE(C);
END;
/
```

Your Task

- Run “1.sql” file in SQLPLUS
- Observe the output Table
- Open a new sql file in Notepad++

Task 1

- Declare three variables (Say, A, B, C) with the data type of ‘taka’ attribute of ‘money’ table.
- Take input the values of A & B from user.
- In the BEGIN section, Sum A & B (C := A+B)
- If C is less than 170, then insert a new row in ‘money’ table with id = 7, name = ‘A’ and taka = C+10
- If C is in between 170 and 210, then insert a new row in ‘money’ table with id = 7, name = ‘B’ and taka = C+30
- Otherwise, insert a new row in ‘money’ table with id = 7, name = ‘C’ and taka = C

Task 2

- Declare three variables (A, B, C) with the data type of ID, Name, Taka attribute of ‘money’ table.
- Take input the values of A, B, C from user.
- Insert exactly 5 rows in ‘money’ table where the ID will be incremented once each time.

OFFLINE

› Run ‘DB.sql’

› Create one question that requires all of today’s topics (IF ELSE/WHEN CASE and LOOP)

› Solve the question using PL/SQL

› Follow the FORMAT of the previous OFFLINE.

› There will be an ONLINE in the Next Lab.

Good Luck ☺