

CSE 4508 – RDBMS Programming Lab

Lab 5

PL/SQL is a block structured language where we can write code organized into blocks similar to Java/C/C++, although the coding style differs here due to not having any curly braces to define blocks, rather we define blocks using the BEGIN and END keywords. You can define PROCEDURES (which execute some code without returning anything) and FUNCTIONS (which execute code and return some variable/record). And you can even define unnamed blocks in PL/SQL, otherwise known as **anonymous blocks** that can be called immediately upon defining by using the / at the end.

Note: Remember to SET SERVEROUTPUT ON to see the results of the blocks.

```
SQL> SET SERVEROUTPUT ON;
SQL> BEGIN
  2     DBMS_OUTPUT.PUT_LINE('Hello World');
  3 END;
  4 /
Hello World

PL/SQL procedure successfully completed.
```

Refer to Lectures 6 & 7 from the Lectures pdf for pointers on Variables, Operators and Data Types.

Refer to Lectures 8 & 9 from the Lectures pdf for pointers on Control Structures and Loops.

A. Write a block of PL/SQL code which checks whether the current year is a leap year and prints “Yes” or “No”. After this, it should print the immediate previous leap year, and the immediate next one. For example, if the current year is 2022 then it will print “No” and then print “2020 2024”. [Hint: Use SYSDATE to know the current date. Find out how to get only the year from SYSDATE]

Note: Do NOT simply hardcode and print 2020 and 2024. It should account for any case of the current year.

B. Write a PL/SQL function called **times_table** which takes two inputs: **n**, which indicates how many times tables you have to print, and **iter** which indicates how far along the times table you have to go. Then write a block of code to call this function, taking inputs of **n** and **iter** from the user. The example output for **n=2** and **iter=10** is shown:

```
1 Table
-----
1*1=1
1*2=2
1*3=3
1*4=4
1*5=5
1*6=6
1*7=7
1*8=8
1*9=9
1*10=10
2 Table
-----
2*1=2
2*2=4
2*3=6
2*4=8
2*5=10
2*6=12
2*7=14
2*8=16
2*9=18
2*10=20
```