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). Furthermore, you can even define unnamed blocks in PL/SQL, otherwise known as **anonymous blocks** that can be called immediately upon defining 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 that checks whether the current year is the starting year of a new decade (years such as 2000, 2010, 2020) and prints either “Yes” or “No”. After this, it should print the current decade (e.g. for 2000 to 2009, print ‘The 2000s’, for 2010 to 2019, print ‘The 2010s’).

B. Write a PL/SQL procedure(or function) called **prime_generator** which takes only one input: **s**. The function will keep generating prime numbers, starting from 2, until the sum of all the prime numbers generated so far is less than or equal to **s.** For example, if s = 20, the output will be **2, 3, 5, 7** (Since 2+3+5+7 = 17. “11” is not included since that would make the sum greater than 20)**.** Execute this function from a PL SQL block.