CSE 4508 – RDBMS Programming Lab

Lab 7

Prerequisites: Oracle 10g Express Edition

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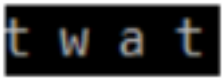
A. Write a block of PL/SQL code which checks whether the current year is a leap year and prints
"Yes" or "No". After this, it should print the immediate previous leap year, and the immediate next one. [Do NOT simply hardcode and print 2016 and 2020]

B. Write a PL/SQL procedure that takes as input a string. The program will achieve two things:
1) Make a new string with a space added between every character of the input string. For instance, if the input string is twat, the output will be:



2) Check if the original input string was a palindrome. Print "Yes" or "No" accordingly. [For example: 'twat' is not a palindrome, but 'tawat' is]

C. Write a PL/SQL procedure/function called nearest_primes. This procedure takes a number, n, as an input. Given the number n, the procedure will output the nearest prime number less than n and the nearest prime number greater than n. For example, if n = 15, the program should output 13 and 17.

D. A hacker stumbles onto a database table containing only two columns: Username (varchar2) and Password_Length (number). Password_Length only contains a number, such as 7 or 8, denoting how long the password of that username is. Write a block of PL/SQL, using a function if necessary, which will first find the highest Password_Length from the table. It will then find out how many permutations the hacker needs to go through to crack that password. (The password only contains letters of the alphabet. You therefore have 26x2= 52 possibilities for each symbol of the password. However, no character can be repeated. So the correct answer, for a password of length 4, is:

52x51x50x49 = 6497400)