York University

Dept. of Computer Science and Engineering
CSE 2031
Software Tools

Write a function to replace the occurrence of word1 with word2 in a string s. Note that I said word1 not substring 1. A word is ended by one or more space, tabs, or new lines. Test your function by including it in a small program and reading the input from the keyboard.
The prototype is
 void replace_word(char * s, char * word1, char * word2);

Write a function to return 1 if its argument is a prime number, else return 0. Use this function to display the prime numbers between 2 integers (the 2 integers are read by your program from the standard input.

Write a C program that takes an integer represents a year, and then it displays what day hat year started. For example if the input is 2008, the output should be
Tuesday (Jan. 1st 208 was a Tuesday).
The algorithm to calculate what day is as following

$$x = (3 - (year / 100 \% 4)) * 2$$

$$y = year \% 100$$

$$day = (y / 12 + y \% 12 + y \% 12 / 4 + x)\%7$$

$$\text{if the year is leap add 7 to days, else add 1 to day}$$

$$day = day\%7$$

The result is a number between 0 and 6 where 0 means Sunday, 1 means Monday, etc. …
The definition of a leap year is that it divisible by 4, but not 100 unless it is divisible by 400. The code to calculate if a year is leap or not must be written as a separate function. Test your code against the UNIX cal program, any differences. ?