# EL2208 Problem Solving with C Lab. Lab #8

**Determining which years in a specified range of years are leap years.**

As usual, work in praktikum.ee.itb.ac.id server.

Write a program which determines which years in a specified range of years are leap years. The user will be prompted to enter a range of years; earlier year first, later year second. Do not let the user enter a latter year first; keep prompting them until they enter them in the right order. Next, loop over this range of years (including the end-years) and determine which years are leap years. Recall that a leap year is one which is evenly divisible by 4 except for centesimal years (years ending in 00) that are not evenly divisible by 400. The year 1976 is a leap year as is 2000 but not 1900. Call a function to determine if a specific year is a leap year. The function prototype will be

**char leap_year(int year);**

The argument will be the year in question and the return value will be the character 'n' if that year is NOT a leap year and 'y' if that is IS a leap year. Call this function from the main program repeatedly until the entire range of years is processed. As you process each year, print the output to a file called **lab9.out** in the following format:

```
Leap Years       Non Leap Years
                   1895
  1896
                   1897
                   1898
                   1899
                   1900
                   1901
                   1902
                   1903
  1904
                   1905
```

if the user entered the range of years from 1895 through 1905. Use the **fopen/fprintf/fclose** functions to access this output file.

To check your output file, you can either open it with **emacs** or use the **more** command to examine it's contents by typing

**more lab9.out**

on the command line.

Show your lab instructor when you are done with the lab and submit it using perl submitter.