California State University, Sacramento
College of Engineering and Computer Science

CSc 20: Programming Concepts and Methodology II

Lab 02

Overview:

In this lab you are to write a Java program to prompt the user for an integer indicating a year and then print the calendar for that year. Run the instructor's program in directory ~wang/sample20/lab02 for sample output.

Objective:

This lab's objective is to exercise you with the use of Java's control statements. **You are required to use exactly one while statement, one for statement and one switch statement.** You will also practice on how to use some basic input methods of the Scanner class and some formatting techniques of method printf().

Activities:

1. Copy instructor's JulianDate class from ~wang/sample20/lab02 into your working directory. The JulianDate class is used to determine the day of the week for the 1st day of January.

   ```
   JulianDate JD = new JulianDate();
   int date = JD.toJulian(yr,1,1);
   int dayOfWeek = (date+1)%7; // 0 means Sunday, 1 means Monday, etc.
   ```

2. Develop your program according the pseudo code given in class.

Notes:

1. No arrays are allowed in this lab.
2. Your output should be **closely similar** to the output of the instructor's sample program.
3. To determine whether a year is a leap year or not:

   a. If the year is a century year, the year must be divisible by 400.
   b. If the year is not a century year, the year only needs to be divisible by 4.