Programming Assignment #2

Decisions

1— Leap Year

A year with 366 days is called a leap year. A year is a leap year if it is divisible by 4 (for example, the year 1980), except it is not a leap year if it is divisible by 100 (for example, the year 1900); however, it is a leap year if it is divisible by 400 (for example, the year 2000).

There were no exceptions before the introduction of the Gregorian calendar on October 15, 1582 (for example, the year 1500 was a leap year). Write a program that asks the user for a year and computes whether that year is a leap year or not.

Here are some sample runs of such a program:

```
Enter the year then press Enter : 1500

Leap year: 1500


Enter the year then press Enter : 1900

1900 not a leap year!


Enter the year then press Enter : 1996

Leap year: 1996


Enter the year then press Enter : 1997

1997 not a leap year!


Enter the year then press Enter : 2000

Leap year: 2000
```

2– Calculator

Write a Java program that designs a calculator. The program should read from the user two integer numbers and a character which indicates the type of operation desired.

Operation	Desired output
+	Sum of two integers is calculated
-	Difference of two integers is calculated
*	Product of two integers is calculated
/	The quotient of the division of two integers is calculated
%	The remainder of the division of two integers is calculated

3– Salary

Complete the following program to determine the raise and new salary for an employee by adding if -else statements to compute the raise. The input to program includes the current annual salary for the employee and a number indicating the performance rating (1=excellent, 2=good, and 3=poor). An employee with a rating of 1 will receive a 6% raise, an employee with a rating of 2 will receive a 4% raise, and one with a rating of 3 will receive a 1.5% raise.

4– Sorting Three Floating Numbers

Write a program that reads in three floating-point numbers and sorts them. For example

```
Please enter three numbers
4
9
2.5
The inputs in sorted order are
2.5
4
9
```

Use **only** conditional statements.

5– Min–Max

How can you find the minimum/maximum of three numbers using the conditional operator, in just one line?

Hint: Google for ternary operator in Java.