

# errCSC1003 Practice Outline Sep 26-30

*Programming exercises about data types and type conversion.*

1. Write a program that takes two positive integers as command-line arguments and prints true if either evenly divides the other. You might need % (to check divisible) and boolean operations. (You can use the LeapYear test program in the lecture notes as the reference.)

```
public class LeapYear
{
    public static void main(String[] args)
    {
        int year = Integer.parseInt(args[0]);
        boolean isLeapYear;

        // divisible by 4 but not 100
        isLeapYear = (year % 4 == 0) && (year % 100 != 0);

        // or divisible by 400
        isLeapYear = isLeapYear || (year % 400 == 0);

        System.out.println(isLeapYear);
    }
}
```

2. Write a program that prints the sum of two random integers between 1 and 6 (such as you might get when rolling dice). This program does not need the input. You can use the RandomInt program in the lecture notes as the reference.

```
public class RandomInt
{
    public static void main(String[] args)
    {
        int N = Integer.parseInt(args[0]);
        double r = Math.random();
        int t = (int) (r * N);
        System.out.println(t);
    }
}
```

double to int (cast)      int to double (automatic)

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3. [Optional] Order check. Write a program that takes three double command-line arguments  $x$ ,  $y$ , and  $z$  and prints true if the values are strictly ascending or descending ( $x < y < z$  or  $x > y > z$ ), and false otherwise.