CS101 Assignment One

January 22, 2009

1 Q1 [programming]

Write a program that takes 2 positive integers as command line arguments and prints true if one evenly divides the other. Use the following skeleton code Q1.java.

```java
public class Q1 {
    public static void main(String[] args) {
        int a = Integer.parseInt(args[0]); // get the first number
        int b = Integer.parseInt(args[1]); // get the second number
        ...
    }
}
```

2 Q2 [programming]

Write a program to compute the distance of two points in the 3D Euclidean space. The program should accept coordinates of 2 points (6 numbers) from your program input arguments and output the distance of the points. The distance of point \((x_1, y_1, z_1)\) and point \((x_2, y_2, z_2)\) is defined as

\[
d = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2 + (z_1 - z_2)^2}
\]

To convert an input argument string to double, use function `Double.parseDouble(args[n])`, where \(n\) is the \((n+1)\)th argument.

3 Q3 [programming]

Write a program to generate integer numbers randomly from 1 to 6. This program simulates a dice. [Hint: function `Math.random()` generates random double number in \([0,1)\)].

4 What to Submit

Submit programs (.java files) that can be compiled and executed. Name your program as `Qn.java` where \(n\) is the question number. Upload your programs to WebCT before the submission deadline. There will be 3 days grace period. But late submission would involve 10% point deduction for each day. Submissions later than 3 days are not accepted.