

## More on Command Line Processing

```
import java.util.Scanner;

public class fToC
{
    public static void main(String[] args)
    {
        if (args.length > 0)
            System.out.println(f_to_c(Double.parseDouble(args[0])));
        else
        {
            Scanner console = new Scanner(System.in);

            while (console.hasNext())
                System.out.println(f_to_c(Double.parseDouble(console.nextLine())));
        }

        public static double f_to_c(double temp_in_fahrenheit)
        {
            return (temp_in_fahrenheit - 32) * (5.0/9.0);
        }
    }
}

// Program generates temperatures in degrees Fahrenheit from -125 - +135
import java.util.Random;

public class genValues
{
    public static void main(String[] args)
    {
        int numberOfValues = 1000;

        if (args.length > 0)
            numberOfValues = Integer.parseInt(args[0]); // if a command line argument specified, use it

        Random rnd = new Random();

        for (int i = 0; i < numberOfValues; i++)
            System.out.println(rnd.nextInt(261) - 125); // temperature ranges -125 - +135
    }
}
```

Sample run:

```
$ java genValues 10 | java fToC
18.88888888888889
-81.66666666666667
51.111111111111114
-72.77777777777779
40.55555555555556
56.111111111111114
23.88888888888889
30.0
-68.88888888888889
-61.111111111111114
```

Notes:

- Observe how the fToC program can handles either a command line argument OR values from STDIN
  - The number of generated values has a default of 1000, unless a command line argument is present
- Notice how conversion from text to int or double is performed using parseInt() or parseDouble()
- The fToC program should be enhanced to catch errors, including... what????
- Outputting temperature values to  $10^{-14}$  implies a very high-level of accuracy, how can this be remedied?