

Exceptions

For the following exercises, choose appropriate class names as you see fit.

1. Write a program called **DivideLoop.java** that repeatedly asks for the numerator and divisor. For each set of data, the program prints out the result (quotient), or an informative error message if there is a problem (division by zero or poor input data). The program continues looping, even if there is a problem. Exit the loop when data entered for the numerator start with characters “q” or “Q”. Don’t print out an error message in this case. Don’t ask for the divisor if the user just asked to quit.

Here is sample output from one run:

```
Enter the numerator: 12
Enter the divisor: 4
12 / 4 is 3.0

Enter the numerator: 12
Enter the divisor: 0
You can't divide 12 by 0

Enter the numerator: glarch
You entered bad data.
Please try again.

Enter the numerator: quit
```

2. Write a program called **GroupTotaler.java** that reads from a file named **input.txt** which contains a list of numbers that are arranged into groups of various sizes. The program outputs the sum of the numbers in each group. Each group starts with a one-line descriptive phrase. The phrase can be anything that is not a number. Some groups may have zero number in them.

Sample input.txt contents:

```
Group A
23
-12
29
-84
Group B
-2
-45
-90
123
26
19
-5
-30
9
Group C
Last Group
12
-34
23
47
52
8
```

Corresponding Output:

```
Group A
Sum = -44
```

```
Group B
Sum = 5
```

```
Group C
Sum = 0
```

```
Last Group
Sum = 108
```