

For each of the following, assume that the following line has already been executed:
`Scanner in = new Scanner(System.in);`

Exercise #1. Is it possible to crash the following fragment by entering input at the console? If yes, give an example of input that causes a crash. If no, explain why not.

```
if (in.hasNextInt()) {  
    if (in.nextInt() > 10) {  
        System.out.println(in.nextInt());  
    }  
}
```

The following input causes a crash:
15 Hello

Exercise #2. Is it possible to make the following fragment print out “Tom Harry” by entering input at the console? If yes, give an example of input that causes this to be printed. If no, explain why not.

```
System.out.println("Tom");  
if (in.hasNextInt()) {  
    System.out.println(" Dick");  
}  
if (in.hasNextInt()) {  
    System.out.println(" Harry");  
}
```

There is no way to get this to print “Tom Harry”. If the next input word is an integer, “Tom Dick Harry” is printed. If the next input word is not an integer, “Tom” is printed.

Exercise #3. Consider the following fragment:

```
if (in.hasNextInt()) {
    int i = in.nextInt();
    System.out.println(i + 100);
} else {
    // Skip non-integer input.
    in.nextLine();
}
String line = in.nextLine();
System.out.println(line);
```

What does this fragment print if given the following lines of input?

```
10
Hello
```

The following text is printed:
110

What if it is given the following lines of input?

```
Hello
World
```

The following text is printed:
World