

CS 102: Quiz #8, November 4, 2009

SOLUTION

1. Consider the following Java method

```
private static int exercise(int n){
    if (n<0)
        return -1;
    else if (n<10)
        return 1;
    else
        return 1 + exercise(n/10);
}
```

What is the return value of `exercise(5079)`?

Solution: 4. (The method returns the number of digits of the parameter `n`.)

2. Design and implement a program that creates an exception class `StringTooLongException`, designed to be thrown when a string has too many characters in it. You'll need to write two classes: a `Driver` class including the `main` method and a `StringTooLongException` class. In the `Driver` class, read strings from the user until the user enters "DONE". If a string is entered that has more than 20 characters, throw the exception. Allow the thrown exception to end the program.

Solution:

```
public class StringTooLongException extends Exception{
    public StringTooLongException(){
        super("String too long");
    }
}
```

```
import java.util.Scanner;
public class Driver{
    public static void main (String[] args)
        throws StringTooLongException{
        Scanner scan = new Scanner(System.in);
        String inp;
```

```
System.out.print("Enter a string (DONE to exit): ");
inp = scan.nextLine();
while (!inp.equals("DONE")){
    if (inp.length()>20)
        throw new StringTooLongException();
    System.out.print("Enter a string (DONE to exit): ");
    inp = scan.nextLine();
}
}
}
```