Lab 21
Hip to be Square

Objective:

Write two classes: One class draws a square, and an exception that occurs when the user puts in an invalid dimension.

- First download the driver and put it in your project
  - DO NOT ALTER THE DRIVER!
- Write a class file called **DimensionException** that inherits from Exception
- Create the following constructors
  - Default – calls the parent's constructor and pass a message that it is an invalid dimension
  - A constructor that takes one string parameters that is passed to the parent's constructor
- Write a class file called **Square** that DOES NOT HAVE a main method
- An attribute of this class is
  - Length – corresponding to the length of each side
- Create the following constructors
  - Default – creates a 1x1 square (or a single star)
  - One that has a integer parameter that corresponds to its length and width
- Accessors and Mutators for each variable
  - MAKE SURE THE MUTATORS CHECK FOR VALID VALUES!
  - If the dimension is set improperly throw the **DimensionException**
- Create the following Methods
  - draw – this method will draw a square of asterisks (*) by the given dimensions.
  - getArea – returns the area of the square
  - getPerimeter – returns the perimeter of the square

Example Dialog:

```
Welcome to the easy square program
Enter the length of the side of a square or enter QUIT to quit
5
*****
*****
*****
*****
*****
The area is 25
The perimeter is 20
Enter the length of the side of a square or enter QUIT to quit
0
Dimensions must be of length one at least
Enter the length of the side of a square or enter QUIT to quit
```

Lab Report Questions:

1. Describe what an exception does.
2. Describe the order in which a series of "catches" need to be.

Finally:

Upload DimensionException and Sqaure file to the dropbox