Exceptions Assignment A↓

Due   Dec 14, 2020 by 11:59pm   **Points** 20   **Submitting**   a file upload
Available   until Dec 18, 2020 at 11:59pm

This assignment was locked Dec 18, 2020 at 11:59pm.

In this final assignment, we will learn a little about writing programs that use Exceptions.

Your Task

Begin your program by typing (or cutting and pasting) the following class outline into a java file named Exceptional.java.


```
public class Exceptional

{

    public static void main (String[] args)

    {

    }


    public static void exceptionGenerator (int num) throws GettingUpThereException

    {

    }

}
```


After the code you have already typed (i.e., after the definition of the Exceptional class), enter the following:


```
class GettingUpThereException extends Exception

{

    GettingUpThereException (String message)
```

```
    {

        super (message);

    }

}
```

What you have done is create a new type of exception that is derived from the parent (i.e., super) class Exception. The definition of the new derived class, GettingUpThereException, is placed within the Exceptional file, but not within the Exceptional class.

Now, complete the exceptionGenerator() method as follows:

First, create an object of type GettingUpThereException in the exceptionGenerator() method. The class constructor has a String parameter therefore you will need to pass a String message such as: "Young at heart is a wonderful thing" to the constructor when creating the GettingUpThereException object.

Next, use an if-statement to test whether the argument passed to exceptionGenerator() is greater than the number that you consider to be the breaking point to old age. The responsibility of this if-statement is to throw a GettingUpThereException exception if that number is "old".

Finally, write a System.out.println() statement with a message such as: "You're pretty young" at the end of the exceptionGenerator() method.

The final portion of this assignment is to call the exceptionGenerator() method from main().

In main(), declare an integer variable.

Then, set up a for-loop that will execute four times. Within this for-loop, the first statement of the for-loop needs to prompt the user to enter an integer age.

This read statement will be the second statement in the for-loop.

Now for the hard part. As the third statement of the for-loop, you need to call the exceptionGenerator() method giving it the number entered by the user as its argument. Since that method throws a GettingUpThereException exception, this will need to be done with a try-catch block. The catch block must print the exception's message using its getMessage() method.

When you have completed the program, test it using numbers that are both above and below your old age cutoff. Make sure that you understand its output.

Submitting Your Assignment with screenshots of running code.