AP Computer Science Homework 5

Due date: Friday, September 23, 2016
Instructor: Mr. Alwin Tareen

Part A: The Richter Scale

- The richter scale is used to classify the magnitude of earthquakes. The table below lists magnitudes on the richter scale and a description of the damage that could occur with an earthquake of each magnitude.

Magnitude	Damage
greater than 8.0	Most structures fall
greater than 7.0	Most buildings destroyed
greater than 6.0	Many buildings considerably damaged; some collapse
greater than 4.5	Damage to poorly constructed buildings
greater than 3.5	Felt by many people, no destruction
greater than 0	Generally not felt by people

- Write a `Java` program in the file `Richter.java` that prints out a description of the damage that would occur with an earthquake of that magnitude.
- The variable `magnitude` is being read in as a parameter, which means it is available for use throughout your program. You must use this variable in your comparison expressions.
- The variable `damage` has been declared as type `String`. You must place the description inside this variable, for each level of magnitude.
- The program must also print the following error message, if the user enters a negative number: `This number is not valid`
- Verify that the program displays the following output when you run the `void main(String[] args)` method:

```
Most structures fall
Most buildings destroyed
Many buildings considerably damaged; some collapse
Damage to poorly constructed buildings
Felt by many people, no destruction
Generally not felt by people
This number is not valid
```

- You will write your solution in a `method` called `damageReport()`, right below the place where it says: `YOUR CODE HERE`.
- Compile and run the `Richter.java` file, and make sure that you get a correct value on the terminal output. If you have made an error, correct the mistake, and then compile and run the `Richter.java` file again, until you get the right answer.

- If you are confident you have a correct answer, clicked on the button labelled `Run Tests` to activate the `JUnit` test bench.
- If you see a green bar in the `BlueJ: Test Results` window, then your code is verified as correct. Otherwise, if a red bar appears, then you need to perform some additional debugging.

Part B: Submission

- Submit your `Java` program by uploading it to the `Web-CAT` automated grading platform.