Lab07 Game Show
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Section 001

1. Problem Statement:
   Create a program that will take in an input file, that holds the information of:
   - Category
   - Weight of said category
   - Scores achieved on each assignment in the category
   - Max scores possible on each assignment in category

   Then the program must give the:
   - Grade average
   - Letter grade
   - Weight contribution

   Then write those to a new file in a html format.

2. Planning:
   We first thought of the problem as a whole, by first brainstorming how we are going to start this program, and thinking about how it is going to eventually end up. We had to think about how we could make this work using what we already knew from class. Following that, we thought of the functions we would require, i.e. the functions used on the first grade calculator, and we made plans on how we could implement them into this new program. We then gave thought as to how we would break up the strings taken in from the input file. We then did this again with the updated input file

3. Implementation:
   We transferred the functions from the first grade calculator over and made adjustments as needed for them to work in the intended way of this lab. We then worked our way through breaking up the strings line by line that are taken in from the input file with the first for loop. Next, it was split it into more workable chunks. Then we called the functions. Lastly, we wrote to the output file in html format using the values acquired by the functions.

Example of Code Running:

```
<h1>Homework Statistics (10.0)</h1>
<ul>
<li><b>Average: </b>0.7728813559322034</li>
<li><b>Letter Grade: </b>C</li>
<li><b>Overall Grade Contribution: </b>7.728813559322035</li>
</ul>
<h1>Quizzes Statistics (10.0)</h1>
<ul>
<li><b>Average: </b>0.7712121212121212</li>
<li><b>Letter Grade: </b>C</li>
<li><b>Overall Grade Contribution: </b>7.712121212121213</li>
</ul>
<h1>Tests Statistics (10.0)</h1>
<ul>
<li><b>Average: </b>0.796734693877551</li>
<li><b>Letter Grade: </b>C</li>
<li><b>Overall Grade Contribution: </b>27.885714285714286</li>
</ul>
<h1>Projects Statistics (10.0)</h1>
<ul>
<li><b>Average: </b>0.8162303664921466</li>
<li><b>Letter Grade: </b>B</li>
<li><b>Overall Grade Contribution: </b>24.4869109947644</li>
</ul>
<h1>Final Statistics (10.0)</h1>
<ul>
<li><b>Average: </b>0.8384737678855326</li>
<li><b>Letter Grade: </b>B</li>
<li><b>Overall Grade Contribution: </b>12.577106518282989</li>
</ul>
```

Proof of PEP8 Compliance:

```
hcw52@tatooine:~/cs126/labs$ pycodestyle-3 hcw52_rad449_lab8_gradingcalculator2.py
hcw52@tatooine:~/cs126/labs$
```

4. Reflection:

Overall, we think we should have focused less on trying to get the strings with the first file, to be exactly how we wished and initially planned them to be. We wasted a ton of time on the first day, trying to get the strings to output the way that we first thought would work. However, after the script was updated and the strings were fixed up, the completion of the lab was a much simpler task to finish.