

Consumer Lab Partner Team #: ____1____

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Introduction: ([Link](#) to Runestone Version)

Start by pretending to buy something from a shopping site on the internet that also has reviews by other people who have bought that product. Some options are product reviews, music reviews, game reviews, movie reviews, or restaurant reviews like below:

- <https://www.amazon.com>
- <https://www.pluggedin.com/>
- <https://www.commonsemmedia.org/>
- <https://www.rottentomatoes.com/>
- <https://www.yelp.com/>

- Find a positive review. What words make you think it is a positive review? Which of these words are the most positive in your opinion? Which of these words are most often used in reviews?
- Find a negative review. What words make you think it is a negative review? Which of these words are the most negative in your opinion? Which of these words are most often used in reviews?
- Do you think any of the reviews are fake reviews? How can you tell? Why would people write fake reviews?
- Discuss with your partner. Make notes here of your discussion

____Some words that make us think reviews are positive are “need”, “enjoy”, “good price” and “recommend”. Some words that make us think reviews are negative are “disappointing”, “broke”, and “doesn’t work”. We can tell they are fake reviews because of the generic names and the over-enthusiasm in their reviews. They also use an excessive amount of personal pronouns. To either promote the product or to harm the reputation of the company.

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- Try to rank some of the positive and negative words as more or less positive or negative in comparison. Read two to three online reviews of your choice and generate a list of positive and negative adjectives.
 - Look at the cleanSentiment.csv list of words from the lab. Can you find your positive and negative words on the list? Notice that each word has a positive or negative integer value assigned to it. This value is called the sentiment value of the word. A large positive sentiment value means that word has appeared in a lot of positive contexts. The higher the number, the more positive the sentiment. And a large negative sentiment value means that word has

appeared in a lot of negative contexts. This list was generated by a computer program that counted the frequency of each word in lots of online reviews that were rated by humans as positive or negative. Do you agree with the sentiment values on the list? The quality of the list really depends on the quality and quantity of the data used to generate it.

ACTIVITY 1 ([Link](#) to Runestone Version)

Introduction (Reviews and Sentiment Value)

Paste the link to your github repository here:

__ <https://github.com/jhanrath0187/Consumer-Lab> _____

1. a. Record the method signature in the space below.

____ `Review.sentimentVal(String)` _____

1. b. Does this method require a parameter? If so, what type of parameter is required? What happens if you pass a different type of parameter instead? (Try it!)

____ Yes, it requires a string. It will not compile and say that it is incompatible.

1. c. Does the method return a value? If so, what is the return type?

____ Yes. It returns a double value.

2. Examples Table:

<i>Method Call</i>	<i>Return Value</i>
<code>sentimentVal("happily");</code>	2.32
<code>sentimentVal("terrible");</code>	-3.38
<code>sentimentVal("cold");</code>	-0.04

3. a. `double num = sentimentVal("warm");`

1.46

3. b. `String word = sentimentVal(0.5);`

Incompatible type. Won't compile.

3. c. `double x = sentimentVal("good", "bad");`

Won't compile.

ACTIVITY 2 ([Link](#) to Runestone Version)

Sentiment Value and Star Ratings

4. Explain how the totalSentiment method works, including how you're using strings and iteration in your solution.

__The totalSentiment method looks at every word in a file and calculates the sentiment value of each word and adds them up. The text to string method converts the text to string and we used a while statement to look at each word in the string.

5. Test your starRating method for multiple reviews, including your simple sample review.

a. Do the ratings make sense? Explain why or why not.

___The ratings do make sense. The simple review got a 1 star while the 26 West Review got a 4 star. The ratings make sense because the simple review was a negative review and the 26 west review was a good one.

b. Describe at least two ways in which you could adjust your totalSentiment method so that your program returns even more reasonable ratings.

_We could exclude words that give no sentiment values. We could also exclude punctuation from words. .

6. Explain to the student, using specific examples of (a) what logical error he made in writing his code, and (b) how to fix it.

___Make sure he has a solid understanding of how all of the reader functions work and where/when to use them. If errors are made with using them it's most likely because they are excluding something or it's out of order.

ACTIVITY 3 ([Link](#) to Runestone Version)

Autogenerated Review

3. Describe the action of the indexOf and substring methods. Explain how these methods can be used to divide an existing string into two parts. Why is it necessary to add 1 to the position of the space when copying the remainder of the string?

____substring returns a new string with the characters in the current string starting with the character at the from index and ending at the character before the to index. If the to index is not specified it will contain the rest of the string. _____

____indexOf searches for a specified string in the current string and returns the index of the beginning of it, or -1 if it isn't found. _____

__It is necessary to add 1 to the position because otherwise the index will end right before the end of the string. _____

5. In the Review class all methods are static. Explain the difference between calling static methods as opposed to calling non-static methods.

____ Non-static methods can access any static method and static variable, without creating an instance of the object. Static methods can only access static data members and static methods of another class or same class. _____

6. Autogenerated reviews may be created that are intentionally positive or negative. Explain how your method fakeReview could be modified to create a fake positive or fake negative review.

____This could be modified by making a method that randomly chooses a positive adjective in the file or a negative adjective in the file then calling it in the fakeReview method.

ACTIVITY 4 ([Link](#) to Runestone Version)

Create a Positive or Negative Review

1. Determine one possible reason to autogenerate a negative review.

___A reason to autogenerate a negative review is to intentionally harm a business. Such as if a person dislikes a certain dentist for their political views or something unrelated to their job and then they review bomb their business with negative reviews. _____

2. Determine one possible reason to autogenerate a positive review.

___A possible reason to autogenerate a positive review would be when a business wants to draw in customers. They could make positive reviews and post them online to misleadingly increase their public image. _____

3. Discuss with a partner what the method needs to do to create a stronger review and write down the algorithm using pseudocode.

if the sentiment value of the word is greater than 0

Then the word will be replaced with a random positive adjective that has a sentiment value greater than 2

Else if the sentiment value of the word is less than 0

then the word will be replaced with a random negative adjective that has a senimtent value less than -2

5. What is the result of the following statement?

```
oneWord = oneWord.substring(1);
```

___The result will be the character at index one to the end of the oneWord string.

6. Why was it necessary to remove the * character (or other symbol) used to annotate the adjective before getting its sentiment value?

___ It is necessary to remove the * because it would not be recognized and found in the cleanSentiment file.

7. In this activity you wrote a method that created a more positive or more negative review. How could this method be used or modified to create a super positive review (one that is extremely favorable)?

___ We could create a method that would take random positive adjectives with a high sentiment value to replace the positive adjectives in the review.
