## Reading Poetry Backwards - RPB v1.0

This assignment requires you to study, understand, and augment a Python program that (re)writes or "breaks" poems in various "deformed" manners, including printing the lines of a poem in reverse (last line to first line) or randomized orders or printing the individual words of a poem in complete reverse order.

Asking you to "read poems backwards" is not original with us (cf. Leithauser, 2013). In their article "Deformance and Interpretation", McGann and Samuels (1999, p25) note:


> In an undated fragment on a leaf of stationery, Emily Dickinson wrote what appears to be one of her "letters to the world":
> 'Did you ever read one of her Poems backward, because the plunge from the front overturned you? I sometimes (often have, many times) have -- a Something overtakes the Mind -• (Prose Fragment 30)

In addition to discovering varied meanings in a poem when reading in new ways (sometimes called "breaking a poem"), you may have come across poems that invite varying interpretations depending on the order read. For instance, "Lost Generation" by Jonathan Reed is a pessimistic view of the world when read from top to bottom, but sounds optimistic when the lines are read backwards (bottom to top).

Your program will help the reader more easily "read" poems in various deformed manners. For example with English poems, to read the lines of a poem "backwards", that is from the last line to the first line, the (human) reader must concentrate to move their eyes "up" to the preceding line on the page upon finishing a line. So to aid the reader who wishes to read the lines of a poem in reverse order, your program will produce a version of the poem where the last line of the poem appears at the top of the poem. The next to the last line of the poem will appear second, and so on. Here is a trivial example that shows the start and ending of a children's poem on the left. On the right are the lines of the poems printed "backwards" with the original line numbers highlighting to the reader that the lines appear in reverse order.

## Mary had a little lamb <br> by Sarah Josepha Hale <br> Mary had a little lamb, whose fleece was white as snow.

And everywhere that Mary went,
"Why does the lamb love Mary so?" the eager children cry.
"Why, Mary loves the lamb, you know." the teacher did reply.

## Lines Backwards Title: Mary had a little lamb Author: Sarah Josepha Hale

23 the teacher did reply.
22 "Why, Mary loves the lamb, you know."
21
20 the eager children cry
19 "Why does the lamb love Mary so?

## Requirements:

(1) I have given you a Starter Kit that includes a function that does most (but not all) of the work for opening a text file containing a poem and writing the lines of the poem in reverse order into a new file. Your task is to complete the readingLinesBackwards () function. The code will already produce a file with the lines of the poem printed backwards. Modify this function so that your version also writes the original lines numbers in the poem (which of course should appear in a decreasing order from last line to line \#1). The numbers should begin each line, and the poem should start after 2 spaces. (Please note that the output file will not contain the first three lines of the input file - our code should always skip the poem name, author, and blank line at the top of each poem.)

23 the teacher did reply.
22 "Why, Mary loves the lamb, you know."
21
20 the eager children cry.
19 "Why does the lamb love Mary so?
(2) Complete the oddLines () function. This function is similar to your first function, but this time, rather than print the lines of the poem in reverse order, only the odd lines of the poem should appear in regular order. The first two lines of the output is shown below:

```
1 \text { Mary had a little lamb,}
3
5 the lamb was sure to go.
7 He followed her to school one day
```

(3) Complete the readingWordsBackwards () function. This function must print all the words in the poem in complete reverse order for every line of the poem, although the newlines (line breaks) should be preserved as in the original. Thus the very last word in the poem will be the first word in your new deformed version. All the words should be written in lowercase only. To get all of the points, this version should also remove the punctuation. (You may want to write a helper function to do that.) Don't write line numbers. The first two lines of output are shown:
reply did teacher the know you lamb the loves mary why

Leithauser, Brad (2013). Reading Poems Backward. The New Yorker. July 11, 2013.
http://www.newyorker.com/online/blogs/books/2013/07/reading-poems-backward.html

Samuels, Lisa and McGann, Jerome J. (1999). Deformance and Interpretation. New Literary History, v30(1), 25-56.

