Object-Oriented Programming Language

9/29/2018

Homework Assignment No. 3

Due 11:59 pm, Saturday October 6, 2018

Late submission within 24 hours: score*0.9;

Late submission within one week: score*0.8.

The solutions will be posted after one week of the due date.

In exercise 3.5 of lecture 3 (pages 15-17), there is the example of how we can read string data from a text file. Take a look at the exercise, and complete this HW based on file inputs.
(Total 100%)

1. **(80%):** (a) Read a sequence of words from an input file `SilentSpring.txt` (provided with this file) and store the words in a `vector of string`. After you've read the words, look for punctuations. Print the total number of punctuations. (hint: you can use the substr() method and the ispunct() method. You can use the pop_back() method). (b) please count the occurrence of strings and output the one with most occurrence.

```
Please input the file name.
input here: SilentSpring.txt
File was opened correctly.
Words: excerpt from silent spring 1962 the history of life on earth has been a history of interactio
n between living things and their surroundings to a large extent the physical form and the habits of
 the earth vegetation and its animal life have been molded by the environment considering the whole
span of earthly time the opposite effect in which life actually modifies its surroundings has been r
elatively slight only within the moment of time represented by the present century has one species s
pecies man man acquired significant power to alter the nature of his world
Total punctuation: 13
Total words: 93

Word with greatest occurrence: the
Total count: 10
```

2. **(20%)** A textfile `input.txt` contains sentences of text. A line with an empty string indicates a paragraph break. (hint: take a look at the getline() function). Write a program to store all the lines in a vector container and print the lines in the first paragraph. For example, if our `input.txt` has the following contents (please copy and paste and generate the file by yourself):

```
Two roads diverged in a yellow wood,
And sorry I could not travel both
And be one traveler, long I stood
And looked down one as far as I could
To where it bent in the undergrowth;

Then took the other, as just as fair,
And having perhaps the better claim
Because it was grassy and wanted wear,
Though as for that the passing there
Had worn them really about the same,
```

```
And both that morning equally lay
In leaves no step had trodden black.
Oh, I kept the first for another day!
Yet knowing how way leads on to way
I doubted if I should ever come back.

I shall be telling this with a sigh
Somewhere ages and ages hence:
Two roads diverged in a wood, and I,
I took the one less traveled by,
And that has made all the difference.

The Road Not Taken by Robert Frost
```

A sample output looks like:

```
The first paragraph of the input file is

Two roads diverged in a yellow wood,
And sorry I could not travel both
And be one traveler, long I stood
And looked down one as far as I could
To where it bent in the undergrowth;
```