Part 4_1:

The idea of this part is to count the number of distinct words that are not case sensitive and space-delimited from the read in file. I made a string remove function that takes care of forcing everything to be lowercase. I read the file into a buffer string then use the string remove function on it. I then count the total number of words in the read in string because that will help us know the length for the arrays we will create. I create two identical arrays and then tokenize the string so that I can store each word at a specified index in the array so I can easily access the arrays for comparison later. I then create a for loop with some nested for loops in it that essentially pulls out the first word from the first array then checks if that word has been seen before by comparing it with the third array (3rd array stores all the words that have already been seen) and it does this in a for loop so that it can check for multiple
instances in which a word could potentially be repeated. From there it goes into the next for loop that checks for matching words that aren't at the same index then if it finds a repeated word then it increments the numofrepeat counter that keeps track of number of repeated words and saves that word into the third array. Once the main for loop is done we take the original number of words and subtract the number of repeated words to get the number of distinct words.

```
student@studentVM:~/ee355/lab1/leonardo_martinez_Lab1_Part4.zip$ ./practice
Enter the name of the file you want to read in
in.txt

The number of distinct words is: 10
```

Part 4_1:
The idea of this part is to count the number of non-repeating distinct words from the read in file, that are not case sensitive. The only difference between part 2 and part 1 is now we are checking repeated words in a case where because and because. are recognized as the same word. To do this I just modified the string remove function to get rid of all non-alphanumerics along with lowercasing everything. Aside from that, the code is identical.

```
student@studentVM:~/ee355/lab1/leonardo_martinez_Lab1_Part4.zip$ ./practice
Enter the name of the file you want to read in
in.txt

The number of distinct words is: 9
```