CSE 332 Summer 18
Exercise 11

Parallel Practice IV

Due Date: Monday August 6, 11:59 PM
Submit via your gitlab repository.

Use the `ForkJoin` framework to write the following method in Java:

> `public static int[] filterEmpty(String[] arr)`
> Returns an array with the lengths of the non-empty strings from `arr` (in order).

For example, if `arr` is `["", "", "cse", "332", "", "hw", "", "7", "rox"]`,
then `filterEmpty(arr) == [3, 3, 2, 1, 3]`.

A parallel algorithm to solve this problem in $\mathcal{O}(\lg n)$ span and $\mathcal{O}(n)$ work is the following:

(1) Do a parallel map to produce a bit set

(2) Do a parallel prefix over the bit set

(3) Do a parallel map to produce the output

In lecture, we discussed `parallelPrefix` together, and code for it is included in the `gitlab` repository. Rather than re-implementing that piece yourself, you should just use it. For the other two parts though, you should write them. Do not bother with a sequential cutoff for this exercise.