

CSE 332: Data Structures and Parallelism

Exercises (Parallelism)

Directions: *Submit your solutions using gitlab. You must fill out the partners form for para to get access to your repository. Choosing a partner is disabled, because these exercises are solo.*

EX12. getLeftMostIndex (20 points)

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

```
public static int getLeftMostIndex(char[] needle, char[] haystack, int sequentialCutoff)
```

Returns the index of the *left-most* occurrence of *needle* in *haystack* (think of *needle* and *haystack* as *Strings*) or -1 if there is no such occurrence.

For example, `getLeftMostIndex("cse332", "Dudecse4ocse332momcse332Rox") == 9` and `getLeftMostIndex("sucks", "Dudecse4ocse332momcse332Rox") == -1`.

Your code must actually use the `sequentialCutoff` argument. You may assume that `needle.length` is much smaller than `haystack.length`. A solution that peeks across subproblem boundaries to decide partial matches will be significantly cleaner and simpler than one that does not.