CSE 332: Data Structures and Parallelism

Exercises (Parallelism)

Directions: *Submit your solutions using gitlab.*

EX11. `getLongestSequence` (20 points)

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

`public static int` **`getLongestSequence`**`(int val, int[] arr, int sequentialCutoff)`
Returns the length of the longest *consecutive* sequence of `val` in `arr`.
For example, if `arr` is `[2, 17, 17, 8, 17, 17, 17, 0, 17, 1]`, then `getLongestSequence(17, arr) == 3` and `getLongestSequence(35, arr) == 0`.

Your code must have $\mathcal{O}(n)$ work, $\mathcal{O}(\lg n)$ span, where n is the length of `arr`, and actually use the `sequentialCutoff` argument. We have provided you with an extra class `SequenceRange`. We recommend you use this class as your return value, but this is not required.