## Coding Practice With Kick Start 2020 - Coding Practice with Kick Start

## **Analysis: Bike Tour**

For each of the checkpoints, we can determine if it is a peak in O(1) time by comparing its height to the heights of the checkpoints before and after it.

There are  $\mathbf{N}$  checkpoints, so the total time complexity of this approach is  $O(\mathbf{N})$ , which is sufficient for both Test Set 1 and Test Set 2.

## Sample Code(C++)

```
int countPeaks(vector<int> checkpoints) {
  int peaks = 0;
  for(int i = 1; i < checkpoints.size() - 1; i++) {
    if(checkpoints[i-1] < checkpoints[i] && checkpoints[i+1] < checkpoints[i]) {
       peaks++;
    }
  }
  return peaks;
}</pre>
```