

- 90 minutes to complete two coding problems. 15 minutes to describe the approach and talk about run-time and memory complexity. 15 minute survey about the experience of taking the assessment.
- The coding questions were similar to any of the online platforms like leetcode, hackerrank..., You need to pass as many test cases as possible. The compile and run feature lets you test your code instantly.
- Q1: Given a list of (x,y) coordinates of the nearby steakhouses, return K-number of places that are closest to the user.
- A1: My solution was to use Min-heap and pop K times. This has the complexity of  $O(K \log N)$  instead of  $O(N \log N)$  if dealt with a fully sorted array. Another challenge was to retrieve the location and not the distance. So I used an unordered map; But we can have multiple places at the same distance, so I used an unordered multimap. Given a 2D grid of cells with 3 possible values, 1 (road-connected), 0 (no road) and 9 (destination), find the distance from the start to the destination.
- A2: I used a recursion approach. Each time we have a choice to right or down since we start from top-left. If m rows, n cols, computation complexity  $O(2^{\min(m,n)})$ . In my "describe approach", I talked about how DP can solve the overlapping sub-problem to decrease the complexity significantly. But I failed 5 test cases out of 15.