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CS32 Homework 4

2. The call to to Map<Coord, int>::insert causes a compilation error because Coords don’t have any assignment operators or equality operators. Without them, the Coord can’t be compared after it’s inserted into its node.

3. It’s impossible for the recursive function to store the path without a variable. Without the path the output won’t show “Actor=>Protester=>HardcoreProtester”, and will instead only show “HardcoreProtester”. It’s also impossible for the function to go down every unique path starting from Actor each time with only the given parameter.

4.a. I got O(n^3). There are 3 nested for loops, each going through N.

b. I got O(n^3). Due to the symmetry, this is more efficient that a, but its (1/2) of a, which is

still the same order of time complexity.

5. I got O(n^2). It loops through the smaller Map, but for every iteration it (presumably) loops through the bigger Map too to see if the value is inside it. This results in around N \* N.