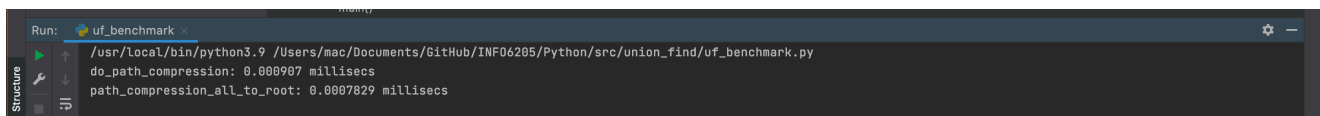**XINYI WU (001529267)**

Program Structures & Algorithms

Spring 2021 Assignment No. 4

Task:

1. For weighted quick union, store the depth rather than the size;
2. For weighted quick union with path compression, do two loops, so that all intermediate nodes point to the root, not just the alternates.

Output:

Relationship Conclusion:

Path compression all to root makes union find save more time. It helps speed up.