1. Test cases pass for both implementations from weighted quick union with depth and with path grandparent. Screenshot listed down below:

A screenshot of a computer screen

Description automatically generated

Weighted quick union with depth

A screenshot of a computer screen

Description automatically generated

Weighted quick union with grandparent

1. Trendline shows that it tends to increase in polynomial with order of 2. The performance of Weighted quick union with depth is better than weighted quick union with path compression to grandparent. The time consuming between these two alternatives isn’t change too much.