TASK

Height-weighted Quick Union with Path Compression

OUTPUT

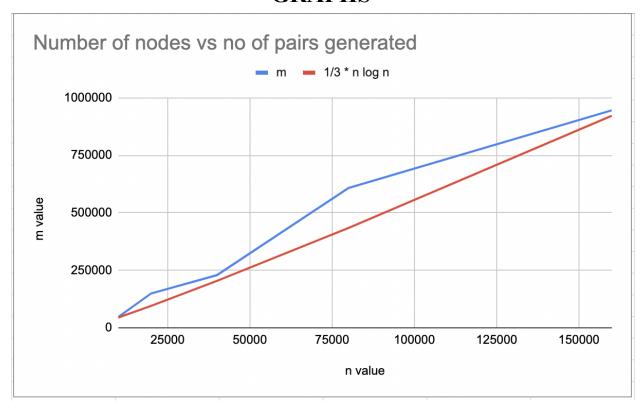
```
<terminated> New_configuration [Java Application] /L
n value: 10000 m value: 46521
n value: 20000 m value: 149339
n value: 40000 m value: 228777
n value: 80000 m value: 608025
n value: 160000 m value: 945607
```

RELATIONSHIP BETWEEN n AND m

On a trial and error basis and also looking at the similarity in graphs, I can say that the values of m are closer to $\frac{1}{3}$ rd of n log(n). So I can conclude that

n is directly proportional to m

EVIDENCE TO SUPPORT THE CONCLUSION AND GRAPHS



UNIT TESTS

```
Finished after 0.036 seconds
                           ■ Errors: 0
  🔚 edu.neu.coe.info6205.union_find.UF_HWQUPC_Test [Runner: JUnit 4] (0.003 📃 Failure Trace
                                                                                                                                            國 [] [
     testlsConnected01 (0.002 s)
     testlsConnected02 (0.000 s)
     ⊫ testIsConnected03 (0.000 s)
     testFind0 (0.000 s)
     testFind1 (0.000 s)
     # testFind2 (0.000 s)
     testFind3 (0.000 s)
     testFind4 (0.000 s)
     /= testFind5 (0.000 s)
     testToString (0.000 s)
     testConnect01 (0.000 s)
     testConnect02 (0.000 s)
     testConnected01 (0.000 s)
```