INFO6205

Assignment 4

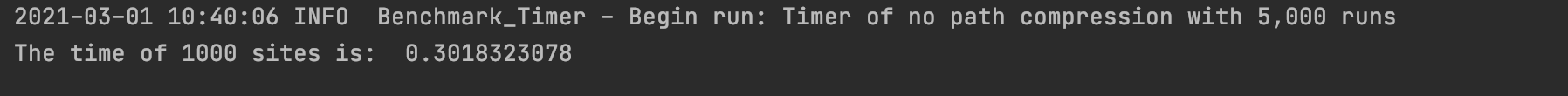
Name: Yumeng Zhang

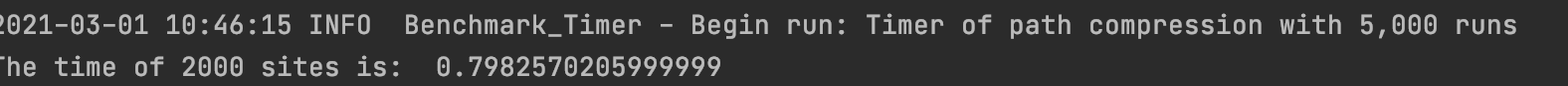
NU ID: 001543248

* Output and Evidence

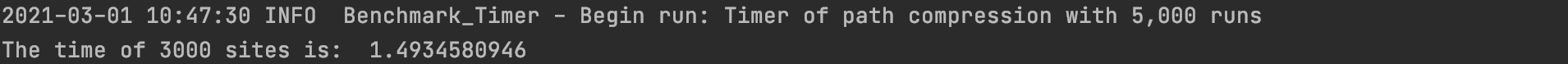
1. Path compression:

n = 1000 (n sites) , run 5000 times

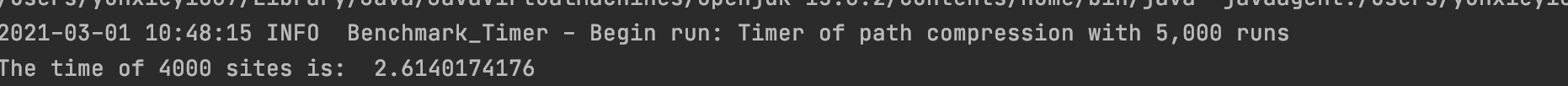


Changing n = 2000

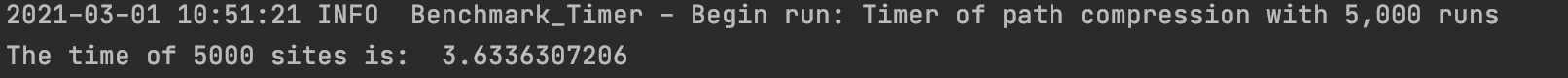
Changing n = 3000



Changing n = 4000

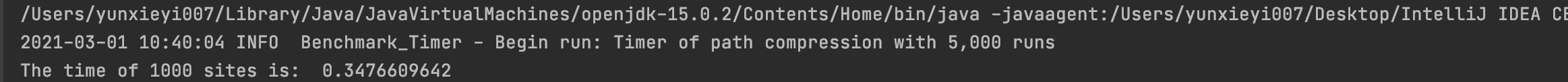


Changing n = 5000

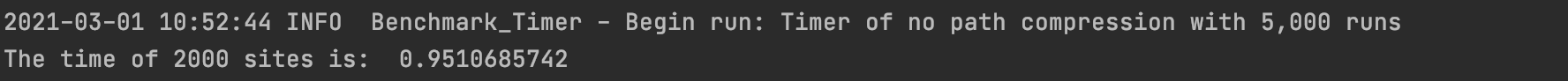


1. No path compression:

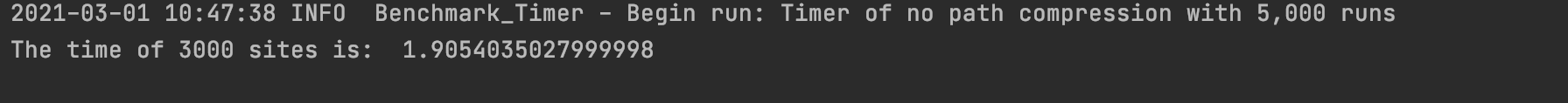
n = 1000 (n sites) , run 5000 times



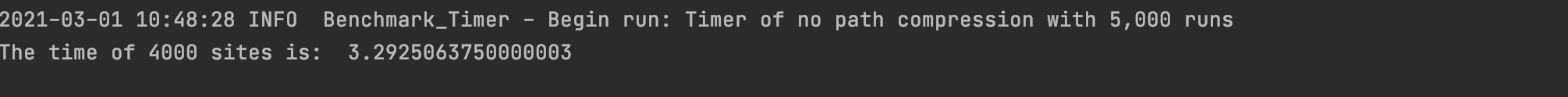
Changing n = 2000



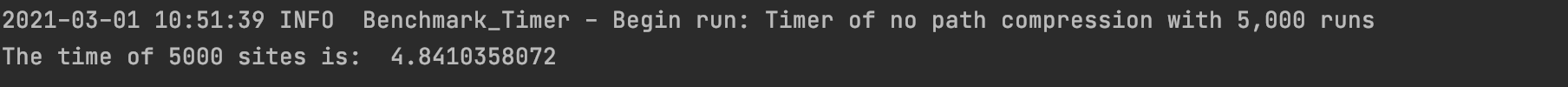
Changing n = 3000



Changing n = 4000



Changing n = 5000



* Conclusion:

Path compression helps Union\_Find save more time and run faster. With the number of sites increasing, the gap in time is widening.