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INFO 6205

Program Structures & Algorithms

Fall 2020

Assignment 2

Output:

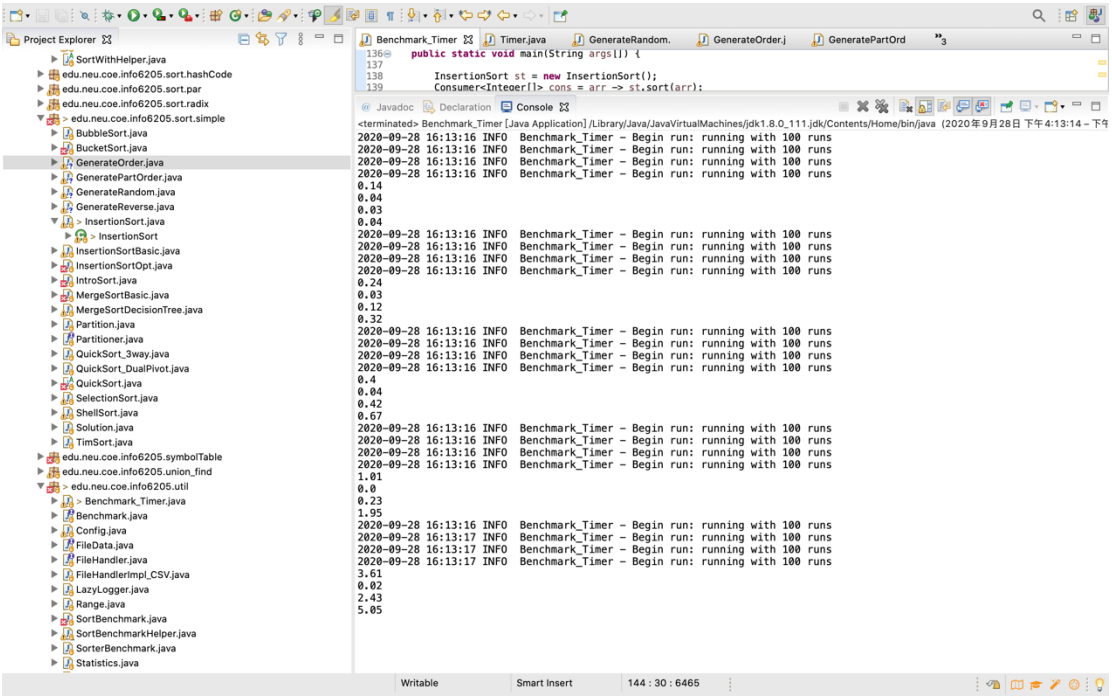
For each loop

First line of the output – Random

Second line of the output – Ordered

Third line of the output – Partially-ordered

Fourth line of the output – Reverse

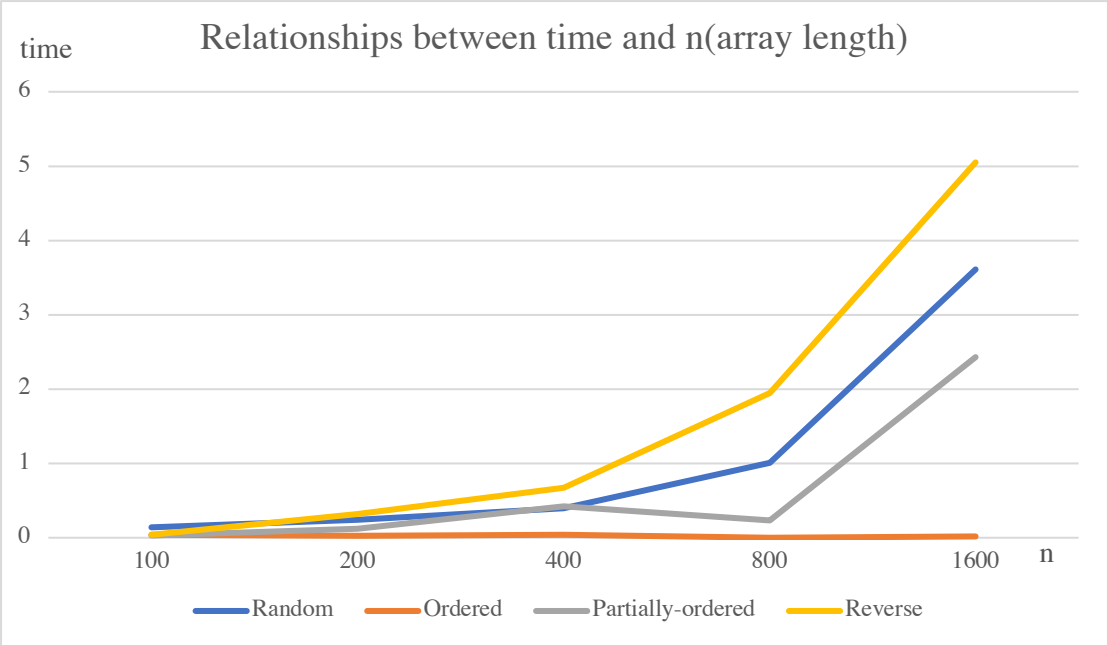


Conclusion:

For Random ordered, Partially-ordered, and Reverse ordered arrays, as n increases by doubling each time, t drastically increases too and tends to increases with a steeper slope.

But for Ordered arrays, as n increases by doubling each time, there is no significant difference between running times. That means, for an ordered array, no matter how long the length of this array is, it is sorted around same time.

Evidence:



n / order	100	200	400	800	1600
Random	0.14s	0.24s	0.4s	1.01s	3.61s
Ordered	0.04s	0.03s	0.04s	0.0s	0.02s
Partially-ordered	0.03s	0.12s	0.42s	0.23s	2.43s
Reverse	0.04s	0.32s	0.67s	1.95s	5.05s