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**Program Structures & Algorithms**

**Spring 2021**

**Assignment No. 2**

* **Task**
* **Relationship Conclusion:**

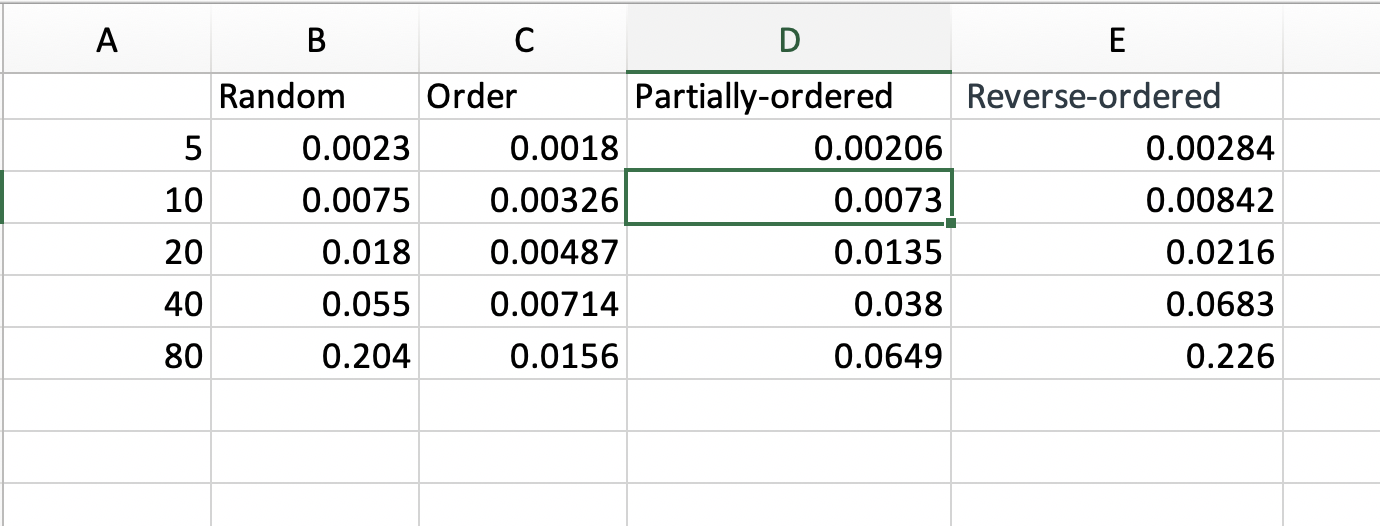
**For Best Cases: O(n)**

**For Worst Cases: O(n2)**

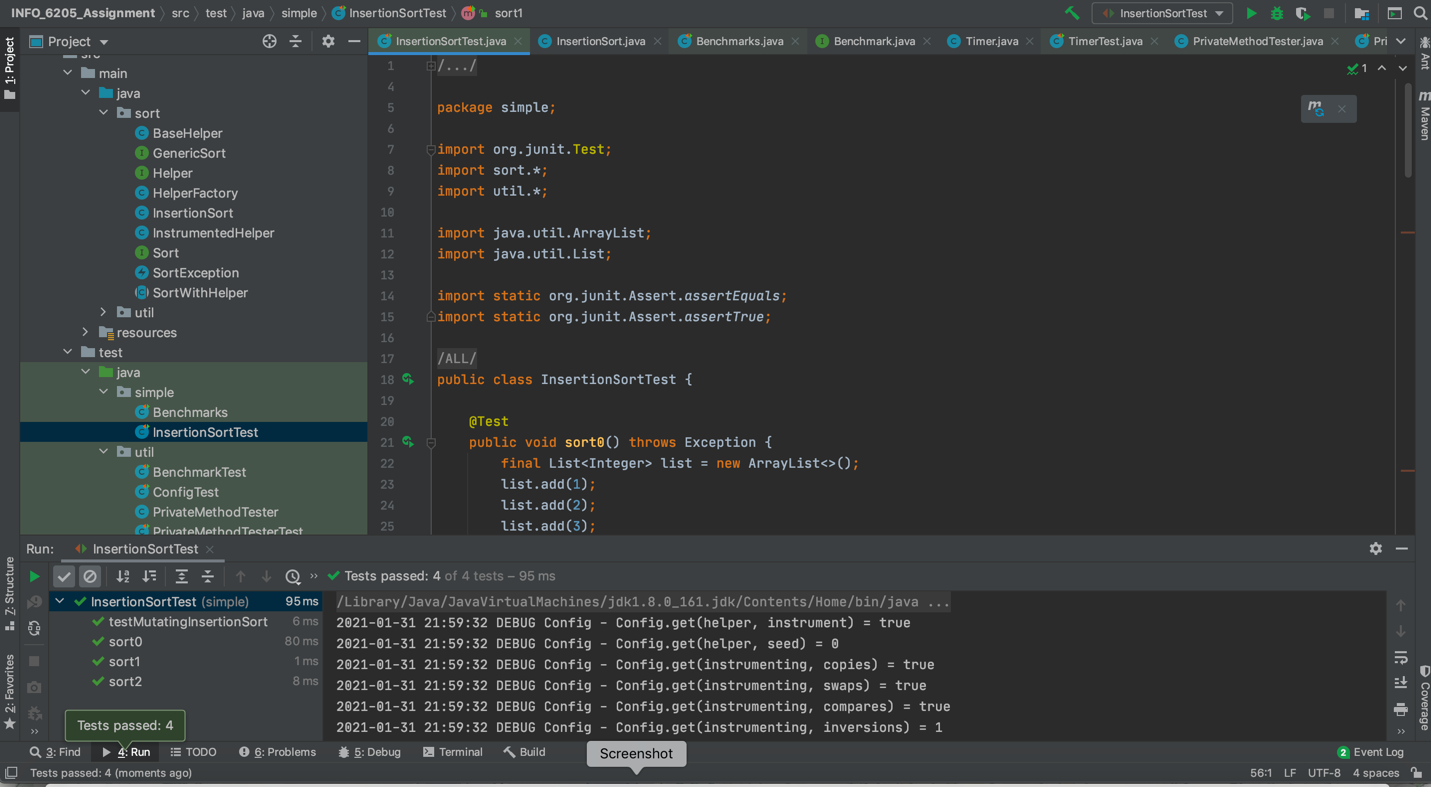
**For Average Cases: O(n2)**

**P.S. for partially ordered, I think the time complexity is nearly O(n), while the time is more than order condition.**

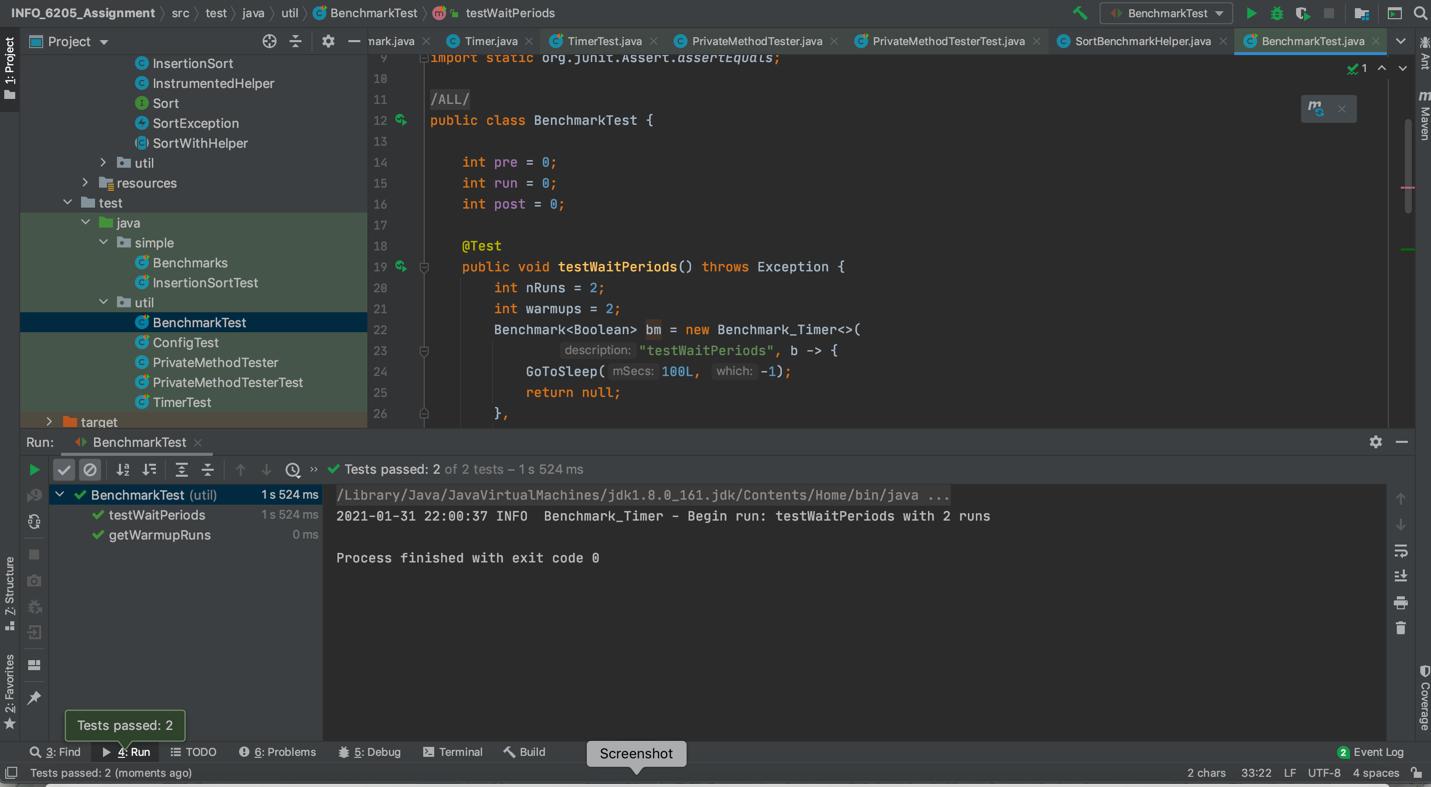
* **Evidence to support the conclusion:**
* **Graphical representation:**



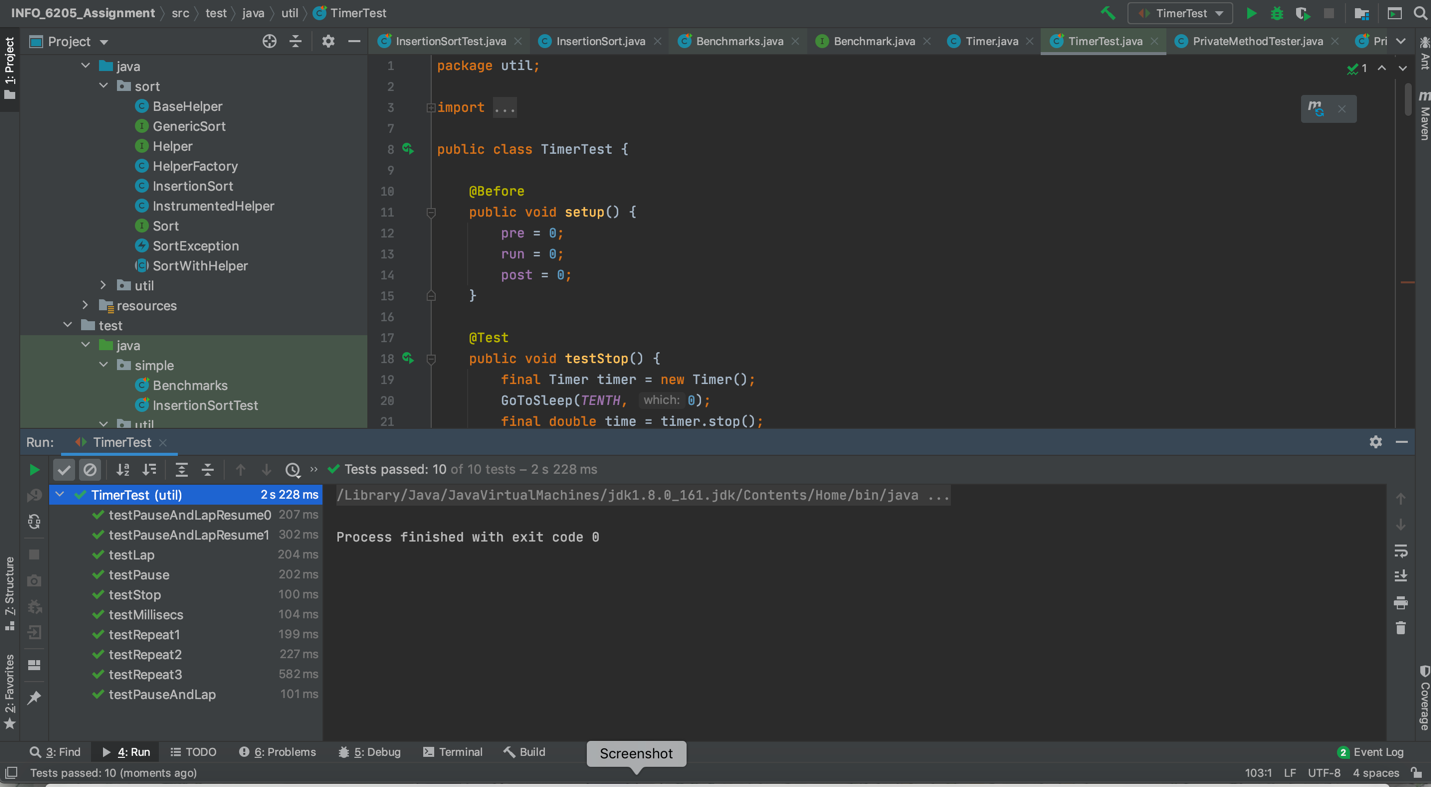
* **Unit tests result:**



Insertion Sort Unit Test



Benchmark Test Picture



Timer Test Picture