**Short Project – 1**

**Group 27**

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**File Contents**

1. ***GenericSort.java*** –

Static methods to sort an array of generic types that are comparable, using Merge sort and Insertion Sort algorithms.

1. ***IntegerSort.java*** –

Static method to sort an array of integers using Merge Sort.

1. ***MergeSortComparison.java*** – [*RUN*]

Contains the main method to generate an array of random integers(both primitive and wrapper types) and perform merge sort on them.

1. ***DiameterOfTree.java*** – [*RUN*]

Static method to find the path of the diameter of a Graph. Also contains the main method to test the method.

**Sort Comparison**

|  |  |  |  |
| --- | --- | --- | --- |
| **Input Size** | **Generic Merge Sort** | **Integer Merge Sort** | **Insertion Sort** |
| 100,000 | 75 | 15 | 48433 |
| 1,000,000 | 326 | 145 | ∞ |
| 2,000,000 | 580 | 297 | ∞ |
| 4,000,000 | 1315 | 612 | ∞ |
| 8,000,000 | 2937 | 1865 | ∞ |
| 16,000,000 | 6546 | 2682 | ∞ |