**READ ME**

**This project has multiple source code files, each corresponding to the algorithms as listed below:**

1. **Insertion Sort**
2. **Merge Sort**
3. **Heap Sort**
4. **In-place Quick Sort**
5. **Modified Quick Sort**

**This Read Me is a guide on how to run the algorithms in the local machine for test purposes.**

**All algorithms are in Java 17, so a local installation of JDK is required to run the code. Additionally, an installation of IDE is also encouraged.**

**For all programs, the results will show the time taken by the algorithm to sort the array. The time is shown in milliseconds and nanoseconds. This will be shown for three cases: randomly generated array, sorted array, and reverse sorted array.**

**The input array size is hardcoded. That means, to check for different input sizes, manual changes to the value of input will be required. The value of input size is specified as integer n (int n) under the main class for all algorithms.**

**For all algorithm, we have used array data structure to implement the sorting functions.**