

## Learning Objectives:

- Understand how insertion sort works
- Understand how merge sort works
- Practice the use of interface `Comparator<T>`
- Develop and implement an algorithm

## Turning In:

Make sure to include a comment with your name and assignment number on top of the source code file.

Submit a jar file that **includes the java files** via Canvas.

## Description:

Implement 3 methods: `insertionSort`, `mergeSort` and `isAnagram`.

### `insertionSort`:

The method `insertionSort` is a static method that returns nothing.

It has two parameters: a generic array and a `Comparator` (generic)

It sorts the generic array using the insertion sort algorithms

### `mergeSort`:

The method `mergeSort` is a static method that returns nothing.

It has two parameters: a generic array and a `Comparator` (generic)

It sorts the generic array using the merge sort algorithms

### `isAnagram`:

The method `isAnagram` is a static method that returns a boolean value.

It has two parameters of type `String` (those are the two words)

To determind whether the two words are anagrams, the method should sort the letters of each of the words and compare the results

In order to sort the letters in the words, one of your sort methods should be used.

To decide which of the two sorting algorithms leads to better performance the time with large numbers of English words

The assignment includes a file `Words.txt` that includes 1510 words.

To produce more accurate results sort the words multiple times.

Create two tables that list the measuerements and calculate the average.

Clearly label which one is your choice.