

# Lab 8

## Heap Sort, Merge Sort and Quick Sort

Download the archive `Lab8.zip` and extract the `TrySorts` applet. The applet makes use of the following sorting implementations

- `BubbleSort.java`
- `HeapSortInPlace.java`
- `QuickSortInPlace.java`

Use the applet with various settings and observe the behavior. Note, you can have a look at the array before and after sorting for array sizes under 100 elements. The *New Elements* button will generate a new array to be sorted.

## In-Place Quick Sort

The quick-sort implementation is not randomized. Randomize the pivot selection and observe any change in running time.

## Merge Sort

Replace the `BubbleSort` implementation with `MergeSort` and compare the sorting algorithm with Quick Sort and Heap Sort.