# Merge Sort

### How a merge sort works

- Recursively divides list in half until there is only one item is in the list
- Merges the two halves of the list such that the merged list is sorted



### Animation of a merge sort



# Efficiency and Advantages

- A merge sort has a Big-Oh efficiency of O( n log(n) ).
- Merge sorts work very well with linked lists
- Merge sort is a parallel process and is therefore easily multithreaded.
- Merge sort is a stable sort.

## Activity

#### Demo