**Divide-and-Conquer**

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* Recursively decompose structure (multi-branched recursion) to substructure
* Using substructure to solve the original problem
* The solution to the original problem is composed for the solution on the

structured steps

* Divide and conquer algorithms are naturally adapted for execution in

multiprocessor machine

* Substructures can, in principle, be solved within the cache
* Generally 2 recursive calls or a single recursive call and a second that caches

with a data structure

https://en.wikipedia.org/wiki/Divide\_and\_conquer\_algorithms

**Implement a Divide-and-Conquer Solution**

Count Inversions and merge to a sorted array

An **inversion** is a pair of places of a sequence where the elements on these

places are out of their natural order.

**int**[] sequence = { 1, 2, 6 ,3, 4, 5 };