

1 Recursion

1.1 Design principle

1. Reduce the problem of size n to a size $n-1$
2. Figure out the base case (usually $n=0$ or 1)
3. Terminate recursion at the base case. Make sure that every n reaches the base case.

1.2 Parameterization

- It consumes extra memory if pass a new array (part of old array copied into this) for recursion. Instead we should pass the indices as the parameters.
- In creating recursive methods, it is often useful to define additional functions(or methods) to facilitate recursion.