Recursive function

Any function which calls itself, is called as recursive function.

For every recursive function we need to find a terminating condition.

Example:

To write recursive function to add 1 to n numbers

Add(5) 1+2+3+….+5	Add(4)+5---→10+5=15
Add(4) 1+2+3+4	Add(3)+4---→6+4=10
Add(3) 1+2+3	Add(2)+3---→3+3=6
Add(2) 1+2	Add(1)+2---→1+2 =3
Add(1) return 1	1

Recursive programs time complexity is always high, so as much as possible avoid using recursion,

But many times, recursive function makes code easy write and easy to understand.

Sorting techniques

1. Bubble sort
2. Selection sort
3. Insertion sort
4. Merge sort
5. Quick sort
6. Heap sort (tree sort)

To sort array using bubble sort

[5,6,1,7,3,4,2]

Assignment

Merge 2 sorted file in file 3