

## Assign 4

1) Option a) it needs  $O(n)$  or  $O(\log n)$  memory to create auxiliary locations

2) c) Larger values need to be sorted with small keys

3) #include <bits/stdc++.h>  
using namespace std;  
int main() {

int n;

cin >> n;

int arr[n];

for (int i = 0; i < n; i++) {

cin >> arr[i];

}

int k;

cin >> k;

for (int i = 0; i < ((n/2) + 1); i++) {

for (int j = 0; j < n - 1 - i; j++) {

if (arr[j] > arr[j+1]) {

swap(arr[j], arr[j+1]);

}

}

}

for (int i = n/2; i < n; i++) {

cout << arr[i] << " ";

}

}