

## Insertion Sort

→ 12, 11, 13, 5, 6

↳ 12, 11, 13, 5, 6

↳ 11, 12, 13, 5, 6

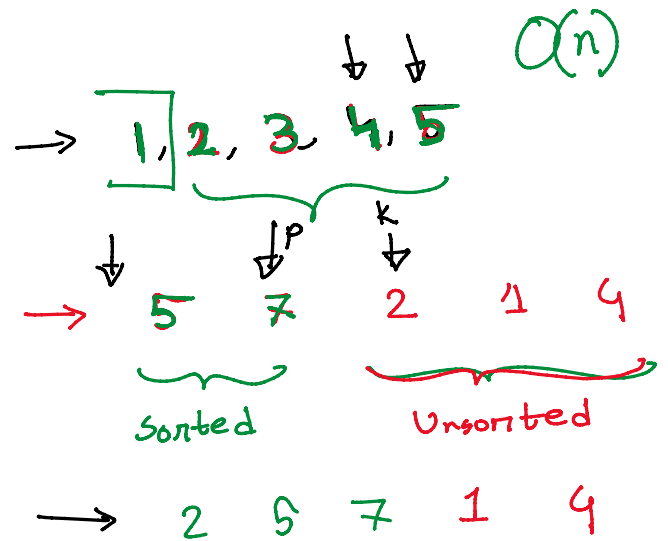
↳ 11, 12, 13, 5, 6

↳ 5, 11, 12, 13, 6

↳ 5, 6, 11, 12, 13

arr → 12 11 13 5 6

5 6 11 12 13



int key = 6

for (i = 1; i < n; i++)

{ key = arr[i];

p = i - 1;

while (p ≥ 0 && arr[p] > key)

{ arr[p+1] = arr[p];

p--;

arr[p+1] = key;

— • —

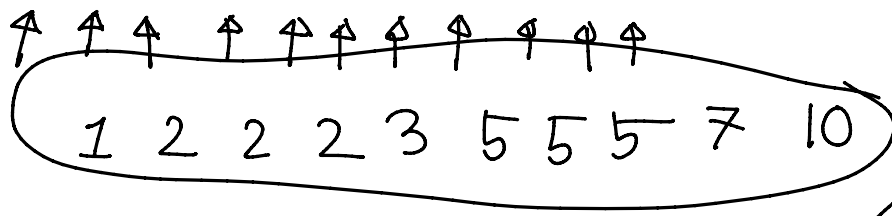
## Counting Sort:

5 5 1 2 2 10 7 3 2 5

↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑

freq[] = {0, 1, 3, 0, 0, 3, 0, 0, 0, 0, 1}

0 1 2 3 4 5 6 7 8 9 10



KITCHEN

async  $\equiv$  single thread

```
int a;  
cin >> a;  
do-task1()  
do-task2()  
5 do-task3()  
int b;  
cin >> b;
```

