

## Smallest Subarray with sum greater than a given value

```
int smallestSubWithSum(int arr[], int n, int x)
{
    int WindowSize = INT_MAX;
    int start = 0, end = 0, sum = 0;;
    for(end=0; end<n; end++){
        sum += arr[end];
        while(sum>x){
            if(sum>x){
                WindowSize = min(WindowSize, end-start+1);
                sum -= arr[start++];
            }
        }
    }
    if(WindowSize==INT_MAX)
        return 0;

    return WindowSize;
}
```

## Count More than n/k Occurences

```
int countOccurence(int arr[], int n, int k) {
    int x = n / k, count=0;
    map<int, int> map;

    for (int i = 0; i < n; i++) {
        map[arr[i]]++;
    }
    for (auto i : map) {
        if (i.second > x) {
            count++;
        }
    }
    return count;
}
```

## Maximum Product Subarray

```
long long maxProduct(vector<int> arr, int n) {
    long long maxi = INT_MIN;
    long long prod=1;
```

```
for(int i=0;i<n;i++)
{
    prod*=arr[i];
    maxi=max(prod,maxi);
    if(prod==0)
        prod=1;
}
prod=1;
for(int i=n-1;i>=0;i--)
{
    prod*=arr[i];

    maxi=max(prod,maxi);
    if(prod==0)
        prod=1;
}
return maxi;
}
```