

Convert the following C++ code to ASM code

```
#include<iostream>

using namespace std;

int main()
{
    int arr[]={5,2,8,9,12,3,1,6,13,15,7,10};

    int length=sizeof(arr)/sizeof(int);

    int zeros[5],ones[5],twos[5];

    // "zeros" array -> n%3=0, "ones" array -> n%3=1, "twos" array -> n%3=2

    int index_for_zeros=0,index_for_ones=0,index_for_twos=0;

    // to keep track of the number of elements placed in the arrays

    for(int i=0; i<length; i++){
        if(arr[i]%3==0){
            zeros[index_for_zeros]=arr[i];
            ++index_for_zeros;
        }
        else if(arr[i]%3==1){
            ones[index_for_ones]=arr[i];
            ++index_for_ones;
        }
        else{
            twos[index_for_twos]=arr[i];
            ++index_for_twos;
        }
    }
}

RESULTANT ARRAY:  ZEROES -> 9, 12, 3, 6, 15
                   ONES  -> 1, 13, 7, 10
                   TWOS  -> 5, 2, 8
```