Objective:

- The purpose of this quiz is to focus on the very basic fundamental concepts learned so far in previous lectures.

Question:

Write a C++ function, which takes an array of integer and its size as arguments. Firstly, the function should determine the number of even values present in the array. After that the function should dynamically allocate an array of integers to store those many values. Then, the function will copy all the even values from the original array into the newly allocated array. At the end, the function should return a pointer to the dynamically allocated array containing all the even values. The size of this new array will be returned through a reference parameter (see the 3rd argument in the function prototype given below).

The prototype of your function should be:

int * **extractEvens (** int * original, int origSize, int & newSize **)**;

Note: *Indent your code properly. Use meaningful variable names.*

```
int getEvenNumbersCount( int * arr, int size )
{
    int evenCount=0;
    for ( int i=0; i<size; i++ )
    {
        if ( arr[i]%2 == 0 )
            evenCount++;
    }
    return evenCount;
}
int * extractEvens ( int * original, int origSize, int & newSize )
{
    newSize = getEvenNumbersCount(original, origSize);
    if ( newSize == 0 )
        return 0;
    int * evenNumberArray = new int [newSize];

    for ( int i=0,j=0; i<origSize; i++ )
    {
        if ( original[i]%2 == 0 )
            evenNumberArray[j++] = original[i];
    }
    return evenNumberArray;
}
```