COAL LAB - Fall 2020

Faisal Khan: faisal.khan@nu.edu.pk

Assignment

Q#1 Write a code to find the number of even and odd numbers using **DIV** instruction. There should be a subroutine(function) to count the number of even numbers and a separate subroutine to count the number of odd numbers.

Example:
Array: 3, 9, 56, 43, 1, 2, 23
Even: 2 (56, 2)
Odd: 5 (3, 9, 43, 1, 23)

Q#2 Suppose you're given 3 double-digit integers. Write code to find the integer whose digits when added are the maximum.Use **DIV** and there should be subroutine.

Example: 47, 72, 31
47 = 4+7 = 11
72 = 7+2 = 9
31 = 3+1 = 4
As 11 is maximum so output is 47.

Q#3 Convert the following c++ code into assembly code.
There must be 2 functions; add1 will be called from main and add2 will be called from add1. Store results on stack and maintain stack, you must create local variables as created in code. Single violation of code will lead to a zero.

```
#include <iostream>

using namespace std;

int add2(int a, int b, int c){
    int sum=a+b+c;

    return sum;
}
int add1(int a, int b){
    int sum = a+b;
    return add2(sum, a,b);
}
```

```
int main()
{
    int out = add1(12,12);

}
```
