General Coding Practice 1!

The practices here are meant to improve your coding skills only. We won't be coding robots. Instead, we will solve some Math/Logic problems. For all problems, solve them in a script (you can do them using functions or directly in the OnStart() area) and output the answers using Print() or Comment().

Use whatever coding techniques you've learnt so far.

I have included hints in the next page. **Don't scroll down unless you want spoilers.**

Answers are in the Github for this chapter: goo.gl/TwtbJV.

Question 1

If we list all the natural numbers below 10 that are multiples of 3 or 5, we get 3, 5, 6 and 9. The sum of these multiples is 23.

Find the sum of all the multiples of 3 or 5 below 1000.

Question 2

Each new term in the Fibonacci sequence is generated by adding the previous two terms. By starting with 1 and 2, the first 10 terms will be:

1, 2, 3, 5, 8, 13, 21, 34, 55, 89, ...

Find the sum of the terms in the Fibonacci sequence whose values do not exceed 10,000.

Question 3

Find the total current (let current be shift 1 not shift 0) value of the following 40 Simple Moving Averages: MA(5), MA(10), MA(15), … ,MA(200).

I.e. Sum all the shift 1s of MA(5), MA(10), MA(15), … ,MA(200).

For the other iMA inputs, use whatever you want!

Hints:

Question 1: Use a loop to add. Use an If function to determine if the number is a multiple of 3 and 5. Google the method/function to identify whether a number is a multiple of another number.

Question 2: Create 3 variables to store the current term, previous term and the one before that. Use a loop to add. Use a while loop to determine if the number is <10000.

If you are using a For loop, use an If function to determine if the number is <10000.

Question 3: Use a Loop to add.