Computer Programming C++
Midterm In Class Practice 2019/10/16

Problem 1: Ask the user to input two positive numbers M and N, if the user input is not positive numbers, ask the user to input again and again, for unlimited times, until getting correct input.
Then print on screen:
The average of M and N is (M+N)/2 and is XX.
For example, if the input is 5 and 8, then print:
The average of 5 and 8 is (5+8)/2 and is 6.5.

Problem 2: ask the user to input a number "x" and create a function and, then displays
When input x=XX, output y=YY. for the following:

$$y=\exp(x) \text{ for } x<1$$
$$y=2*\sin(x)*\cos(2x) \text{ for } 1<=x<5$$
$$y=x^3 \text{ for } x>=5$$

Problem 3: Ask the user to input a number and create the following function:
Fun1: the input and output are x and y, respectively, for y=x*exp(-x)+3
Display "Positive" if y(x) is positive, and "Negative" if y(x) is negative, and "0" if y(x) is zero.

Problem 4: Ask the user to input two positive integers, then display the highest common factor and least common multiple of these two integers.

Problem 5: Perform the following integration:

账号:
Xinyuan Ethnic Restaurant
密码: 结果取前6位 ↓

$$\int_{-2}^{2} \left(x^3\cos\frac{x}{2} + \frac{1}{2}\right)\sqrt{4-x^2}\, dx$$

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