Problem Set 1

- **Simple calculator :** Jimmy asked Hoffa to make a special calculator called **Tiny calculator** just for him so that he can perform mathematical operations with only two inputs. The calculator, taking only two inputs will perform the following operations:
    - Addition of two numbers
    - Subtraction
    - Multiplication
    - Division
    - Remainder of division operation
    - Square
    - Cube
    - Average or mean of the two numbers
      And will output the results serially one by one.

  INPUT :   1   3

  OUTPUT :   4

             -2

             3

             0.333

             1

             1   9

             1   27

             2

  THE FLOATING POINTS OR DOUBLES DOES NOT NEED TO HAVE SPECIFIC SIGNIFICANT DIGITS

- **Letter case Conversion :**   The Task is to Convert from upper case letter to lower case ones by the first input, then the opposite using the second input. (HINT: Use the concept of ASCII, google it)

  INPUT : A

  OUTPUT : a

  INPUT : a

  OUTPUT : A

  ASSUME THE FIRST INPUT WILL BE IN UPPERCASE AND SECOND INPUT WILL BE IN LOWERCASE

- **Swap Variables :** Al place two data in two placeholders in the computer, the data he places are floating point or fractional in nature. Then Pacino asks him to give him the two pieces of data. Al wants to make the data dirty, that means he wanted to corrupt the data and swap the values of the placeholders. So He magically converts the data to integers and then swaps the values of the placeholders and gives the data to Pacino.

  Now simulate the above scenario in **two different ways**.

  No input of the problem, only keep two floating point number in the computers memory. Then as the scenario suggests, the numbers are converted to integers and then the placeholders are swapped

  a = 9.89

  b = 7.88

  OUTPUT :

  a = 7

  b = 9