Create pseudo code or program flow chart for these problems

**As homework assignment. Bring handwritten answer to class (online students submit it on canvas). Due 6:00 pm 8/25/2016**

1. Given a 9 character long string, verify it is a valid M number

Input character string

If string contains 9 characters and all integers

Print “valid M number”

Else

Error message

1. Given an 11 character long string, verify it is a social security number.

Input character string

If string is 11 characters and fourth&seventh char are “-“ and all other characters are integers

Print “valid SSN”

Else

Error message

1. Given a string, verify it is a valid email address

Input email address

If string contains one @ in any location but first character or last four characters

AND last four characters are known (.net, .com, .edu)

Print “valid email”

Else

Error message

1. Given a string, encrypt it using Caesar cipher i.e. by shifting the alphabet by 3. So string 'ace' will become 'dfh'.

Assign each letter with a number (a = 1 … z = 26)

Input string to encrypt

If valid input

For each character in string

Convert character to its number

Add 3 values to the characters

Number 27 -> a, 28 -> b, and 29 -> c

Return to string format (no numbers)

Print that string

Else

error

1. Given a number check if it is a prime number. You may use this logic

Input number

If valid input

For n = 2 to input -1

If input/n has no remainder

Print false, not prime

Exit For loop

Next n

Print “prime”

Else

Error message not valid input

1. The rand() function in most programming languages returns a random real number between 0 and 1. The expression (rand()\*6).to\_i will convert the random number to a number between 0 and 5. Create a method that will simulate the roll of 2 dice. Each die will return a number in the 1..6 range. Add those two numbers and the sum will be in the range of 2..12. If you repeat the process 100 times, it is likely that all 11 outcomes would have occurred at least once. Keep a count of how many times each sum came up. You may use an array or hash to store this information. Write a Ruby method that accepts a number for rolls of the dice and returns a hash that has counts of frequencies for of the outcomes 2 through 12.. Print the outcomes and the number of times the sum came up.

Counts for two to twelve set to 0

For n = 1 to 100

a = randbetween(1,6)

b = randbetween(1,6)

c = a + b

if c = 2

two = two + 1

else if c = 3

three = three +1

…

…

Next n

Print {‘two’, two total count…}