**HomeWork2**

Code Used for PBTest: The Same code used for the JUnit Test

Code Coverage Obtained: 94,6%

**-What code does**

The code need as input a string that the code will encrypted with cifratura mono alfabetica

**-Contract**

PreCondition:The code need a string containing the char value from 0 to 122 to work properly

PostCondition:The code will return a string encryped with the cifratura Mono Alfabetica

If there will be a problem with other classes calling this class and passing it wrong a string(null string ,string with char value over 122) , the code will work anyway but will return a string encrypted in a wrong way

**-What we have to Test**

The class have two methods:

-cifratura

-cifraturaMonoAlfabetica

**CifraturaMonoAlfabetica(0-61)**

The method need 2 int variable key and value

So i created 2 method test

1)set value and key with a random number from 0 to 61

because the code need a char value from 0 to 122, so if i set the max possible integer key and value can possible reach to 61 , the on point will be when key and value are 61 ,and the result of this execute will be a value input of 122

As all PBTest it does 1000 try





The Test code have to check if the value corrispond to 32, in that case , for every number the key assume, it will return 32 (32 corrispond to " ")

**CifraturaMonoAlfabetica(62-300)**

Is the same method as before , but this time we're testing the value from 62 to 300 , because the code will return a proper encrypted string for some of this value ,and will return a bad encrypted string for others.You're asking why test value above 122, is because we need to be sure that the code doesn't crash when if it have in input a wrong string caused by an error from the other callers





**Cifratura**

The method need a string in input and return a string encrypted with the previous method

For testing this method with PBTest i choose a range of random string created from a range of char from 0 to 122 (respecting the contract)

The lenght of the string is from 0 to 1402 (it test the empty string, blank string and string with normal input)

1402 is the maximum length of the string for test because the string in that way will weight 1402 byte

(1402 byte+40 byte from Http) +20 byte from TCP+20 byte from IP+18 from Ethernet =1500 byte =MTU(Maximum Trasmission Unit)

1500 byte is the Maximum size of a frame can have while traveling in internet , that prevent data lose , because there will not be needed to dived the starting data into pieces avoiding error .

