basic-mod2

Description

A new modular challenge!

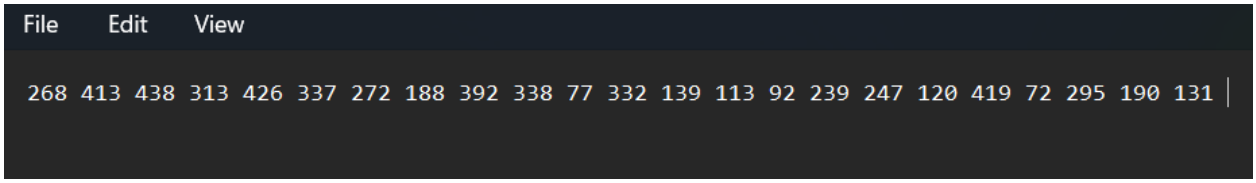
Download the message here.

Take each number mod 41 and find the modular inverse for the result. Then map to the following character set: 1-26 are the alphabet, 27-36 are the decimal digits, and 37 is an underscore.

Wrap your decrypted message in the picoCTF flag format (i.e. `picoCTF{decrypted_message}`)

Seems doable

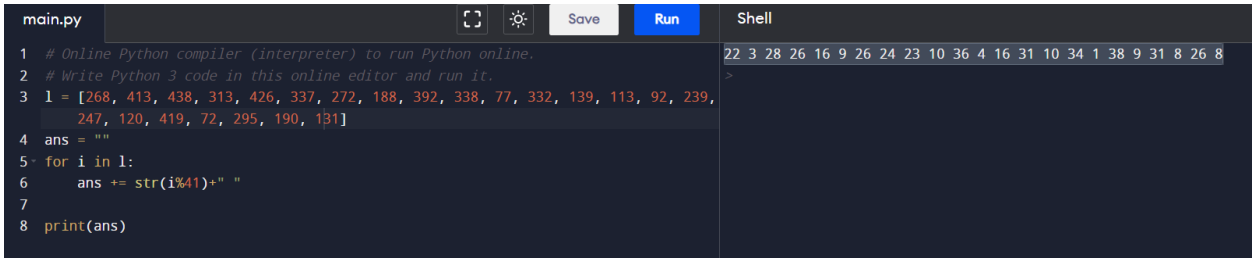
The message :



mod41'd it right away, and got this :

22 3 28 26 16 9 26 24 23 10 36 4 16 31 10 34 1 38 9 31 8 26 8

(Decided to perhaps not take the stress to mod41 each number and note it manually, instead convert them all at once, did that using on the same online python compiler with a nooby aah code :



)

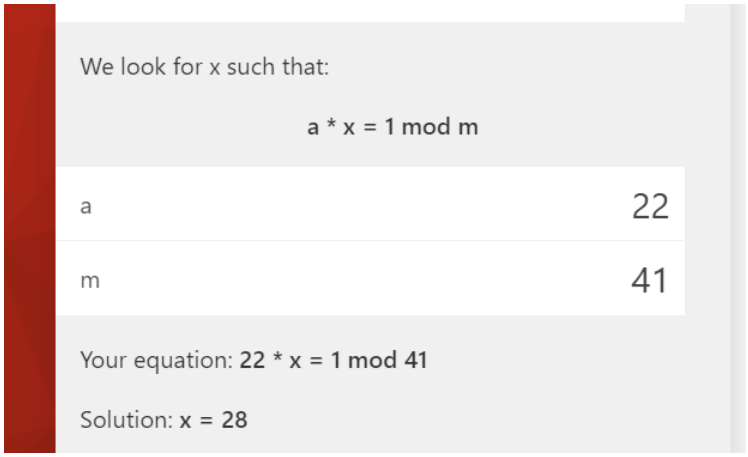
Now to find their modular inverses
Saw this on the hint :

The inverse modulo z of x is the number, y that when multiplied by x is 1 modulo z

Saw this too

It's recommended to use a tool to find the modular inverses

So I reached https://www.omnicalculator.com/math/inverse-modulo



Did the above for all the mod41'd numbers and got this :

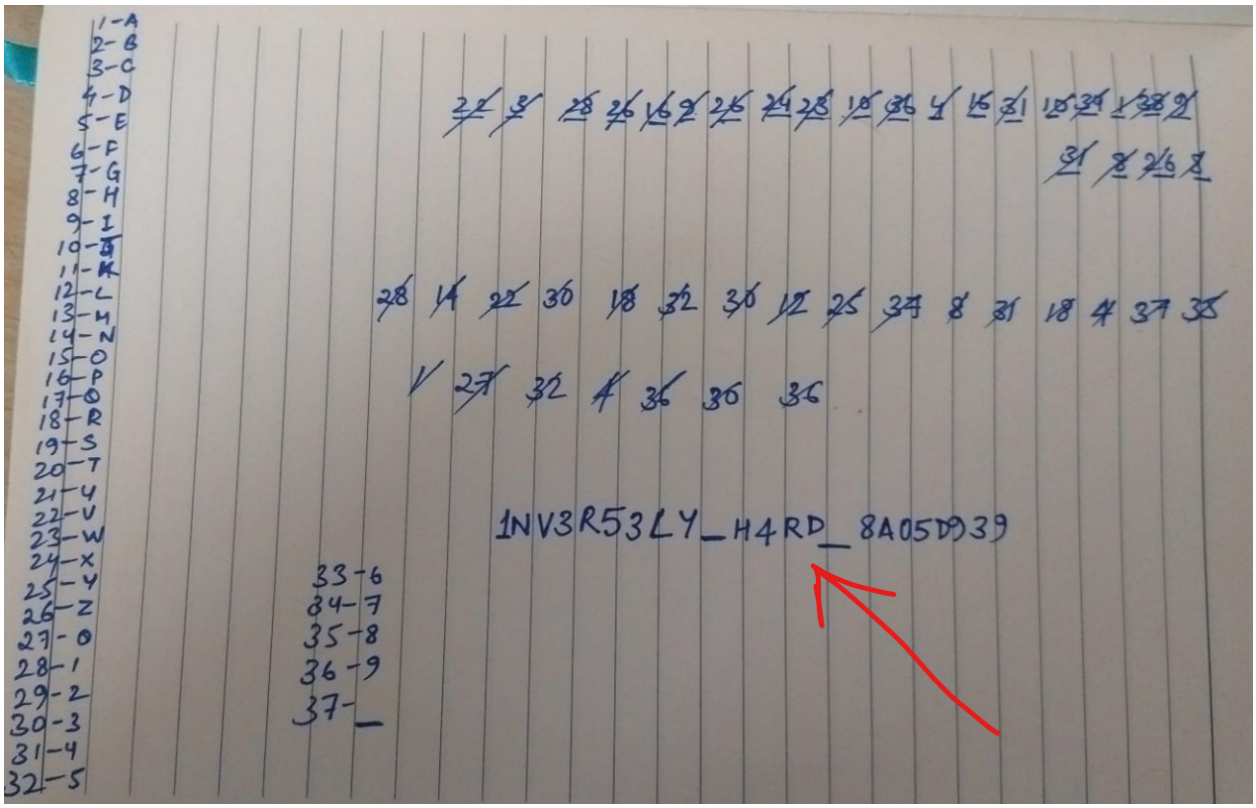
28 14 22 30 18 32 30 12 25 37 8 31 18 4 37 35 1 27 32 4 36 30 36

(found the inverses on the site, and noted the x's down on a notebook)

Now to map the above according to this :

1-26 are the alphabet, 27-36 are the decimal digits, and 37 is an underscore.

looks reall promising **:**



Typed in- ***picoCTF{1NV3R53LY_H4RD_8A05D939}***

lesgoo