Quiz Section for Program Design (I)

Exercise # 6

Si nganis is a rebellious girl attending a strict private school. She and her boyfriend are in the same class, and they want to exchange secret messages without being caught by their teacher. They decide to use Caesar Cipher (Wikipedia) to encrypt their messages, but since they are both lazy, they ask you to design a program to automate the encryption and decryption process.

- Input Format
  The first line contains two integers, 'M' and 'S':

  - 'M' represents the mode: '1' for encryption and '2' for decryption.

  - 'S' represents the shift value for the Caesar Cipher.

  - The next line contains a line of text to be processed, which ends with EOF (End of File).

- Output Format
  Print the result of the encrypted or decrypted text.

- Technical Specifications

  - The Caesar cipher uses left shift for encryption and a right shift for decryption.

  - $M \in \{1, 2\}$

  - $0 < S < 2^{63} - 1$

  - Input text contain ASCII Character only.

The table below shows the example input and output.

Input	Output
1 10 Mea culpa! I copy my friend's code, and ask ChatGPT for help.	Wok mevzk! S myzi wi pbsoxn'c myno, kxn kcu MrkdQZD pyb rovz.
2 3 Pb frgh zrun, dqg L kdyh qr lghd zkb?	My code work, and I have no idea why?
1 260 "Beware of bugs in the above code; I have only proved it correct, not tried it." -- Donald Knuth.	"Beware of bugs in the above code; I have only proved it correct, not tried it." -- Donald Knuth.