Exercises — Cipher me plz

IT IS MY JOB TO MAKE SURE YOU DO YOURS.

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1 Cipher me plz

Files to submit:

- vigenere/vigenere.c

Provided files:

- vigenere/vigenere.h

Authorized headers: You are only allowed to use the functions defined in the following headers:

- assert.h

- err.h

- errno.h

- stddef.h

1.1 Goal

You have to implement the Vigenere cipher and decipher functions.

The prototypes are:

```c
void cipher(const char *key, const char *msg, char *res);

void decipher(const char *key, const char *msg, char *res);
```

`key`, `msg` and `res` are already valid pointers. The vigenere algorithm takes a key as parameter that is repeated as many times as necessary until the end of the message you want to encrypt, as shown in the following example with the key `Penguin` and the message `The temperature here is equal to your grade!`:

```
  The temperature here is equal to your grade!
+ PEN GUINPENGUIN PENG UI NPENG UI NPEN GUINP
  ------------------------------------------
  ILR ZYUCTVNZOZR WIEK CA RFYNR NW LDYE MLIQT!
```

Both the key and the message must be in uppercase; It is up to you to convert them if necessary.

Considering the alphabet in the range [0, 25] (not ascii), the cipher and decipher algorithm must follow the following rule:

```
ciper[i] = (msg[i] + key[i]) % 26
decipher[i] = (msg[i] - key[i]) % 26
```

The ciphering must only apply on the range [A-Z] (considering the transformation of lowercase characters to uppercase), other characters must be ignored. If there is a special character in the message, it will not consume a character in the key.

The case of an empty/invalid key or empty/invalid message will not be tested.

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