

Lists - A level - Encryption/Decryption using Character Substitution

The following two lists represent encryption keys which can be used for a simple character-substitution encryption program.

```
Key1 = ['A','B','C','D','E','F','G','H','I', \
        'J','K','L','M','N','O','P','Q','R', \
        'S','T','U','V','W','X','Y','Z',' ']
```

```
Key2 = ['M','Q','X','H','N','U','V','B','O', \
        'K','A','C','Y','P','E','L',' ','J', \
        'W','S','R','T','I','F','D','Z','G']
```

To encrypt a list of characters, you would:

1. Find that character's index (position) in Key1.
2. Substitute the character at the same index in Key2.

To decrypt a list of characters, you would do the same thing with the opposite keys, i.e.:

1. Find the encrypted character's index (position) in Key2
2. Substitute the character at the same index in Key1

The following list represents a message that has already been encrypted using these keys and algorithm:

```
EncryptedList = ['Q','N','M','Y','G','Y','N','G','R','L', \
                 'G','W','X','E','S','S','D','G','G','S', \
                 'B','N','J','N','W','G','P','E','G','O', \
                 'P','S','N','C','C','O','V','N','P','S', \
                 'G','C','O','U','N','G','B','N','J','N']
```

Write a program to decrypt and display this message.

The attached file decrypt.py contains the three lists. Start with this file to avoid typing (and possibly mistyping) these lists.