You need to write a small program including a pair of functions that can

1. convert an integer into a special text encoding

The Encoding Function

This function needs to accept a signed integer in the 14-bit range [-8192..+8191] and return a 4 character string.

The encoding process is as follows:

1. Add 8192 to the raw value, so its range is translated to [0..16383]

2.Pack that value into two bytes such that the most significant bit of each is cleared

Unencoded intermediate value (as a 16-bit integer):

00HHHHHH HLLLLLLL

Encoded value:

0HHHHHHH 0LLLLLLL

1 of 3

1. Format the two bytes as a single 4-character hexadecimal string and return it.

Sample values:

Unencoded (decimal) | Intermediate (decimal) | Intermediate (hex) | Encoded (hex)

0 | 8192 | 2000 | 4000

-8192 | 0 | 0000 | 0000

8191 | 16383 | 3fff | 7F7F

2048 | 10240 | 2800 | 5000

-4096 | 4096 | 1000 | 2000