Write a program to perform various logical functions on a range of numbers. At the start of your program prompt the user to enter in an integer, called xval. Your program should do the following for the range of numbers from xval to (xval + 3). The value of xval can be between 0 and 4096.

Note: For the step of determining if the value is divisible by 4, you should only use logical instructions and not arithmetic instructions to accomplish this.

Suppose xval is given an initial value of 22. You should display the following:

xval = 22 decimal
xval = 0x16 hexadecimal
swapping bytes 0 and 1 results in 0x1600
Is xval divisible by 4? No
Complementing the first two bytes of xval results in 0xffe9

xval = 23 decimal
xval = 0x17 hexadecimal
swapping bytes 0 and 1 results in 0x1700
Is xval divisible by 4? No
Complementing the first two bytes of xval results in 0xffe8

xval = 24 decimal
xval = 0x18 hexadecimal
swapping bytes 0 and 1 results in 0x1800
Is xval divisible by 4? Yes
Complementing the first two bytes of xval results in 0xffe7

xval = 25 decimal
xval = 0x19 hexadecimal
swapping bytes 0 and 1 results in 0x1900
Is xval divisible by 4? No
Complementing the first two bytes of xval results in 0xffe6