**What bit position in an ASCII code must be complemented to change the ASCII letter represented from uppercase to lowercase and vice versa?**

Answer with Explanation:

To do this, flip bit position 5 (bit 5). This corresponds to the hexadecimal value 0x20, with position 0 being presumed to be the least significant bit.

As an illustration, in ascii, "A" equals 0x41 and "a" equals 0x61. The product of 0x41 and 0x61 is 0x20.

A flip function is created by XOR the character value with 0x20.

**Write your full name in ASCII, using an 8-bit code: (a) with the leftmost bit always 0 and (b) with the leftmost bit selected to produce even parity. Include a space between names and a period after the middle initial.**

Step 1:

The most used character encoding format for text data in computers and on the internet is ASCII (American Standard Code for Information Interchange). There are distinct values for 128 extra alphabetic, numeric, special, and control characters in ASCII-encoded data.

Step 2:

Answer with Explanation

VALUE IN ASCII

We use the binary system to represent the ASCII values.

By dividing a number by two and adding the remainders each time, we can create a binary system.

C= 01000011

L=01001100

A= 01000001(65)

U= 01010101

D= 01000100

I= 01001001

A= 01000001

G= 01000111

.  =   00101110

V= 01010110

E= 01000101

L= 01001100

E= 01000101

Z= 0101101010

Taking example : \sA-65(ascii) (ascii)

Therefore, 01000001 is represented as

0 1 0 0 0 0 0 1

Therefore, 01000001 is represented as 0 1 0 0 0 0 0 1

7 6 5 4 3 2 1 0----- we multiply the 0s and 1s with 2 th power of this integers

26 \*1+20\*1=64+1= 65

Since A-65 = 65,

In a similar manner, we determine the ascii format for each character.

E= 01000101

7 6 5 4 3 2 1 0 So 1\*2^0+1\*2^2+1\*2^6 =1+4+64 =69 =65+4(A+4)

It is 69 for E, therefore 01000101