Example #6 -- Bitwise Operations on Characters

#include <stdio.h>

int main()
{
  int input;
  char ch;

  for (;;)
  {
    input = getchar();

    if (input == EOF) break;

    ch = input & 0x0000007f;

    if ('A' <= ch && ch <= 'Z')
    {
      ch = ch | 0x20;
    }
    else if ('a' <= ch && ch <= 'z')
    {
      ch = ch & 0x5f;
    }

    putchar( ch );
  }

  return 0;
}

Most modern computer systems use the American Standard Code for Information Interchange (ASCII) for encoding character or alphanumeric data. ASCII is a seven-bit code with each character occupying a single eight-bit byte, where the leftmost bit (the most significant bit) is set to zero. Thus, 128 characters may be encoded using ASCII.