

1. Write a function called `count1` that takes an `unsigned char` as an argument and returns the number of ones found in the binary representation of the variable.
2. Write a function called `set` that takes two arguments: an `unsigned char`,  $x$ , and an `int`,  $i$ . Set the bit at index  $i$  of  $x$  to one.
3. Write a function called `clear` that takes two arguments: an `unsigned char`,  $x$ , and an `int`,  $i$ . Set the bit at index  $i$  of  $x$  to zero.
4. Write a function called `print_bin` that takes an `int` as an argument and prints its binary representation to `stdout`.
5. Write a function called `is_odd` that takes an `int`,  $x$ , as an argument. Return 1 if  $x$  is odd, and return 0 if  $x$  is even. Do not use the modulus operator.
6. Write a function called `abs` that takes an `int`,  $x$ , as an argument. If  $x$  is negative, perform the twos complement operation on the integer and return the result. Otherwise, return  $x$ .
7. Write a function called `swap_bytes` that takes an `unsigned short`,  $x$ , as a parameter. Swap the two bytes in  $x$  and return the result. For example: `swap_bytes(0x4567)` returns `0x6745`.