

C Programming

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TP 00

Exercise 1:

Write a function that takes an integer, and checks if the most significant bit of it is set or not.

Your function must be declared as follows:

```
void check_msb(int num);
```

Example:

If you pass 0 to **check_msb**, it will print "msb is not set"

Write a program that takes an integer and uses the function `check_msb` on it.

Exercise 2:

Write a function that takes a byte, and prints it in binary.

Your function must be declared as follows:

```
void print_bits(unsigned char byte);
```

Example:

If you pass 2 to `print_bits`, it will print "00000010"

Write a program that takes a byte and uses the function `print_bits` to display its binary.

Exercise 3:

write a header file for your functions, and a separate main to test all of them.

Exercise 4: (Bonus)

Write a function that takes two integers `n` and `m`, and prints in binary the `n`th byte of `m`.

Your function must be declared as follows:

```
void print_nth_byte(int n, int m);
```

Example:

If you pass `(2, 1)` to `print_nth_byte`, the output will be "00000010"

Add a test for this function in your main.

Exercise 5: (Bonus)

Create a library of your bitwise functions, then Write a program that uses some of the functions in your library.