

Bit Manipulation Practice Assignments

Practice Assignments

1. Write a program where x is assigned to x 0x1234, y = 0x8888. Your program should result of x & y
2. Write a program where x is assigned to x 0x1234, y = 0x8888, z assigned to 0x4321. Your program should print result of x & y, x | y and x ^ y
3. A register has 15 bits. Write a program that sets bits 2 and 3 and resets bit 5 and 6
4. A register has 15 bits. Write a program that sets bits 4 and 7 and toggles bit 5 and 6

Practice Assignments

5. Write a program that prints a given decimal number in binary.
6. Write a program that prints the number of trailing 0s in the binary representation of a decimal number
7. Write a program that prints the parity of a given number
8. Write a program that prints the even numbered bits in a given number

Practice Assignments

Refer to one of the registers in the MSP430 family.

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Reserved							V	SCG1	SCG0	OSC OFF	CPU OFF	GIE	N	Z	C

1. The GIE bit, when set, enables interrupt. Assume status register is represented by variable SR. Write code to set the status register to enable the interrupts
2. N Bit in the status register is 1 if the result of ALU operation is negative and 0 otherwise. Write a C program to check if the last operation was negative.

Thank You