

```

*****Program 13.c *****
//Bit operators.....
#include<stdio.h>
int main() {
    printf("\n\t*****OR \t|\t\"Operator*****\n");
    printf("\t 0 | 0 \t%d\n", 0 | 0);
    printf("\t 0 | 1 \t%d\n", 0 | 1);
    printf("\t 1 | 0 \t%d\n", 1 | 0);
    printf("\t 1 | 1 \t%d\n", 1 | 1);

    printf("\t 4 | 5 \t%d\n", 4 | 5);

    printf("\n\t*****AND \t&\t\" Operator*****\n");
    printf("\t 0 & 0 \t%d\n", 0 & 0);
    printf("\t 0 & 1 \t%d\n", 0 & 1);
    printf("\t 1 & 0 \t%d\n", 1 & 0);
    printf("\t 1 & 1 \t%d\n", 1 & 1);

    printf("\t 4 & 5 \t%d\n", 4 & 5);

    printf("\n\t*****XOR \t^\t\" Operator*****\n");
    printf("\t 0 ^ 0 \t%d\n", 0 ^ 0);
    printf("\t 0 ^ 1 \t%d\n", 0 ^ 1);
    printf("\t 1 ^ 0 \t%d\n", 1 ^ 0);
    printf("\t 1 ^ 1 \t%d\n", 1 ^ 1);

    printf("\t 4 ^ 5 \t%d\n", 4 ^ 5);

    printf("\n\t*****left shift \t<<\t\" Operator*****\n");
    int a = 4; //.....
    int b = a << 1;
    printf("\t a << 1 \t\t%d\n", b);
    b = a << 2;
    printf("\t a << 2 \t\t%d\n", b);

    printf("\n\t*****right shift \t>>\t\" Operator*****\n");
    b = a >> 1;
    printf("\t a >> 1 \t\t%d\n", b);
    b = a >> 2;
    printf("\t a >> 2 \t\t%d\n", b);

    printf("\n\t*****NOT \t~\t\" Operator*****\n");
    printf("\t ~ 0 \t%d\n", ~ 0);
    printf("\t ~ 1 \t%d\n", ~ 1);

}

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*****Program 13.1.c *****
//check ith bth is set or not.
#include<stdio.h>
int main() {
    short int n;
    int mask, k, bitno;
    scanf("%hd%d",&n, &bitno);
    mask = 1 << bitno;
    printf("mask is %d\n", mask);
    k = n & mask;
    if (k == 0) {
        printf("0");
    } else {
        printf("1");
    }
}

```

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    }  
    printf("\n");  
}
```

\*\*\*\*\*Program 14.c \*\*\*\*\*

```
//show bits.  
#include<stdio.h>  
int main() {  
    short int n;  
    int i, mask, k;  
    scanf("%hd",&n);  
    for (i = 15; i >=0; i--) {  
        mask = 1 << i;  
        //printf("Mask = %d\n", mask);  
        k = n & mask;  
        if (k == 0) {  
            printf("0");  
        } else {  
            printf("1");  
        }  
    }  
    printf("\n");  
}
```