

```
/**7(A)MSB
```

```
* C program to check Most Significant Bit (MSB) of a number using bitwise operator
```

```
*/
```

```
#include <stdio.h>
```

```
#define BITS sizeof(int) * 8 // Total bits required to represent integer
```

```
int main()
```

```
{
```

```
    int num, msb;
```

```
    /* Input number from user */
```

```
    printf("Enter any number: ");
```

```
    scanf("%d", &num);
```

```
    /* Move first bit of 1 to highest order */
```

```
    msb = 1 << (BITS - 1);
```

```
    /* Perform bitwise AND with msb and num */
```

```
    if(num & msb)
```

```
        printf("MSB of %d is set (1).", num);
```

```
    else
```

```
        printf("MSB of %d is unset (0).", num);
```

```
    return 0;
```

```
}
```

```
//7(B)LSB
```

```
/**
```

```
* C program to check Least Significant Bit (LSB) of a number using bitwise operator
```

```
*/
```

```
#include <stdio.h>
```

```
int main()
```

```
{
```

```
    int num;
```

```
    /* Input number from user */
```

```
    printf("Enter any number: ");
```

```
    scanf("%d", &num);
```

```
    /* If (num & 1) evaluates to 1 */
```

```
    if(num & 1)
```

```
        printf("LSB of %d is set (1).", num);
```

```
    else
```

```
        printf("LSB of %d is unset (0).", num);
```

```
    return 0;
```

```
}
```