Get highest set bit of a number

ALGORITHM:

STEP 1: Start the program

STEP 2: using integer num,order = -1,i.

STEP 3: Print enter a number and use scanf %d and num

STEP 4: Usinf for loop and if condition

STEP 5: And finally return 0.

COMMANDS:

printf("Enter any number: ");

scanf("%d", &num); //Input number from user

for(i=0; i<INT\_SIZE; i++) //Iterate over each bit of integer

if((num>>i) & 1)

order = i; //If current bit is set

PROGRAM:

#include <stdio.h>

#define INT\_SIZE sizeof(int) \* 8

int main()

{

int num, order = -1, i;

printf("Enter any number: ");

scanf("%d", &num);

for(i=0; i<INT\_SIZE; i++)

{

if((num>>i) & 1)

order = i;

}

if (order != -1)

printf("Highest order set bit in %d is %d", num, order);

else

printf("0 has no set bits.");

return 0;

}

OUTPUT:

Enter any number: 46

Highest order set bit in 46 is 5