TOGGLE NTH BIT OF A NUMBER

ALGORITHM:

STEP 1: Start the program

STEP 2: Using integer are num,n,newNum

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

STEP 4: print enter the nth bit to toggle 0 to 31

STEP 5: And use newNum

STEP 6: Finally return 0.

COMMANDS:

printf("Enter any number: ");

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

newNum = num ^ (1 << n); //Left shifts 1, n times

Then perform bitwise XOR with num

PROGRAM:

#include <stdio.h>

int main()

{

int num, n, newNum;

printf("Enter any number: ");

scanf("%d", &num);

printf("Enter nth bit to toggle (0-31): ");

scanf("%d", &n);

newNum = num ^ (1 << n);

printf("Bit toggled successfully.\n\n");

printf("Number before toggling %d bit: %d (in decimal)\n", n, num);

printf("Number after toggling %d bit: %d (in decimal)\n", n, newNum);

return 0;

}

OUTPUT:

Enter any number: 11

Enter nth bit to toggle (0-31): 1

Bit toggled successfully.

Number before toggling 1 bit: 11 (in decimal)

Number after toggling 1 bit: 9 (in decimal)