

```
1  #include <stdio.h>
2
3  int main(void)
4  {
5      //function prototypes
6      void PrintBinaryFormOfNumber(unsigned int);
7
8      //variable declarations
9      unsigned int a;
10     unsigned int num_bits;
11     unsigned int result;
12
13     //code
14     printf("\n\n");
15     printf("Enter An Integer = ");
16     scanf("%u", &a);
17
18     printf("\n\n");
19     printf("By How Many Bits Do You Want To Shift A = %d To The Left ? ", a);
20     scanf("%u", &num_bits);
21
22     printf("\n\n\n");
23     result = a << num_bits;
24     printf("Bitwise LEFT-SHIFT By %d Bits Of A = %d \nGives The Result = %d\n\n", num_bits, a, result);
25     PrintBinaryFormOfNumber(a);
26     PrintBinaryFormOfNumber(result);
27
28     return(0);
29 }
30
31 // ***** BEGINNERS TO C PROGRAMMING LANGUAGE : PLEASE IGNORE THE CODE OF THE
32 // FOLLOWING FUNCTION SNIPPET 'PrintBinaryFormOfNumber()' *****
33 // ***** YOU MAY COME BACK TO THIS CODE AND WILL UNDERSTAND IT MUCH BETTER AFTER
34 // YOU HAVE COVERED : ARRAYS, LOOPS AND FUNCTIONS *****
35 // ***** THE ONLY OBJECTIVE OF WRITING THIS FUNCTION WAS TO OBTAIN THE BINARY
36 // REPRESENTATION OF DECIMAL INTEGERS SO THAT BIT-WISE AND-ing, OR-ing, COMPLEMENT
37 // AND BIT-SHIFTING COULD BE UNDERSTOOD WITH GREAT EASE *****
38
39 void PrintBinaryFormOfNumber(unsigned int decimal_number)
40 {
41     //variable declarations
42     unsigned int quotient, remainder;
43     unsigned int num;
44     unsigned int binary_array[8];
45     int i;
46
47     //code
48     for (i = 0; i < 8; i++)
49         binary_array[i] = 0;
50
51     printf("The Binary Form Of The Decimal Integer %d Is\t=\t", decimal_number);
```

```
48     num = decimal_number;
49     i = 7;
50     while (num != 0)
51     {
52         quotient = num / 2;
53         remainder = num % 2;
54         binary_array[i] = remainder;
55         num = quotient;
56         i--;
57     }
58
59     for (i = 0; i < 8; i++)
60         printf("%u", binary_array[i]);
61
62     printf("\n\n");
63 }
64
```