

```
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 result;
11
12     //code
13     printf("\n\n");
14     printf("Enter An Integer = ");
15     scanf("%u", &a);
16
17     printf("\n\n\n\n");
18     result = ~a;
19     printf("Bitwise COMPLEMENTING Of \nA = %d (Decimal) gives result %d (Decimal). \n\n", a, result);
20     PrintBinaryFormOfNumber(a);
21     PrintBinaryFormOfNumber(result);
22
23     return(0);
24 }
25
26
27 // ***** BEGINNERS TO C PROGRAMMING LANGUAGE : PLEASE IGNORE THE CODE OF THE
28 // FOLLOWING FUNCTION SNIPPET 'PrintBinaryFormOfNumber()' *****
29 // ***** YOU MAY COME BACK TO THIS CODE AND WILL UNDERSTAND IT MUCH BETTER AFTER
30 // YOU HAVE COVERED : ARRAYS, LOOPS AND FUNCTIONS *****
31 // ***** THE ONLY OBJECTIVE OF WRITING THIS FUNCTION WAS TO OBTAIN THE BINARY
32 // REPRESENTATION OF DECIMAL INTEGERS SO THAT BIT-WISE AND-ing, OR-ing, COMPLEMENT
33 // AND BIT-SHIFTING COULD BE UNDERSTOOD WITH GREAT EASE *****
34
35 void PrintBinaryFormOfNumber(unsigned int decimal_number)
36 {
37     //variable declarations
38     unsigned int quotient, remainder;
39     unsigned int num;
40     unsigned int binary_array[8];
41     int i;
42
43     //code
44     for (i = 0; i < 8; i++)
45         binary_array[i] = 0;
46
47     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     {
```

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