

## Experiment - II (Bitwise Operator)

1) Write a program to apply bitwise OR, AND and NOT operators on bit level.

```
#include <stdio.h>
int main () {
    unsigned int a, b;
    printf ("Enter first number : ");
    scanf ("%u", &a);
    printf ("Enter second number : ");
    scanf ("%u", &b);

    unsigned int and_result = a & b;
    unsigned int or_result = a | b;
    unsigned int not_a = ~a;
    unsigned int not_b = ~b;

    printf ("\n-- BITWISE RESULTS --\n");
    printf ("a AND b = %u\n", and_result);
    printf ("a OR b = %u\n", or_result);
    printf ("NOT a = %u\n", not_a);
    printf ("NOT b = %u\n", not_b);

    return 0;
}
```

The screenshot shows a Microsoft Visual Studio Code (VS Code) interface. The top bar displays the title "C #include <stdio.h> Untitled-1" and the search term "rajatsingh". The left sidebar contains icons for file, search, and other development tools. The main editor area contains the following C code:

```
1 #include <stdio.h>
2
3 int main() {
4     unsigned int a, b;
5     printf("Enter First Number: ");
6     scanf("%u", &a);
7     printf("Enter Second Number: ");
8     scanf("%u", &b);
9
10    unsigned int and_result = a & b;
11    unsigned int or_result = a | b;
12    unsigned int not_a = ~a;
13    unsigned int not_b = ~b;
14
15    printf("\n--- BITWISE RESULTS ---\n");
16    printf("a AND b = %u\n", and_result);
17    printf("a OR b = %u\n", or_result);
18    printf("NOT a = %u\n", not_a);
19    printf("NOT b = %u\n", not_b);
20
21    return 0;
22 }
```

The terminal below the editor shows the execution of the program:

```
cd "/Users/rajatsingh/" && gcc tempCodeRunnerFile.c -o tempCodeRunnerFile && "/Users/rajatsingh/"tempCodeRunnerFile
● rajatsingh@Rajats-MacBook-Air ~ % cd "/Users/rajatsingh/" && gcc tempCodeRunnerFile.c -o tempCodeRunnerFile && "/Users/rajatsingh/"tempCodeRunnerFile
Enter First Number: 12
Enter Second Number: 25
--- BITWISE RESULTS ---
a AND b = 8
a OR b = 29
NOT a = 4294967283
NOT b = 4294967270
● rajatsingh@Rajats-MacBook-Air ~ %
```