

Experiment - II (Bitwise Operator)

- 1) Write a program to apply bitwise OR, AND and NOT Operates 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 image shows a Visual Studio Code editor window with a C program titled "C C PROGRAMING PROJECT .c". The program is designed to take two numbers as input and perform bitwise AND, OR, and NOT operations. The code is as follows:

```
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 output at the bottom shows the execution of the program. It prompts for the first and second numbers, which are 12 and 25 respectively. The results of the bitwise operations are displayed:

```
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 ~ %
```