

2) WAP to apply left shift and right shift operator.

```
#include <stdio.h>
int main() {
    unsigned int num, left, right;
    printf("Enter a number : ");
    scanf("%u", &num);
    int shift;
    printf("Enter number of positions to shift : ");
    scanf("%d", &shift);

    left = num << shift;
    right = num >> shift;

    printf("\n --- SHIFT OPERATOR RESULTS --- \n");
    printf("Original number : %u\n", num);
    printf("Left shift (%d bits) : %u\n", shift, left);
    printf("Right shift (%d bits) : %u\n", shift, right);

    return 0;
}
```

The image shows a Visual Studio Code editor window with a C program that demonstrates bit shifting. The program prompts the user to enter a number and the number of positions to shift. It then calculates the left and right shifts and prints the results.

```
1 #include <stdio.h>
2
3 int main() {
4     unsigned int num, left, right;
5     printf("Enter a number : ");
6     scanf("%u", &num);
7
8     int shift;
9     printf("Enter number of positions to shift : ");
10    scanf("%d", &shift);
11
12    left = num << shift;
13    right = num >> shift;
14
15    printf("\n--- SHIFT OPERATOR RESULTS ---\n");
16    printf("Original number: %u\n", num);
17    printf("Left Shift (%d bits): %u\n", shift, left);
18    printf("Right Shift (%d bits): %u\n", shift, right);
19
20    return 0;
21 }
```

The terminal output shows the execution of the program with the input number 20 and shift value 2:

```
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 a number : 20
Enter number of positions to shift : 2
--- SHIFT OPERATOR RESULTS ---
Original number: 20
Left Shift (2 bits): 80
Right Shift (2 bits): 5
rajatsingh@Rajats-MacBook-Air ~ %
```