BINARY TO DECIMAL CONVERSION

EXP NO: 24

AIM: To write a C program to implement binary to decimal conversion.

ALGORITHM:

1) Start
2) Read the binary number from the user, say ‘n’
3) Initialize the decimal number, d=0
4) Initialize i=0
5) Repeat while n != 0:
    i. Extract the last digit by: remainder = n % 10
    ii. n = n/10
    iii. d = d + (remainder * 2ⁱ)
    iv. Increment i by 1
6) Display the decimal number, d
7) Stop

PROGRAM:

```
#include <stdio.h>
void main()
{
        int num, binary_num, decimal_num = 0, base = 1, rem;
        printf (" Enter a binary number with the combination of 0s and 1s \n");
        scanf (" %d", &num);
        binary_num = num;
        while ( num > 0)
```

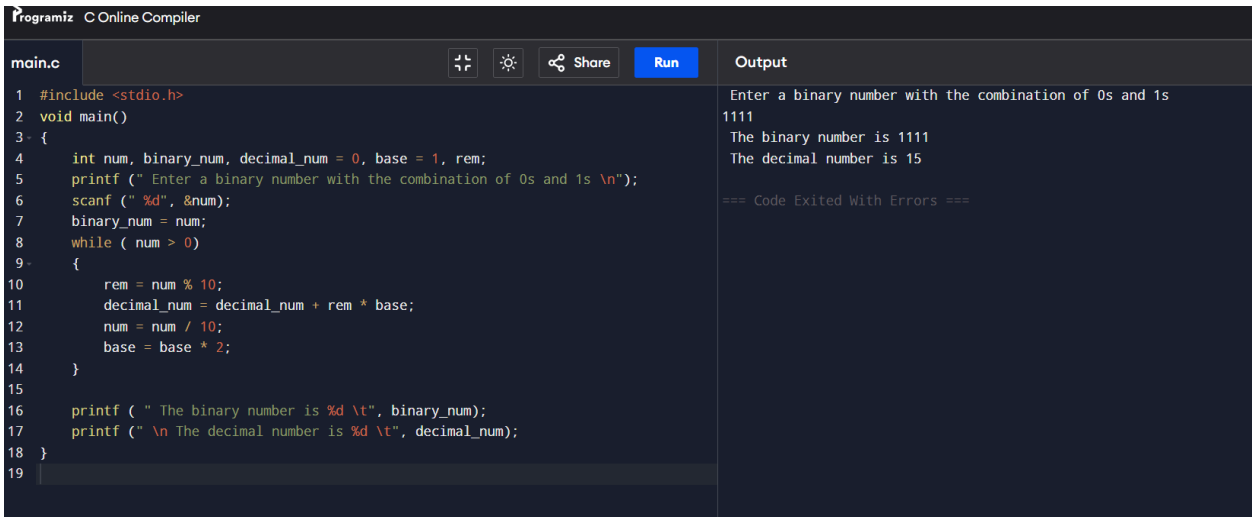
```
{
rem = num % 10;
decimal_num = decimal_num + rem * base;
num = num / 10;
base = base * 2;
}

printf ( " The binary number is %d \t", binary_num);
printf (" \n The decimal number is %d \t", decimal_num);
}
```

INPUT:

1111

OUTPUT:



RESULT: Thus the program was executed successfully using DevC++.