BINARY TO DECIMAL CONVERSION

EXP NO: 26

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:

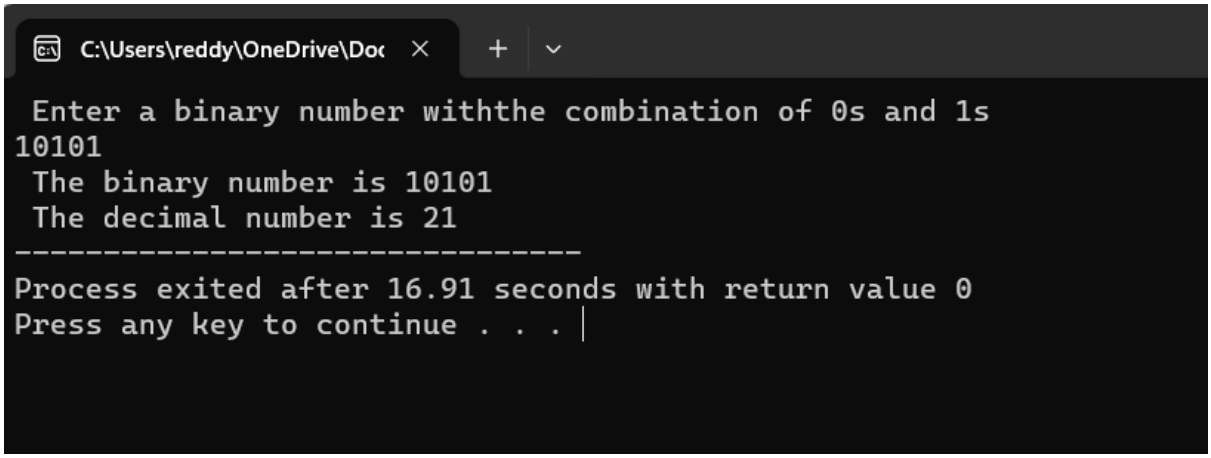
i. Extract the last digit by: remainder = n % 10
ii. n = n/10
iii. d = d + (remainder * 2ⁱ)
iv. Increment i by 1

6) Display the decimal number, d
7) Stop

PROGRAM:

```
#include <stdio.h>

int main()

{

   int num, binary_num, decimal_num = 0, base= 1, rem;

   printf (" Enter a binary number withthe 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&OUTPUT:



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