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/OUTPUT SS:

binary to decimal conversion.cpp

```c
#include <stdio.h>
int 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);
}
```

```
C:\Users\praba\OneDrive\Des
Enter a binary number with the combination of 0s and 1s
1001
The binary number is 1001
 The decimal number is 9
--------------------------------
Process exited after 4.583 seconds with return value 0
Press any key to continue . . .
```

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