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 % 1

ii. n = n/10

iii. d = d + (remainder * 2ⁱ)

iv. Increment i by 1

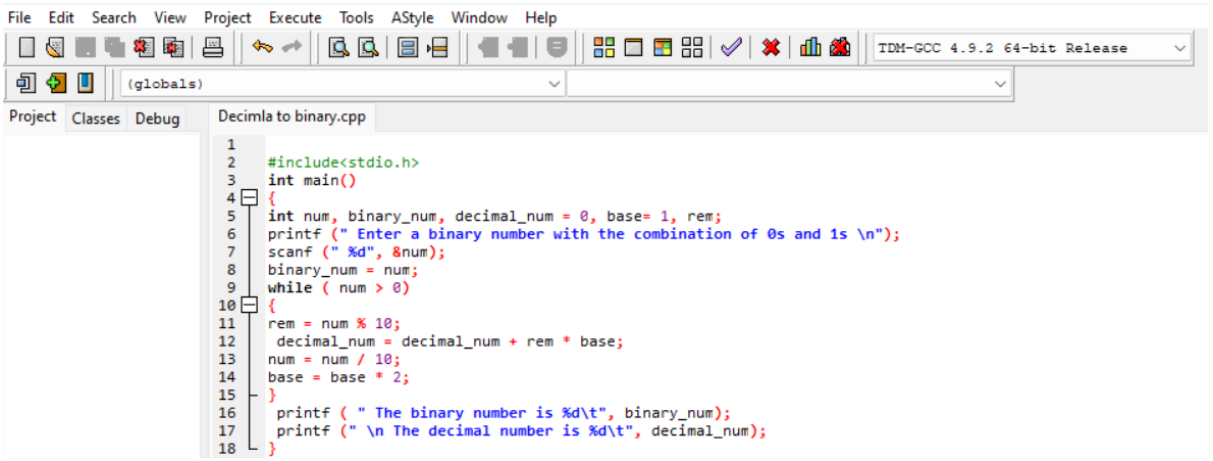
6) Display the decimal number, d

7) Stop

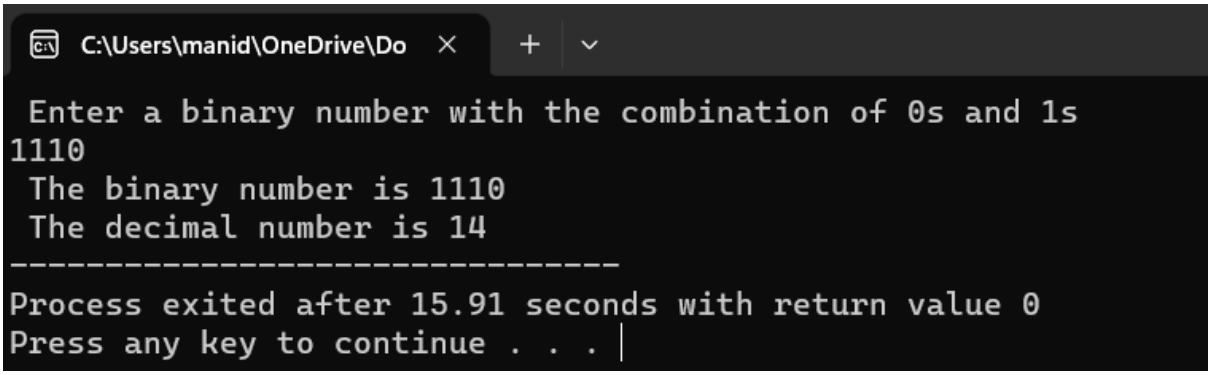
PROGRAM:

```
#include<stdio.h>
int main()
{
int num, binary_num, decimal_num = 0, base= 1, rem;
printf (" Enter a binary number 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:



OUTPUT:



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