

## DECIMAL TO BINARY CONVERSION

**EXP NO: 25**

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

### ALGORITHM:

- 1) Check if your number is odd or even.
- 2) If it's even, write 0 (proceeding backwards, adding binary digits to the left of the result).
- 3) Otherwise, if it's odd, write 1 (in the same way).
- 4) Divide your number by 2 (dropping any fraction) and go back to step 1. Repeat until your original number is 0.

### PROGRAM:

```
#include<stdio.h>
#include<stdlib.h>
int
main()

{

int
a[10],n,i;

printf("Enter
the number to convert: ");

scanf("%d",&n);

for(i=0;n>0;i++)

{

a[i]=n%2;

n=n/2;

}

printf("\nBinary
of Given Number is=");

for(i=i-1;i>=0;i--)
```

```

{

printf("%d",a[i]);

}

return
0;

}

```

## INPUT:

The screenshot shows the Dev-C++ IDE with a C++ program titled 'Untitled1.cpp'. The program is designed to convert a decimal number into its binary representation. It includes necessary headers, declares an array for binary digits, and uses a loop to calculate the binary value by repeatedly dividing the input number by 2. The binary digits are stored in an array and then printed in reverse order. The compiler window at the bottom indicates that the program compiled successfully without any errors or warnings.

```

1 #include<stdio.h>
2 #include<stdlib.h>
3 int
4 main()
5 {
6     int
7     n;
8     int
9     a[10],i;
10    scanf("%d",&n);
11    printf("Enter the number to convert: ");
12    while(n!=0)
13    {
14        a[i]=n%2;
15        n=n/2;
16        i++;
17    }
18    printf("\nBinary of Given Number is:");
19    for(i=i-1;i>=0;i--)
20    {
21        printf("%d",a[i]);
22    }
23 }

```

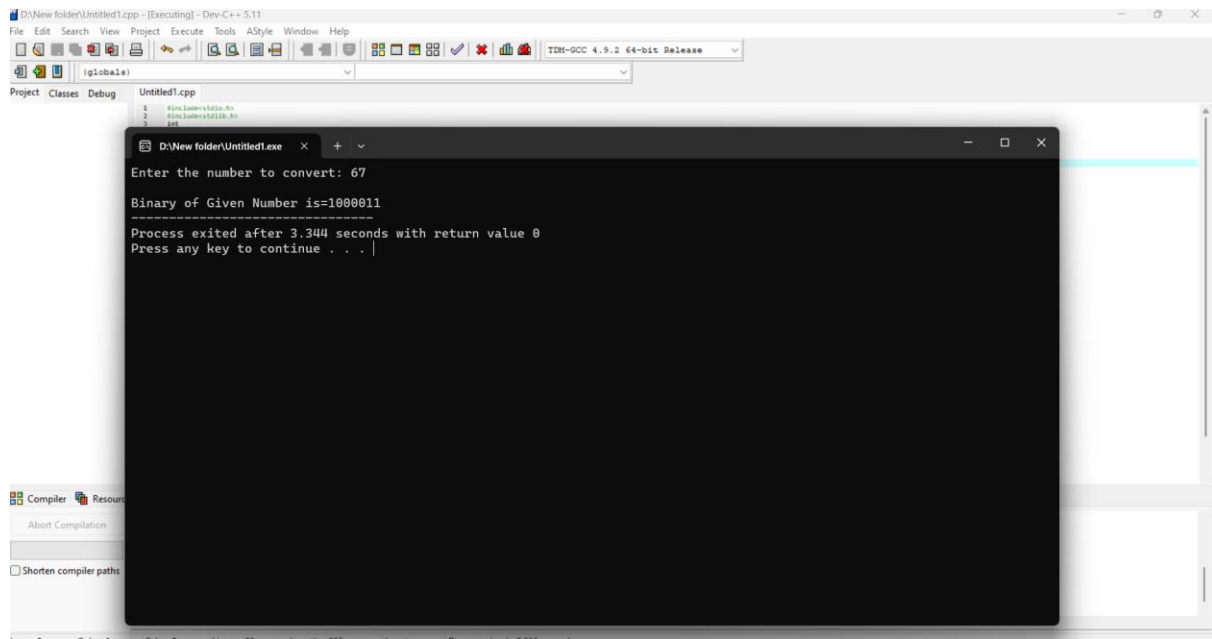
Compilation results...

```

- Errors: 0
- Warnings: 0
- Output Filename: D:\New folder\Untitled1.exe
- Output Size: 128.1015625 KiB
- Compilation Time: 0.61s

```

## OUTPUT:



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