

## DECIMAL TO HEXADECIMAL CONVERSION

EXP NO: 28

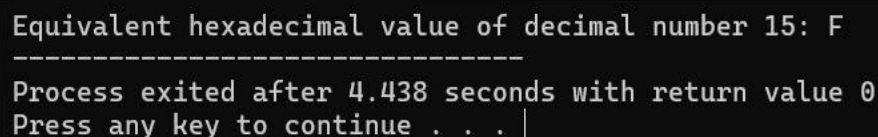
**AIM:** To write a C program to implement decimal to hexadecimal conversion.

### ALGORITHM:

- 1) Start from the right-most digit. Its weight (or coefficient) is 1.
- 2) Multiply the weight of the position by its digit. Add the product to the result.  
(0=0, 1=1, 2=2, ... 9=9, A=10, B=11, C=12, D=13, E=14, F=15)
- 3) Move one digit to the left. Its weight is 16 times the previous weight.
- 4) Repeat 2 and 3 until you go through all digits.

### PROGRAM/OUTPUT SS:

```
[*] decimal to Hexadecimal.cpp ×
1  #include<stdio.h>
2  int main() {
3      long int decimalNumber,remainder,quotient;
4      int i=1,j,temp;
5      char hexadecimalNumber[100];
6      printf("Enter any decimal number: ");
7      scanf("%ld",&decimalNumber);
8      quotient= decimalNumber;
9      while(quotient!=0){
10         temp= quotient % 16;
11         if(temp < 10){
12             temp=temp + 48;
13         }else{
14             temp = temp + 55;
15             hexadecimalNumber[i++]=temp;
16             quotient= quotient / 16;
17         }
18         printf("Equivalent hexadecimal value of decimal number %d: ",decimalNumber);
19         for(j = i - 1 ;j> 0;j--){
20             printf("%c",hexadecimalNumber[j]);
21         }
22         return 0;
23     }
```



```
C:\Users\praba\OneDrive\Des × + ▾
Equivalent hexadecimal value of decimal number 15: F
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Process exited after 4.438 seconds with return value 0
Press any key to continue . . . |
```

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