

OCTAL TO DECIMAL CONVERSION

EXP NO: 30

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

ALGORITHM:

1. Start from the right-most digit of the octal number.
2. Multiply the digit by its positional weight, where the weight is a power of 8.
3. Add the result to the decimal equivalent.
4. Move one digit to the left and repeat the process with the next positional weight (8, 64, 512, etc.).
5. Continue until all digits are processed.

PROGRAM:

```
#include <stdio.h>

int main() {

    int n;

    // Prompt the user to enter an octal number

    printf("Enter the octal number: ");

    scanf("%o", &n); // %o is used to input an octal number

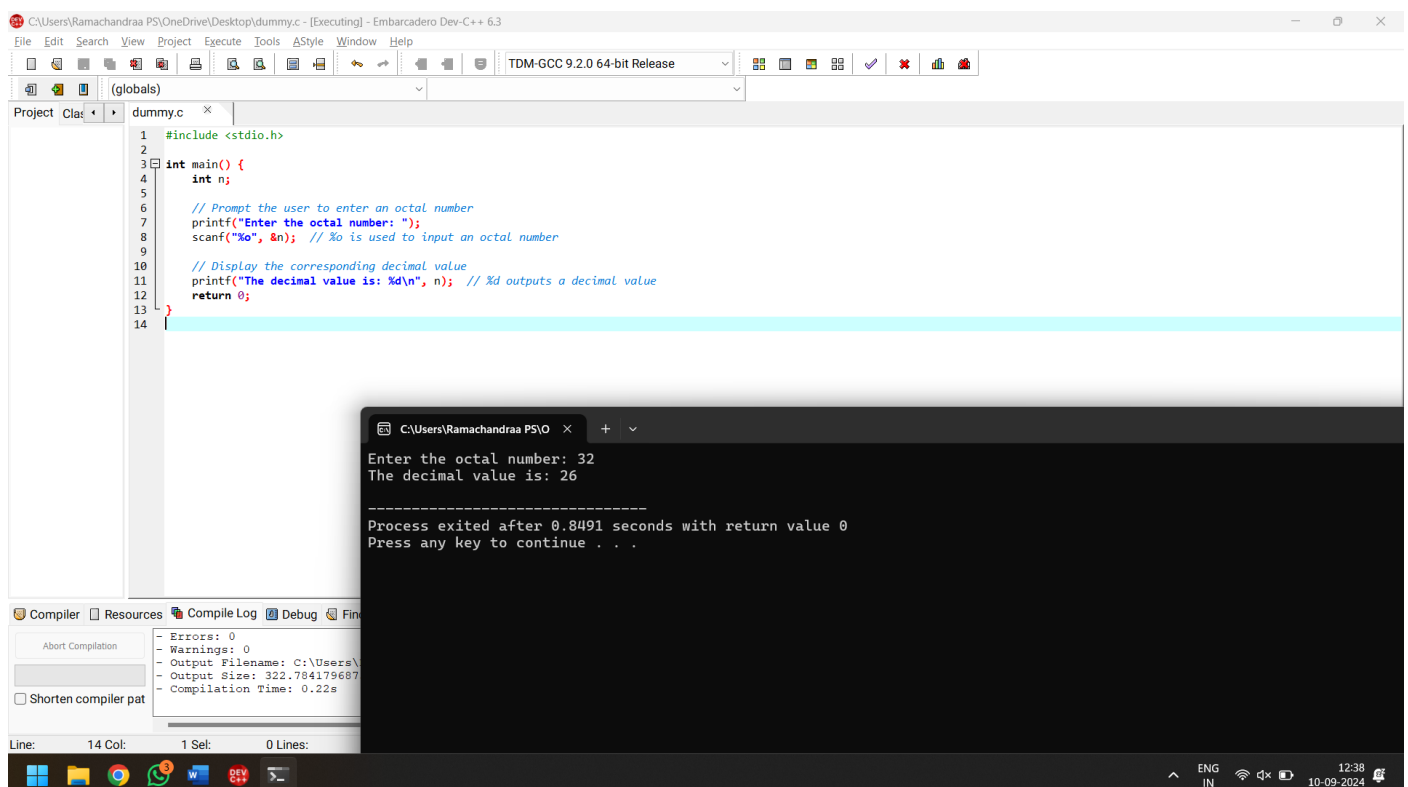
    // Display the corresponding decimal value

    printf("The decimal value is: %d\n", n); // %d outputs a decimal value

    return 0;

}
```

INPUT & OUTPUT:



```
C:\Users\Ramachandras PS\OneDrive\Desktop\dummy.c - [Executing] - Embarcadero Dev-C++ 6.3
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 9.2.0 64-bit Release
(globals)
Project Class dummy.c
1 #include <stdio.h>
2
3 int main() {
4     int n;
5
6     // Prompt the user to enter an octal number
7     printf("Enter the octal number: ");
8     scanf("%o", &n); // %o is used to input an octal number
9
10    // Display the corresponding decimal value
11    printf("The decimal value is: %d\n", n); // %d outputs a decimal value
12    return 0;
13 }
14

Compiler Resources Compile Log Debug Fin
Abort Compilation
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\
- Output Size: 322.784179687
- Compilation Time: 0.22s
Shorten compiler pat
Line: 14 Col: 1 Sel: 0 Lines:
C:\Users\Ramachandras PS\O
Enter the octal number: 32
The decimal value is: 26

-----
Process exited after 0.8491 seconds with return value 0
Press any key to continue . . .
ENG
IN
12:38
10-09-2024
```

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