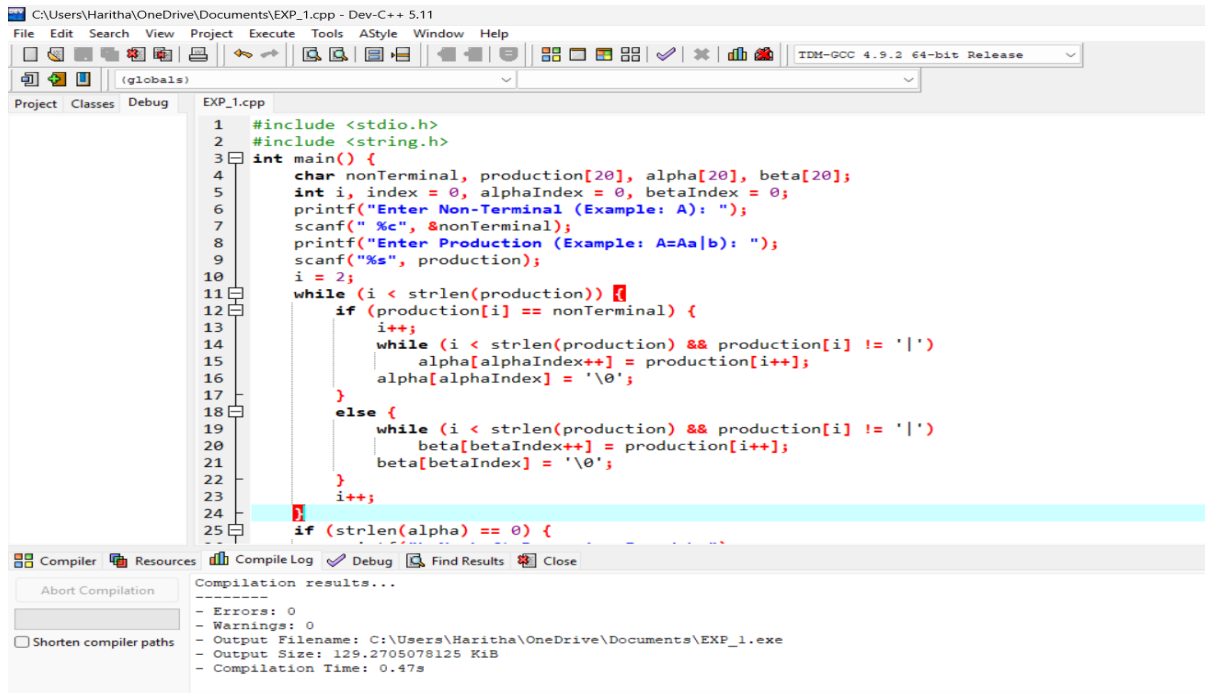


# EXPERIMENT-9

## AIM:

Implement a C program to eliminate left recursion from a given CFG.

## PROGRAM:

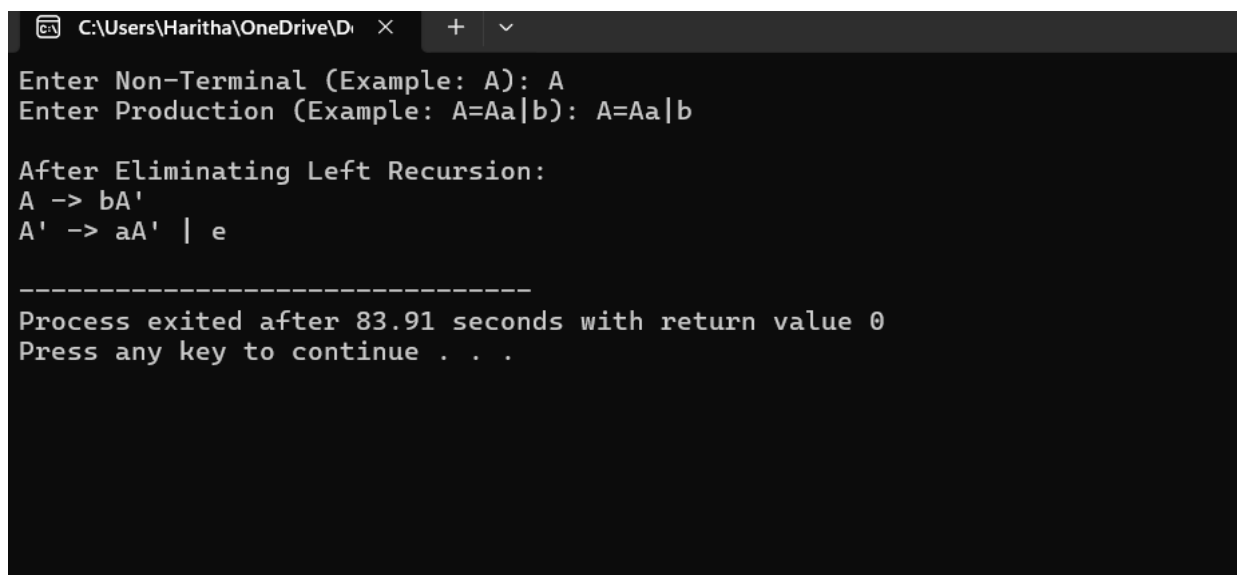


```
1 #include <stdio.h>
2 #include <string.h>
3 int main() {
4     char nonTerminal, production[20], alpha[20], beta[20];
5     int i, index = 0, alphaIndex = 0, betaIndex = 0;
6     printf("Enter Non-Terminal (Example: A): ");
7     scanf(" %c", &nonTerminal);
8     printf("Enter Production (Example: A=Aa|b): ");
9     scanf("%s", production);
10    i = 2;
11    while (i < strlen(production)) {
12        if (production[i] == nonTerminal) {
13            i++;
14            while (i < strlen(production) && production[i] != '|')
15                alpha[alphaIndex++] = production[i++];
16            alpha[alphaIndex] = '\0';
17        }
18        else {
19            while (i < strlen(production) && production[i] != '|')
20                beta[betaIndex++] = production[i++];
21            beta[betaIndex] = '\0';
22        }
23        i++;
24    }
25    if (strlen(alpha) == 0) {
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\Haritha\OneDrive\Documents\EXP\_1.exe
- Output Size: 129.2705078125 KiB
- Compilation Time: 0.47s

## OUTPUT:



```
C:\Users\Haritha\OneDrive\Documents\EXP_1.exe
Enter Non-Terminal (Example: A): A
Enter Production (Example: A=Aa|b): A=Aa|b

After Eliminating Left Recursion:
A -> bA'
A' -> aA' | e

-----
Process exited after 83.91 seconds with return value 0
Press any key to continue . . .
```