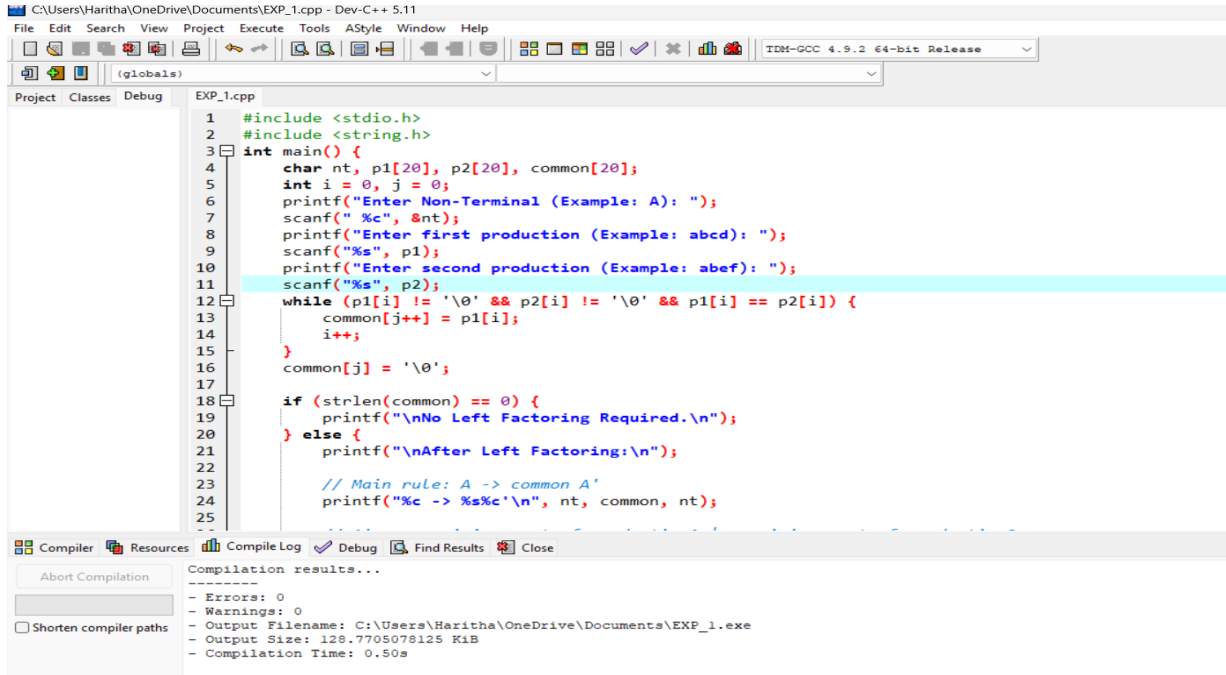


EXPERIMENT-10

AIM:

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

PROGRAM:

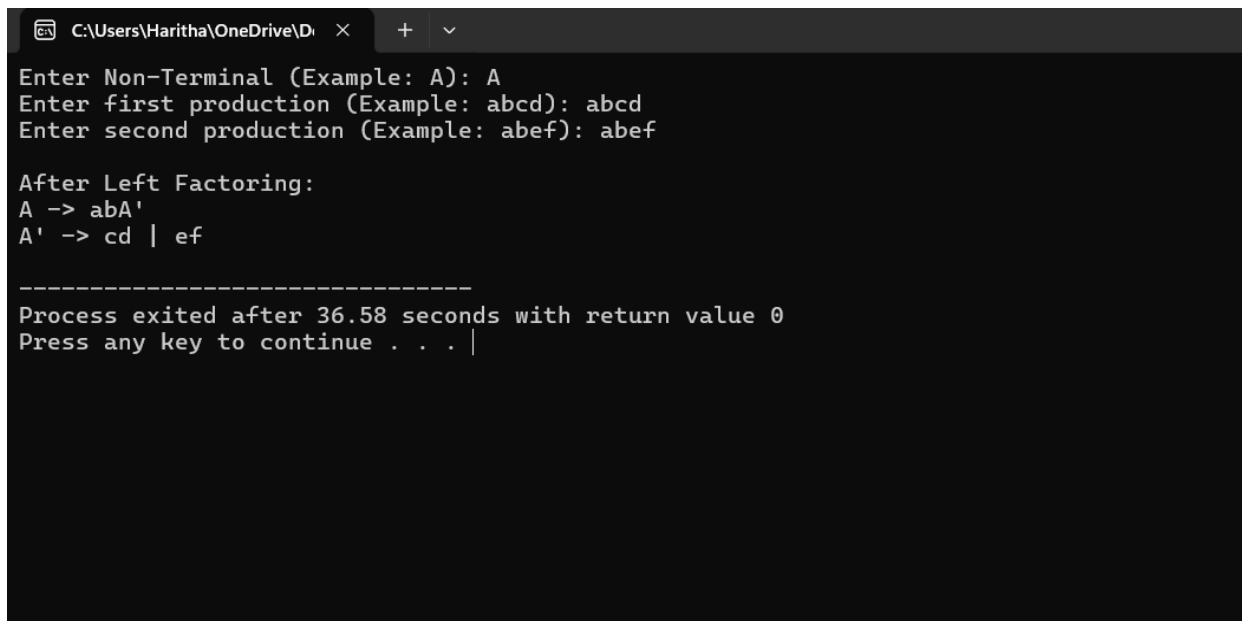


```
1 #include <stdio.h>
2 #include <string.h>
3 int main() {
4     char nt, p1[20], p2[20], common[20];
5     int i = 0, j = 0;
6     printf("Enter Non-Terminal (Example: A): ");
7     scanf("%c", &nt);
8     printf("Enter first production (Example: abcd): ");
9     scanf("%s", p1);
10    printf("Enter second production (Example: abef): ");
11    scanf("%s", p2);
12    while (p1[i] != '\0' && p2[i] != '\0' && p1[i] == p2[i]) {
13        common[j++] = p1[i];
14        i++;
15    }
16    common[j] = '\0';
17
18    if (strlen(common) == 0) {
19        printf("\nNo Left Factoring Required.\n");
20    } else {
21        printf("\nAfter Left Factoring:\n");
22
23        // Main rule: A -> common A'
24        printf("%c -> %s%c\n", nt, common, nt);
25    }
26 }
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\Haritha\OneDrive\Documents\EXP_1.exe
- Output Size: 128.7705078125 KiB
- Compilation Time: 0.50s

OUTPUT:



```
C:\Users\Haritha\OneDrive\Documents\EXP_1.exe
Enter Non-Terminal (Example: A): A
Enter first production (Example: abcd): abcd
Enter second production (Example: abef): abef

After Left Factoring:
A -> abA'
A' -> cd | ef

-----
Process exited after 36.58 seconds with return value 0
Press any key to continue . . . |
```