

# **EXPERIMENT-14**

## **AIM:**

Implement the concept of Shift reduce parsing in C Programming.

## **PROGRAM:**

The screenshot shows the Dev-C++ IDE interface. The title bar displays the path C:\Users\Haritha\OneDrive\Documents\EXP\_3.cpp - Dev-C++ 5.11. The menu bar includes File, Edit, Search, View, Project, Execute, Tools, AStyle, Window, Help. The toolbar contains various icons for file operations. The status bar at the bottom shows TDM-GCC 4.9.2 64-bit Release. The main window shows the source code EXP\_3.cpp with syntax highlighting. Below the code editor are tabs for Compiler, Resources, Compile Log, Debug, Find Results, and Close. The Compiler tab is selected. The Compile Log section shows the following output:

```
Compilation results...
-----
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\Haritha\OneDrive\Documents\EXP_3.exe
- Output Size: 130.3740234375 KiB
- Compilation Time: 0.84s
```

## OUTPUT:

```
C:\Users\Haritha\OneDrive\Di + v

Grammar:
E ? E+E | E*E | (E) | id

Enter expression (use 'id' format, e.g., id+id*id): id+id*id

STACK           INPUT          ACTION
-----
$           d+id*id$      SHIFT
$id         +id*id$      SHIFT
$E          +id*id$      REDUCE: id -> E
$E+
$E+i        id*id$      SHIFT
$E+id       d*id$      SHIFT
$E+id       *id$      SHIFT
$E+E        *id$      REDUCE: id -> E
$E          *id$      REDUCE: E + E -> E
$E*          id$      SHIFT
$E*i        d$      SHIFT
$E*id       $      SHIFT
$E*E        $      REDUCE: id -> E
$E          $      REDUCE: E * E -> E

Parsing Successful: VALID expression.

Process exited after 17.92 seconds with return value 0
Press any key to continue . . .
```