

**NATIONAL INSTITUTE OF TECHNOLOGY SILCHAR**

**Cachar, Assam**

**B.Tech. VI<sup>th</sup> Sem**

**Subject Code:** CS-316

**Subject Name:** Compiler Design Lab

**Submitted By:**

Name : Subhojit Ghimire

Sch. Id. : 1912160

Branch : CSE – B

1. Write a YACC program for conversion of Infix to Postfix expression.

→ CODE:

#### LEX (lab8.l)

```
%{
    #include <stdio.h>
    #include <stdlib.h>
    #include "lab8.tab.h"
    extern int yylval;
}%

%%
[a-zA-Z]([A-Za-z]|[0-9])* {yylval = yytext [0]; return ALPHACHAR;}
[0-9]+ {yylval = yytext [0]; return ALPHACHAR;}
[ \t] {}
[\n] {return 0;}
. {return yytext [0];}
%%

int yywrap () {
    return 1;
}
```

#### YACC (lab8.y)

```
%{
    #include <stdio.h>
    #include <stdlib.h>
}%

%token ALPHACHAR
%left '+' '-'
%left '*' '/'
%right NEGATIVE

%%
S: E {printf ("\n");}
;
E: E '+' E {printf ("+");}
| E '*' E {printf ("*");}
| E '-' E {printf ("-");}
| E '/' E {printf ("/");}
| '(' E ')'
| '-' E %prec NEGATIVE {printf ("-");}
| ALPHACHAR {printf ("%c", yylval);}
;
```

%%

```

int yyerror (char *msg) {
    fprintf (stderr, "%s\n", msg);
    exit (1);
}

int main () {
    printf ("write something: ");
    yyparse ();
    return 0;
}

```

**OUTPUT:**

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
PS D:\Documents\WITS\Semester VI\LAB CS316 Compiler Design\LAB VIII> yacc -d lab8.y
PS D:\Documents\WITS\Semester VI\LAB CS316 Compiler Design\LAB VIII> lex lab8.l
PS D:\Documents\WITS\Semester VI\LAB CS316 Compiler Design\LAB VIII> cc lex.yy.c lab8.tab.c
PS D:\Documents\WITS\Semester VI\LAB CS316 Compiler Design\LAB VIII> ./a.exe
write something: a+b*c
abc*+
PS D:\Documents\WITS\Semester VI\LAB CS316 Compiler Design\LAB VIII> ./a.exe
write something: a + b * c
abc*+
PS D:\Documents\WITS\Semester VI\LAB CS316 Compiler Design\LAB VIII>

```

Ln 10, Col 48 Spaces: 4 UTF-8 CRLF Lex