



Symbiosis Institute of Technology, Pune

Faculty of Engineering

CSE- Academic Year 2025-26

Compiler Construction Lab Batch 2022-26

Lab Assignment No: - 8

Name: Soham Phadke

PRN: 22070122214

Batch: 2022-26

Class: CSE C2

Semester – 7th

Title of Assignment: Write a bison/yacc program to implement Desk calculator with error recovery.

Practice Questions

1. Write a LEX program to count lines ending with "com".
2. Write a LEX program to count URs ending with "org".

Q1.

Source Code

```
%{
#include <stdio.h>
int count = 0;    /* counter for URLs ending with .com */
}%

%%
(www\.[a-zA-Z0-9]+\\.com)    {
    count++;
    printf("%s\n", yytext);    /* print the .com URL once */
}
(www\.[a-zA-Z0-9]+\.[a-zA-Z]+) {
    printf("%s\n", yytext);    /* print other domain URLs */
}
.|\\n                ;    /* ignore other characters */
%%

int main() {
    yylex();    /* run the lexer */
    printf("Count= %d\n", count);
    return 0;
}

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

Output Screenshot

```
PS C:\Users\Soham\Documents\SEM7\Sem7 codes> flex postfix.l
PS C:\Users\Soham\Documents\SEM7\Sem7 codes> bison -d postfix.y
PS C:\Users\Soham\Documents\SEM7\Sem7 codes> gcc -Wall -g -o postfix.exe postfix.tab.c lex.yy.c
```

```
PS C:\Users\Soham\Documents\SEM7\Sem7 codes> ./postfix
Enter postfix expressions (one per line):
Example: 5 3 + 2 * (which is (5+3)*2 = 16)
Press Ctrl+C to exit

5 3 +
Result: 8
```

Q2.

Source Code

```
%{
#include <stdio.h>
int count = 0;    /* counter for URLs ending with .org */
}%

%%
(www\.[a-zA-Z0-9]+\.\org)    {
    count++;
    printf("%s\n", yytext);    /* print the .org URL once */
}
(www\.[a-zA-Z0-9]+\.[a-zA-Z]+) {
    printf("%s\n", yytext);    /* print other domain URLs */
}
.|\\n                ;    /* ignore other characters */
%%

int main() {
    yylex();    /* run the lexer */
    printf("Count= %d\n", count);
    return 0;
}

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

OUTPUT

```
PS C:\Users\Soham\Documents\SEM7\Sem7 codes> get-Content input.txt | ./org_counter.exe
www.google.com
www.github.org
www.yahoo.com
Count= 1
```

POST LAB Question:

Q. 1. Lex program to count URLs ending with "edu".

Source code

```
%{
#include <stdio.h>
int count = 0;    /* counter for URLs ending with .edu */
}%

%%
(www\.[a-zA-Z0-9]+\.\edu)    {
    count++;
    printf("%s\n", yytext);  /* print the .edu URL once */
}
(www\.[a-zA-Z0-9]+\.[a-zA-Z]+) {
    printf("%s\n", yytext);  /* print other domain URLs */
}
.|\\n                ;    /* ignore other characters */
%%

int main() {
    yylex();          /* run the lexer */
    printf("Count= %d\n", count);
    return 0;
}

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

Output

```
● PS C:\Users\Soham\Documents\SEM7\Sem7 codes> get-Content input.txt | ./edu_counter.exe
www.google.com
www.github.org
www.yahoo.com
www.sitpune.edu
Count= 1
```