

# Department of Computer Science and Engineering

## National Institute of Technology, Rourkela

Course Code: CS3075

Course Name: Compiler Design Laboratory

Date: 23-08-2024

Assignment No.:5

Roll No.: 122CS0967

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### QUESTION 1

WRITE A FLEX CODE TO PRINT THE TOKENS.

```
/* just like Unix wc */
%{
#include<stdio.h>

%}

%%

[0-9]+ {printf("%d ",atoi(yytext));}

"+" {printf("ADD \n");}

"-" {printf("SUB \n");}

"*" {printf("MUL \n");}

"/" {printf("DIV \n");}

"|" {printf("ABS \n");}

"(" {printf("MYSTERY \n");}

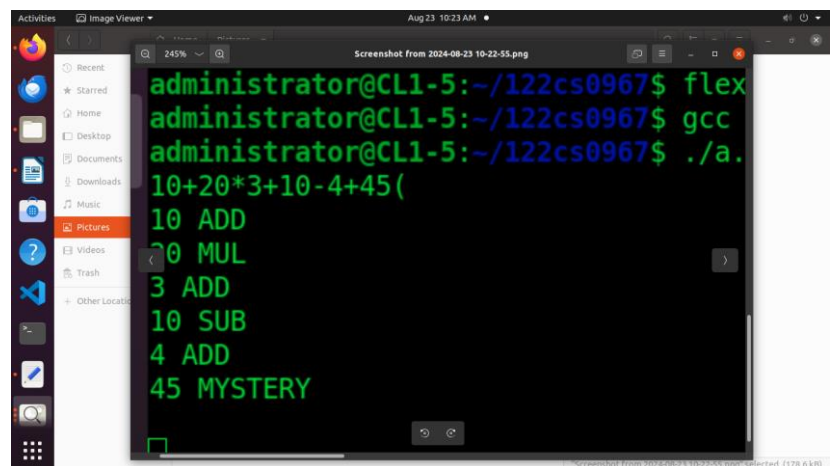
")" {printf("MYSTERY \n");}

%%

int main(int argc, char **argv
{
yylex();

return 0;
}

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



### QUESTION 2

## WRITE A FLEX CODE TO PRINT TOKENS USING ENUMERATIONS

### CODE

```
/* just like Unix wc */

%{

#include<stdio.h>

enum{NUMBER =258,ADD,SUB,MUL,DIV,ABS,EOL};

}%

%%

[0-9]+ {printf("%d enum %d \n",atoi(yytext),NUMBER );}

"+" {printf("ADD enum %d \n",ADD);}

"_" {printf("SUB enum %d \n",SUB);}

"*" {printf("MUL enum %d \n",MUL);}

"/" {printf("DIV enum %d \n",DIV);}

"|" {printf("ABS enum %d \n",ABS);}

"\n" {printf("EOL enum %d \n",EOL);}

" " {printf("SPACE \n");}

%%

int main(int argc, char **argv)

{

yylex();

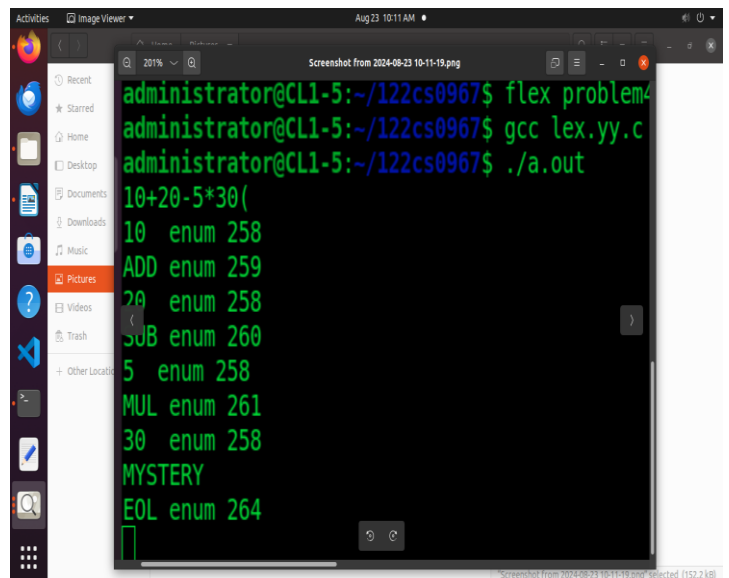
return 0;

}

int yywrap(){

return 1;

}
```



```
administrator@CL1-5:~/122cs0967$ flex problem4
administrator@CL1-5:~/122cs0967$ gcc lex.yy.c
administrator@CL1-5:~/122cs0967$ ./a.out
10+20-5*30(
10 enum 258
ADD enum 259
20 enum 258
SUB enum 260
5 enum 258
MUL enum 261
30 enum 258
MYSTERY
EOL enum 264
```