



**SYMBIOSIS INTERNATIONAL (DEEMED
UNIVERSITY)**

(Established under section 3 of the UGC Act 1956)

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**Founder: Prof. Dr. S. B. Mujumdar, M.Sc., Ph.D. (Awarded Padma Bhushan and Padma
Shri by President of India)**

Compiler Construction Lab 10

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Class: CS	Division: CS-B	Batch: B1

Intermediate code (IC) generator for arithmetic expression

Code:

```
%{
#include <stdio.h>
int tempCount = 1;
%}

%option noyywrap

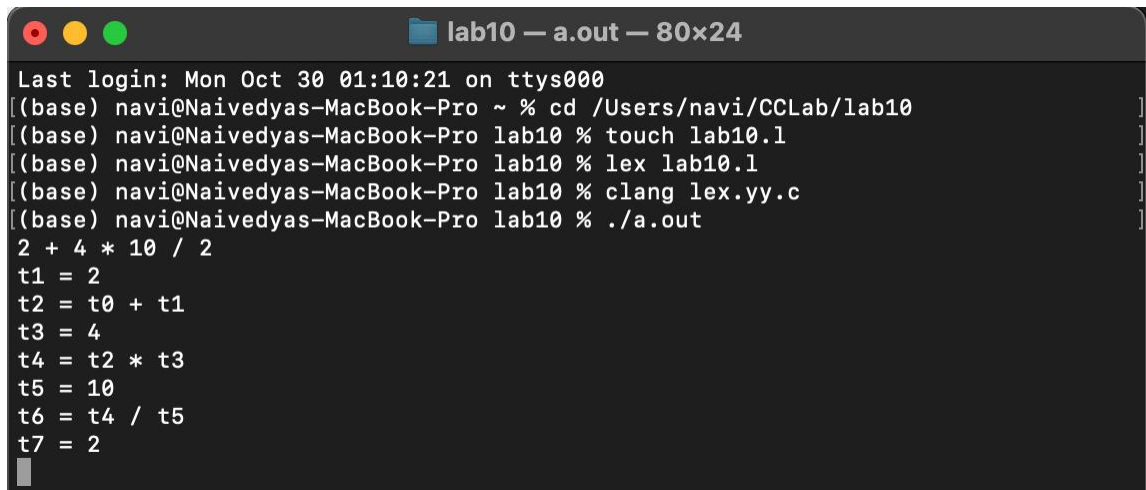
%%
[0-9]+ {
    printf("t%d = %s\n", tempCount, yytext);
    tempCount++;
}
[a-zA-Z_][a-zA-Z0-9_]* {
    printf("t%d = %s\n", tempCount, yytext);
    tempCount++;
}
[-+*/] {
    char op = yytext[0];
    printf("t%d = t%d %c t%d\n", tempCount, tempCount - 2, op, tempCount - 1);
    tempCount++;
}
\n {
    // Newline, reset the temp count for the next line
    tempCount = 1;
}
```

```
}  
. {  
    // Ignore other characters  
}
```

```
%%
```

```
int main() {  
    yylex();  
    return 0;  
}
```

Output:



```
lab10 — a.out — 80x24  
Last login: Mon Oct 30 01:10:21 on ttys000  
[(base) navi@Naivedyas-MacBook-Pro ~ % cd /Users/navi/CCLab/lab10  
[(base) navi@Naivedyas-MacBook-Pro lab10 % touch lab10.1  
[(base) navi@Naivedyas-MacBook-Pro lab10 % lex lab10.1  
[(base) navi@Naivedyas-MacBook-Pro lab10 % clang lex.yy.c  
[(base) navi@Naivedyas-MacBook-Pro lab10 % ./a.out  
2 + 4 * 10 / 2  
t1 = 2  
t2 = t0 + t1  
t3 = 4  
t4 = t2 * t3  
t5 = 10  
t6 = t4 / t5  
t7 = 2  
█
```