

YACC Program

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S7 CSE

yaccg.y

```
%{
#include<stdio.h>
#include"lex.yy.c"
int yyerror(char *);
int yywrap();
%}

%token NUMBER

%%

result:e'\n'{printf("Output : %d\n\n",$$);
        exit(0);};

e      :e '+' t { $$ = $1 + $3;}
        |e '-' t { $$ = $1 - $3;}
        |t    { $$ = $1;};

t      :t '*' f { $$ = $1 * $3;}
        |t '/' f { $$ = $1 / $3;}
        |f    { $$ = $1;};

f      : '('e') { $$ = $2;}
        |NUMBER { $$ = $1;};

%%

int main(void)
{
    return yyparse();
}

int yyerror(char *msg)
```

```
{
    return fprintf(stderr,"YACC: %s\n",msg);
}
```

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

yaaclex.l

```
%{
#include"yaaceg.tab.h"
extern int yylval;
}%

%%

([0-9])+      {yylval = atoi(yytext);
               return NUMBER;}

[\\t]         {}

\\n           {printf("\\n");return yytext[0];}

[^0-9]        {return yytext[0];}

%%
```

Output

```
42813@user:/mnt/42813/compiler/yacc$ flex yaaclex.l
42813@user:/mnt/42813/compiler/yacc$ bison yaaceg.y -d
42813@user:/mnt/42813/compiler/yacc$ gcc -o out yaaceg.tab.c
42813@user:/mnt/42813/compiler/yacc$ ./out
```

$2+3$

Output : 5

```
42813@user:/mnt/42813/compiler/yacc$ ./out  
5*8
```

Output : 40

```
42813@user:/mnt/42813/compiler/yacc$
```