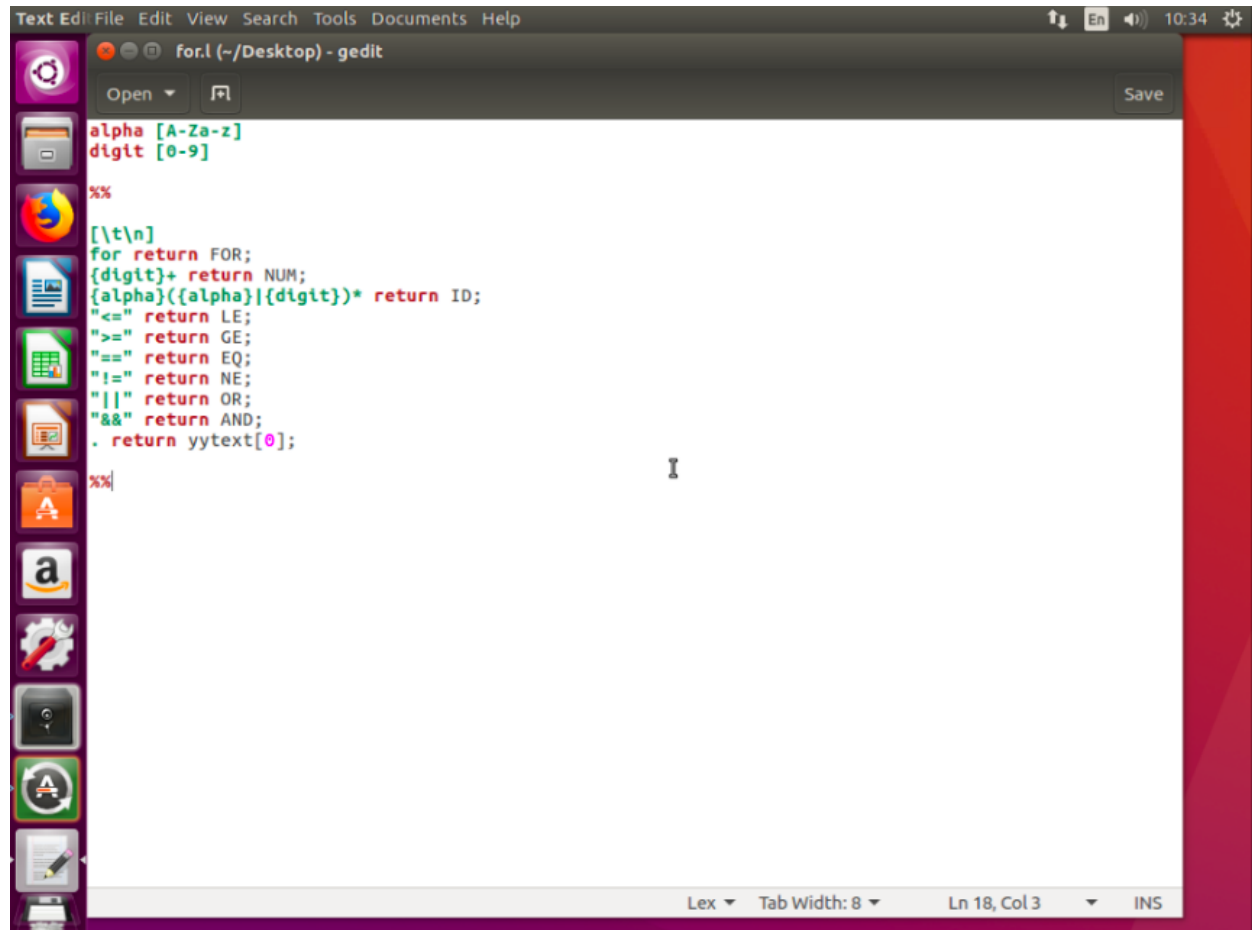


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Batch: C3

## LEX PROGRAM - PARSER for “FOR” LOOP STATEMENTS



```
Text Edit: File Edit View Search Tools Documents Help 10:34
for.l (~/Desktop) - gedit
Open Save

alpha [A-Za-z]
digit [0-9]

%%

[\\t\\n]
for return FOR;
{digit}+ return NUM;
{alpha}({alpha}|{digit})* return ID;
"<=" return LE;
">=" return GE;
"==" return EQ;
"!=" return NE;
"||" return OR;
"&&" return AND;
. return yytext[0];

%%
```

Lex Tab Width: 8 Ln 18, Col 3 INS

## YACC PROGRAM - PARSER for "FOR" LOOP STATEMENTS

```
Text Edit | File | Edit | View | Search | Tools | Documents | Help
fory (/Desktop) - gedit

%{
#include<stdio.h>
#include<stdlib.h>
%}
%token ID NUM FOR LE GE EQ NE OR AND
%right "="
%right OR AND
%left '>'<'<' LE GE EQ NE
%left '+' '-'
%left '*' '/'
%right UMINUS
%left '!'

%%

S      : ST {printf("Input accepted\n");exit(0);}
ST     : FOR '(' E ';' E2 ';' E ')' DEF
      : '{' BODY '}'
      : E
      : ST
      :
      : BODY BODY
      : E ';'
      : ST
      :
      :
E      : ID '=' E
      : E '+' E
      : E '-' E
      : E '*' E
      : E '/' E
      : E '<' E
      : E '>' E

%%

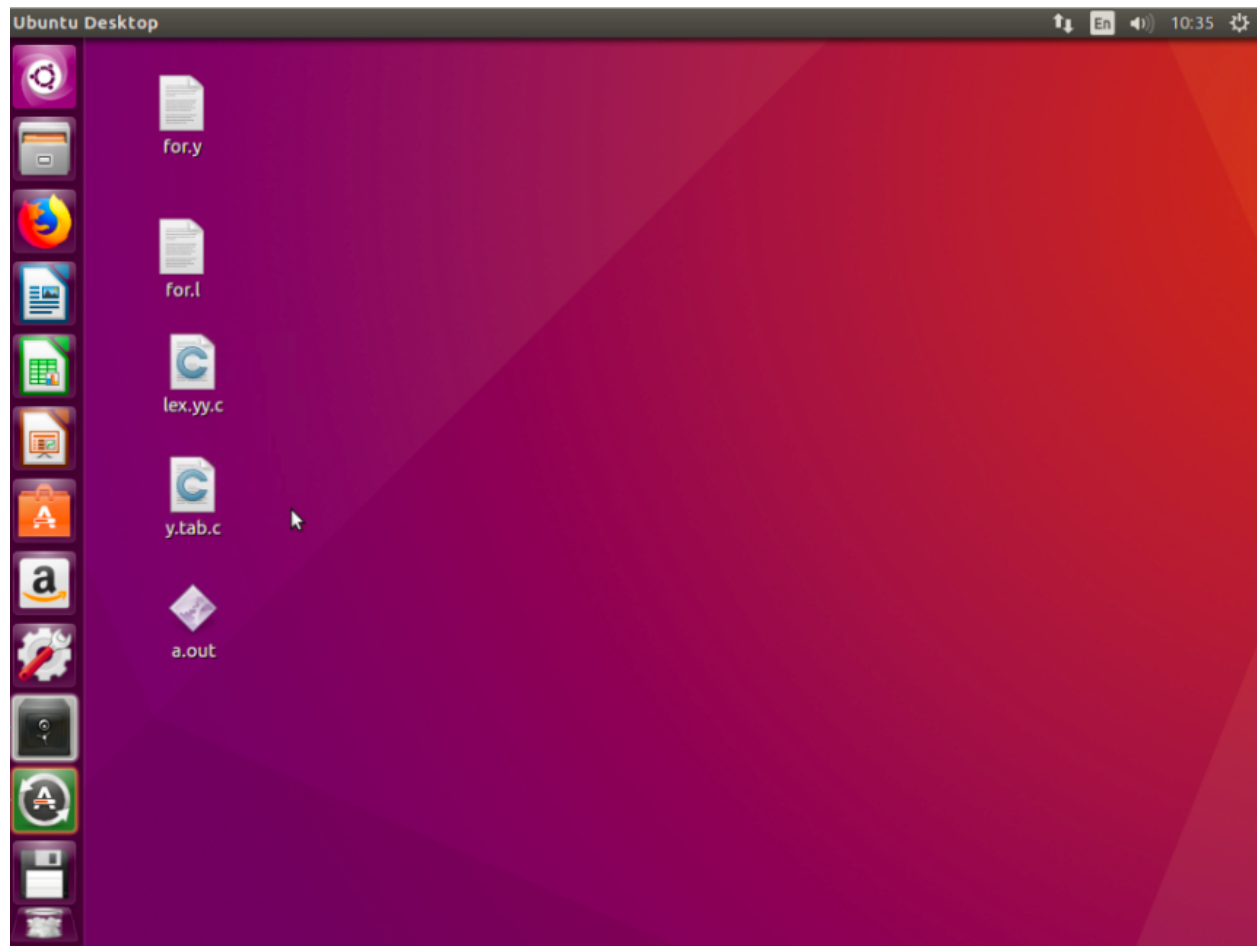
int main()
{
printf("Enter the expression:\n");
yyparse();
}
```

```
Text Edit | File | Edit | View | Search | Tools | Documents | Help
fory (/Desktop) - gedit

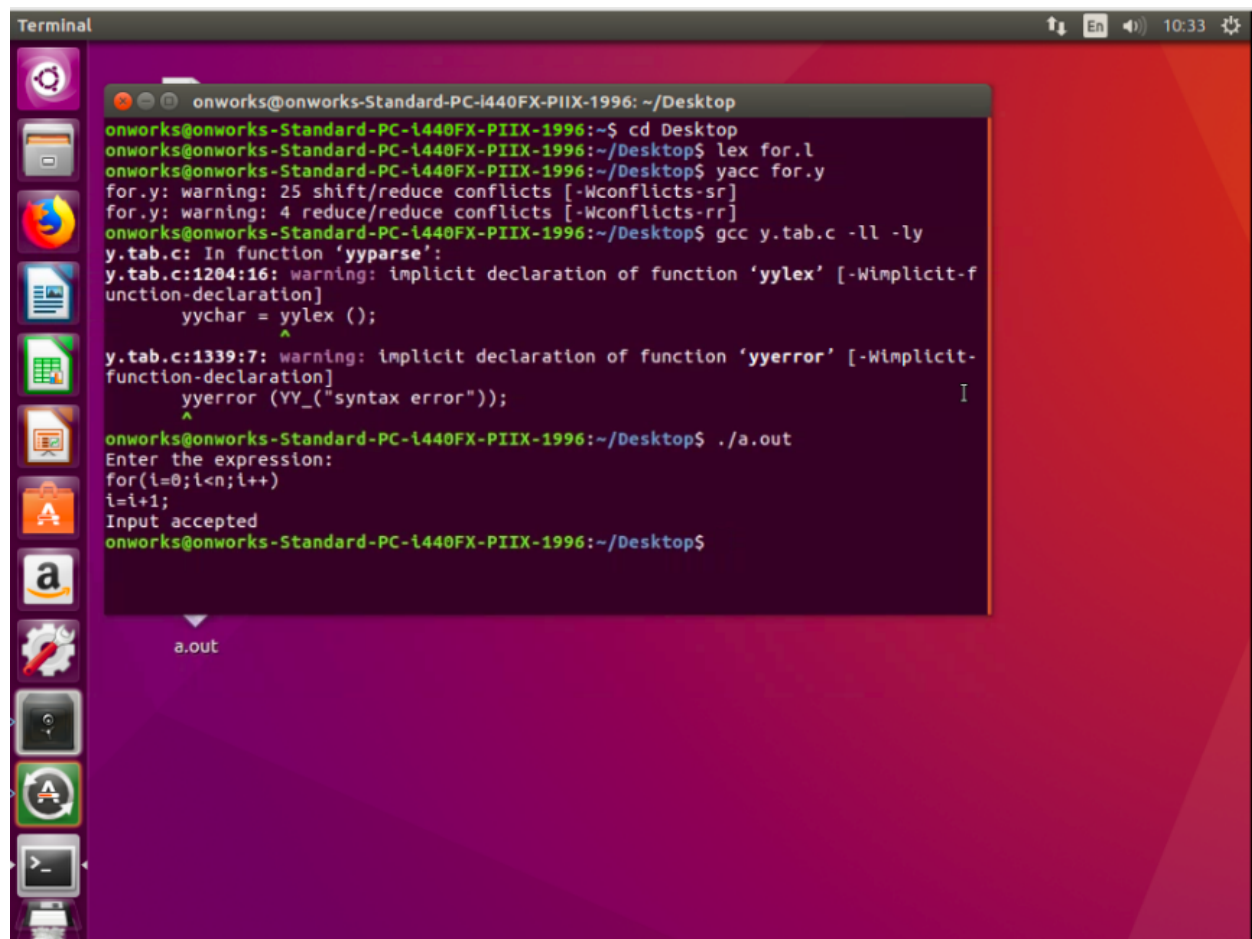
E      : ID '=' E
      : E '+' E
      : E '-' E
      : E '*' E
      : E '/' E
      : E '<' E
      : E '>' E
      : E LE E
      : E GE E
      : E EQ E
      : E NE E
      : E OR E
      : E AND E
      : E '+' '+'
      : E '-' '-'
      : ID
      : NUM
      :
E2     : E '<' E
      : E '>' E
      : E LE E
      : E GE E
      : E EQ E
      : E NE E
      : E OR E
      : E AND E
      :
%%

#include "lex.yy.c"
int main()
{
printf("Enter the expression:\n");
yyparse();
}
```

## LEX and YACC PROGRAM FILES



## OUTPUT



```
Terminal
onworks@onworks-Standard-PC-i440FX-PIIX-1996: ~/Desktop
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cd Desktop
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~/Desktop$ lex for.l
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~/Desktop$ yacc for.y
for.y: warning: 25 shift/reduce conflicts [-Wconflicts-sr]
for.y: warning: 4 reduce/reduce conflicts [-Wconflicts-rr]
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~/Desktop$ gcc y.tab.c -ll -ly
y.tab.c: In function 'yyparse':
y.tab.c:1204:16: warning: implicit declaration of function 'yylex' [-Wimplicit-f
unction-declaration]
    yychar = yylex ();
                  ^
y.tab.c:1339:7: warning: implicit declaration of function 'yyerror' [-Wimplicit-
function-declaration]
    yyerror (YY_("syntax error"));
          ^
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~/Desktop$ ./a.out
Enter the expression:
for(i=0;i<n;i++)
i=i+1;
Input accepted
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~/Desktop$
```