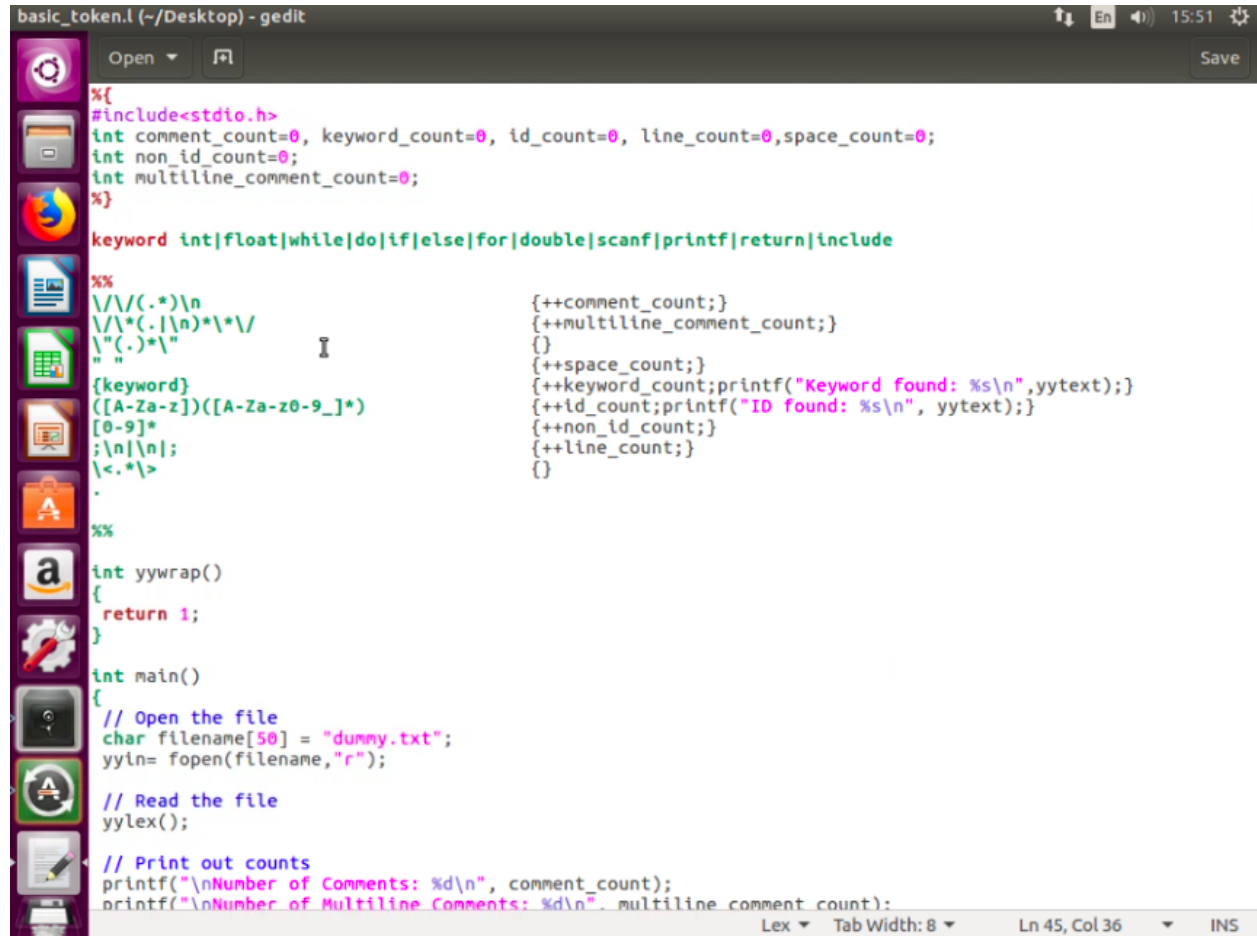


Name: Arundarasi Rajendran

PRN:18070122081

Batch: C3

CODE OF TOKENIZER PROGRAM IN LEX



```
basic_token.l (~/.Desktop) - gedit
%{
#include<stdio.h>
int comment_count=0, keyword_count=0, id_count=0, line_count=0,space_count=0;
int non_id_count=0;
int multiline_comment_count=0;
}%

keyword int|float|while|do|if|else|for|double|scanf|printf|return|include

%%
\\/(.*)\n                                {++comment_count;}
\\/*(.|\n)*\\/*                          {++multiline_comment_count;}
\"(.)*\"                                  {}
\" \"                                     {++space_count;}
{keyword}                                {++keyword_count;printf("Keyword found: %s\n",yytext);}
([A-Za-z])([A-Za-z0-9_]*)                {++id_count;printf("ID found: %s\n", yytext);}
[0-9]*                                   {++non_id_count;}
;\\n\\n|\\n                                {++line_count;}
\\<.*\\>                                  {}
.                                         .
%%

int yywrap()
{
return 1;
}

int main()
{
// Open the file
char filename[50] = "dummy.txt";
yyin= fopen(filename,"r");

// Read the file
yylex();

// Print out counts
printf("\nNumber of Comments: %d\n", comment_count);
printf("\nNumber of Multiline Comments: %d\n", multiline_comment_count);
}
```

Lex Tab Width: 8 Ln 45, Col 36 INS

```
basic_token.l (~/.Desktop) - gedit
[0-9]*          {++non_id_count;}
;\n|\n|;        {++line_count;}
\<.*\>         {}
.
%%
int yywrap()
{
    return 1;
}
int main()
{
    // Open the file
    char filename[50] = "dummy.txt";
    yyin= fopen(filename,"r");

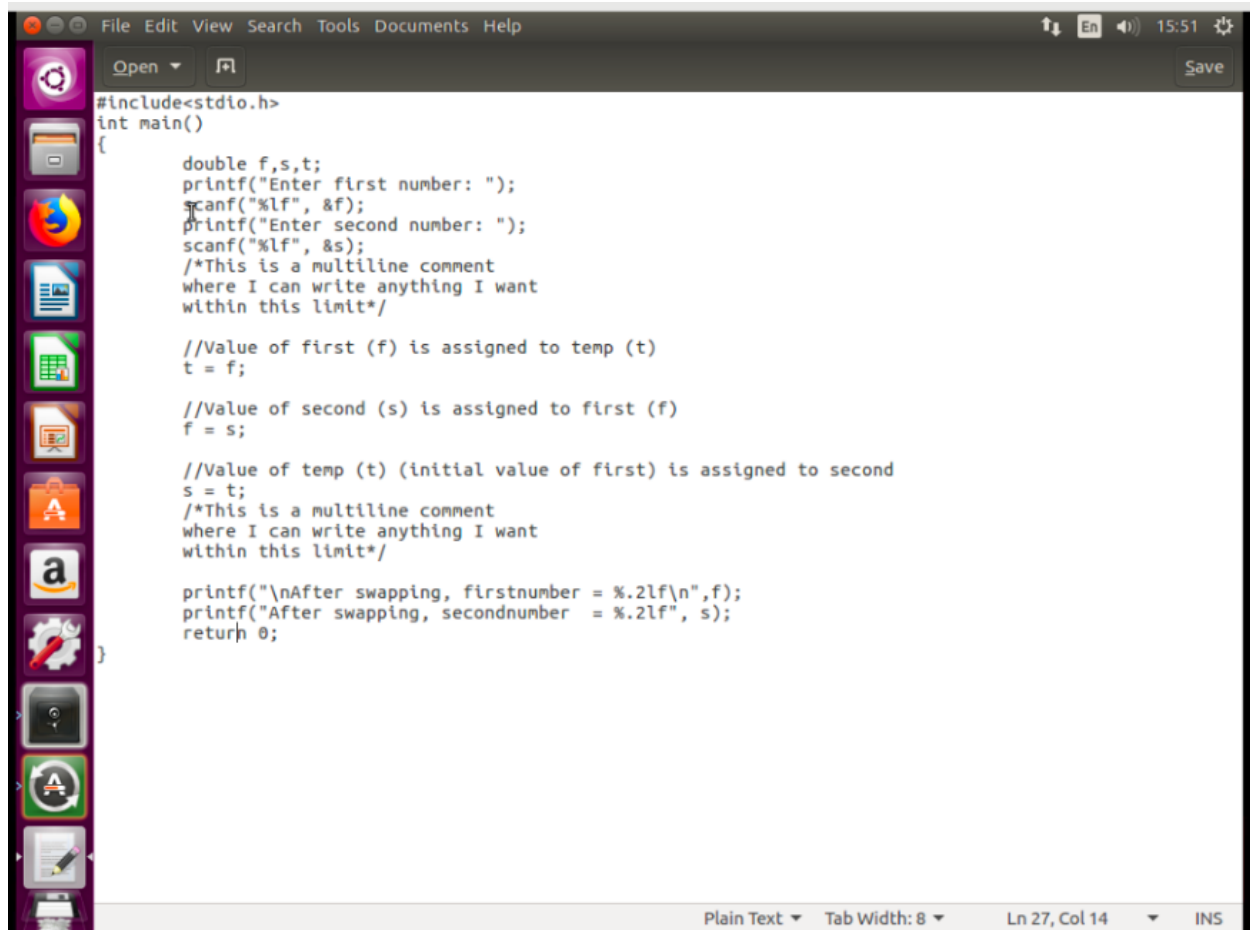
    // Read the file
    yylex();

    // Print out counts
    printf("\nNumber of Comments: %d\n", comment_count);
    printf("\nNumber of Multiline Comments: %d\n", multiline_comment_count);
    printf("\nNumber of Keywords: %d\n", keyword_count);
    printf("\nNumber of Identifiers: %d\n", id_count);
    printf("\nNumber of Words: %d\n", id_count+non_id_count);
    printf("\nNumber of Whitespaces: %d\n", space_count);
    printf("\nNumber of Lines: %d\n", line_count);

    return 0;
}

Lex  Tab Width: 8  Ln 45, Col 36  INS
```

CODE OF INPUT PROGRAM



The screenshot shows a code editor window with a menu bar (File, Edit, View, Search, Tools, Documents, Help) and a toolbar with 'Open' and 'Save' buttons. The code is written in C and implements a swap function using a temporary variable 't'. The code includes a multiline comment and uses printf and scanf for input/output. The status bar at the bottom indicates 'Plain Text', 'Tab Width: 8', 'Ln 27, Col 14', and 'INS'.

```
#include<stdio.h>
int main()
{
    double f,s,t;
    printf("Enter first number: ");
    scanf("%lf", &f);
    printf("Enter second number: ");
    scanf("%lf", &s);
    /*This is a multiline comment
    where I can write anything I want
    within this limit*/

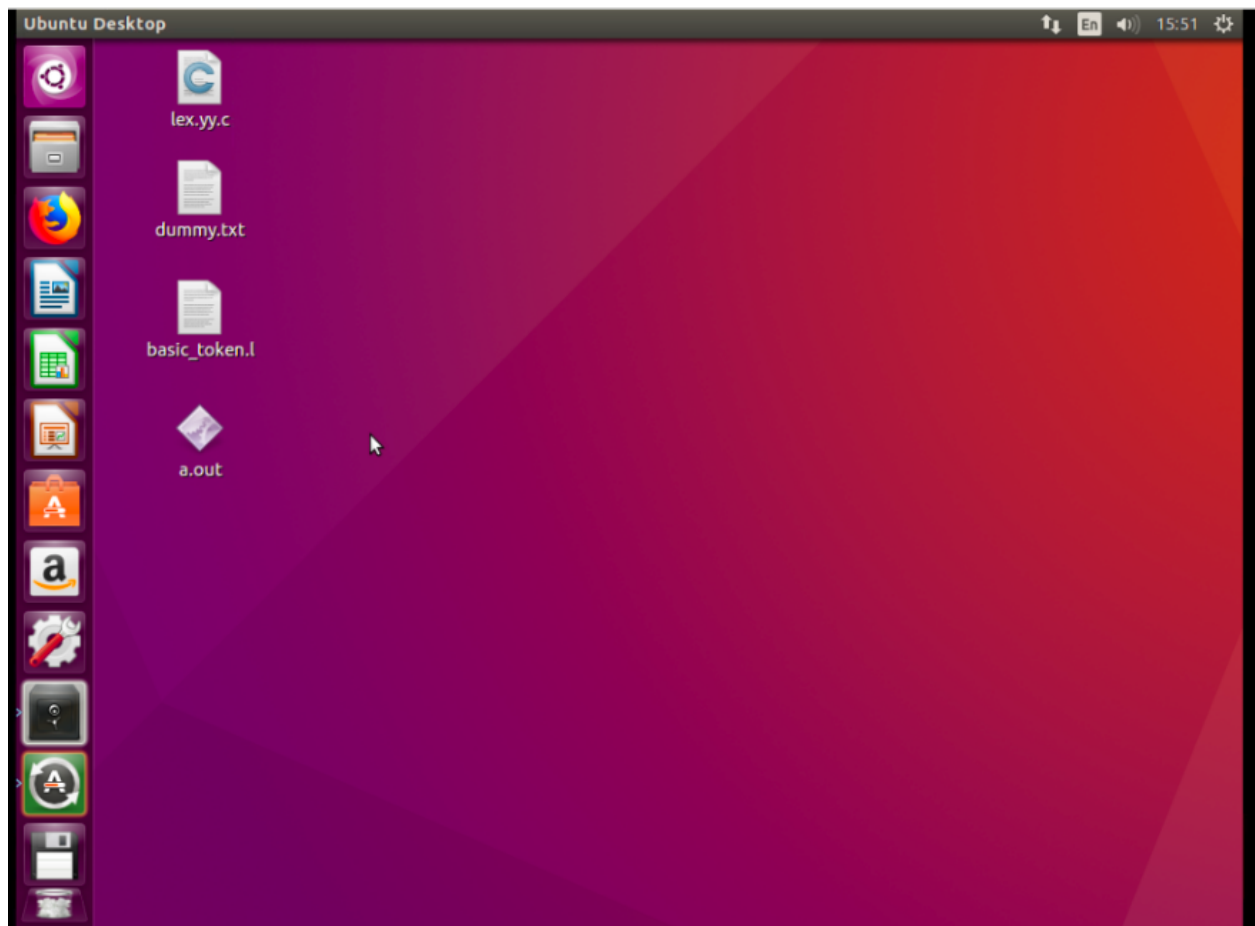
    //Value of first (f) is assigned to temp (t)
    t = f;

    //Value of second (s) is assigned to first (f)
    f = s;

    //Value of temp (t) (initial value of first) is assigned to second
    s = t;
    /*This is a multiline comment
    where I can write anything I want
    within this limit*/

    printf("\nAfter swapping, firstnumber = %.2lf\n",f);
    printf("After swapping, secondnumber = %.2lf", s);
    return 0;
}
```

TOKENIZER PROGRAM LEX FILES



OUTPUT OF PROGRAM

```
onworks@onworks-Standard-PC-l440FX-PIIX-1996: ~/Desktop
onworks@onworks-Standard-PC-l440FX-PIIX-1996:~$ cd Desktop
onworks@onworks-Standard-PC-l440FX-PIIX-1996:~/Desktop$ lex basic_token.l
onworks@onworks-Standard-PC-l440FX-PIIX-1996:~/Desktop$ gcc lex.yy.c
onworks@onworks-Standard-PC-l440FX-PIIX-1996:~/Desktop$ ./a.out < dummy.txt
Keyword found: include
Keyword found: int
ID found: main
Keyword found: double
ID found: f
ID found: s
ID found: t
Keyword found: printf
Keyword found: scanf
ID found: f
Keyword found: printf
Keyword found: scanf
ID found: s
Keyword found: printf
ID found: f
Keyword found: printf
ID found: s
Keyword found: return
Number of Comments: 0
Number of Multiline Comments: 1
Number of Keywords: 10
Number of Identifiers: 8
Number of Words: 9
Number of Whitespaces: 6
Number of Lines: 15
onworks@onworks-Standard-PC-l440FX-PIIX-1996:~/Desktop$
```