

## EXP:1-LEX PROGRAM FOR CAPITAL WORDS

LEX CODE :

```
%{  
  
    #include<stdio.h>  
  
}%  
  
%%  
[A-Z]+[\t\n ] { printf("%s",yytext); }  
.  
;  
%%  
Int yywrap(){}  
int main( )  
{  
    printf("Enter the input string:\n");  
    yylex();  
}
```

OUTPUT:

```
Command Prompt - a
Microsoft Windows [Version 10.0.26100.2894]
(c) Microsoft Corporation. All rights reserved.

C:\Users\prave>set path=C:\Program Files (x86)\GnuWin32\bin

C:\Users\prave>flex cap.l.txt

C:\Users\prave>set path=C:\Program Files (x86)\MinGW\bin

C:\Users\prave>gcc lex.yy.c

C:\Users\prave>a
Enter the input string:
HELLO
HELLO
HELLO
HELLO
BYE BYE
BYE BYE
```

EXP:2-LEX PROGRAM FOR EMAIL VALID OR NOT

%{

%}

%%

```
[a-z.0-9_]+@[a-z]+".com"|"." { printf("it is valid");}
```

```
.+ { printf("it is not valid");}
```

```
%%
```

```
int yywrap(){}
```

```
int main()
```

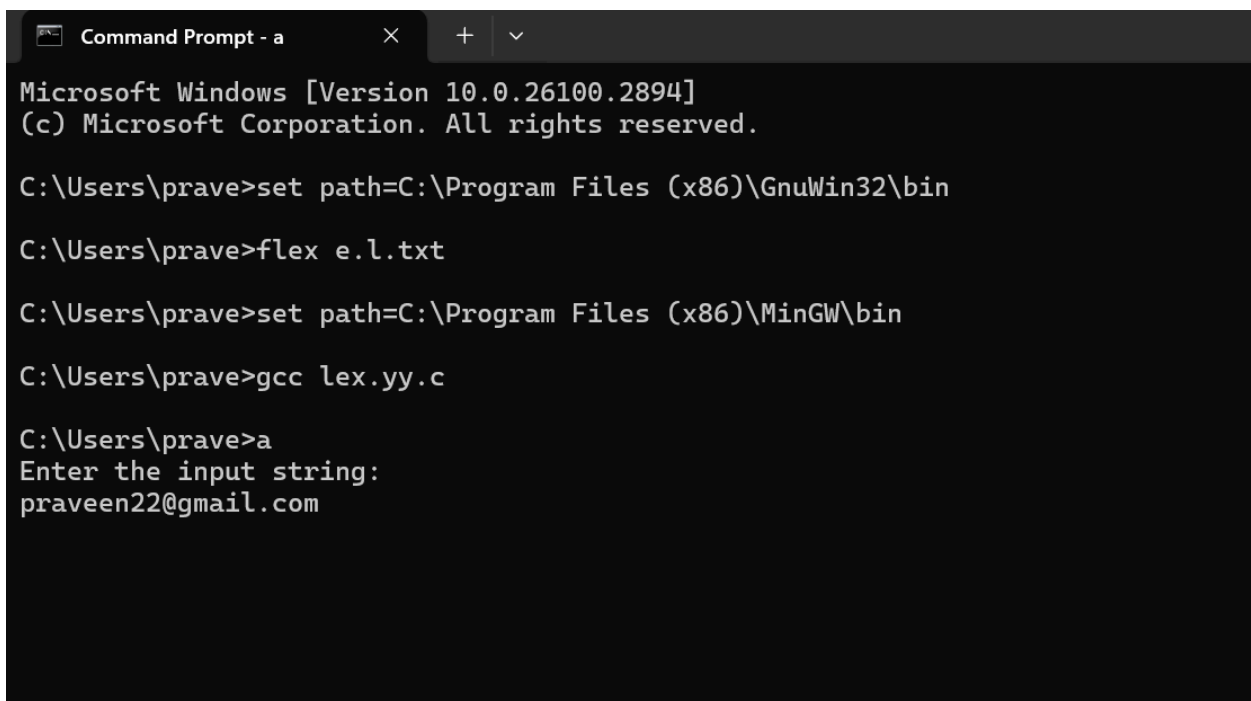
```
{
```

```
printf("enter the mail:");
```

```
yylex();
```

```
}
```

OUTPUT:



```
Microsoft Windows [Version 10.0.26100.2894]
(c) Microsoft Corporation. All rights reserved.

C:\Users\prave>set path=C:\Program Files (x86)\GnuWin32\bin

C:\Users\prave>flex e.l.txt

C:\Users\prave>set path=C:\Program Files (x86)\MinGW\bin

C:\Users\prave>gcc lex.yy.c

C:\Users\prave>a
Enter the input string:
praveen22@gmail.com
```

### EXP:3-LEX PROGRAM FOR MOBILE NUMBER VALID OR NOT

```
%{
```

```
%}
```

```
%%
```

```
[6-9][0-9]{9} {printf("\n mobile number valid\n");}
```

```
.+ {printf("\n mobile number invalid\n");}
```

```
%%
```

```
int yywrap(void){}
```

```
int main()
```

```
{
```

```
printf("\n enter the mobile number:");
```

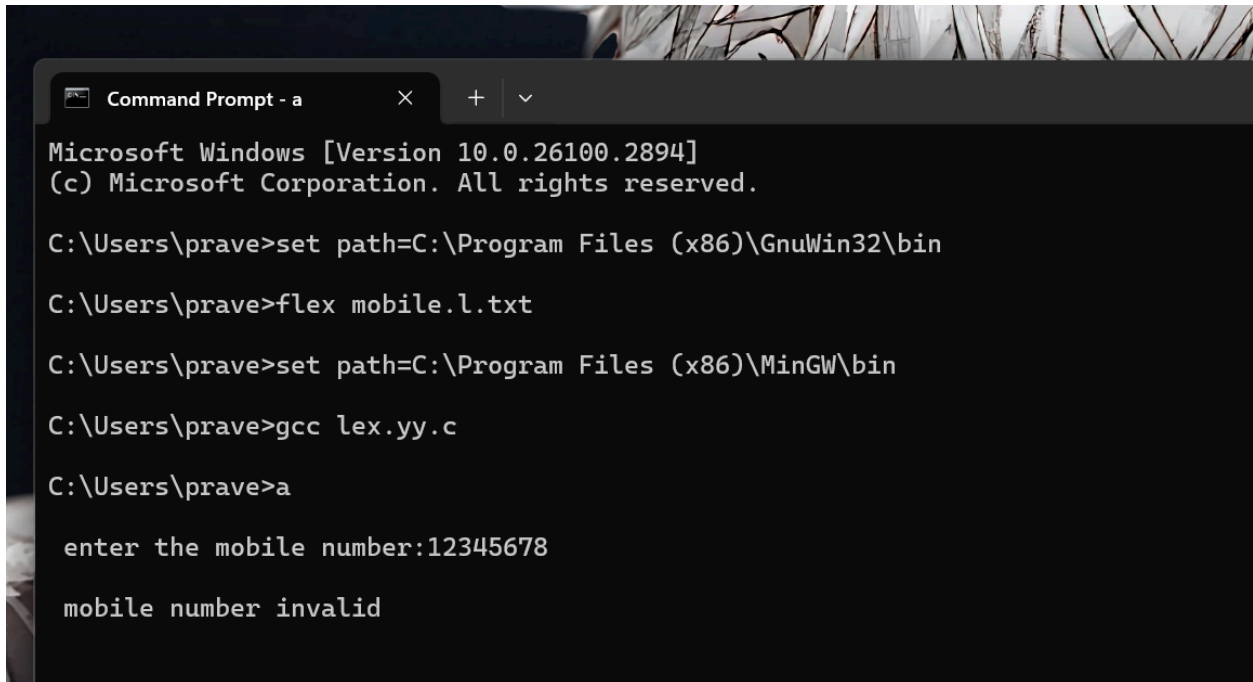
```
yylex();
```

```
printf("\n");
```

```
return 0;
```

```
}
```

OUTPUT:



```
Microsoft Windows [Version 10.0.26100.2894]
(c) Microsoft Corporation. All rights reserved.

C:\Users\prave>set path=C:\Program Files (x86)\GnuWin32\bin

C:\Users\prave>flex mobile.l.txt

C:\Users\prave>set path=C:\Program Files (x86)\MinGW\bin

C:\Users\prave>gcc lex.yy.c

C:\Users\prave>a

enter the mobile number:12345678

mobile number invalid
```

EXP:4-LEX PROGRAM FOR COUNT COMMENT LINES

```
%{
#include<stdio.h>

int nc=0;

%}

%%

"/"[a-zA-Z0-9\n\t ]*"/" {nc++;}
```

```
"/"[a-zA-Z0-9\t ]*"\n" {nc++;}
```

```
%%
```

```
int yywrap( ){}
```

```
int main(int argc ,char* argv[])
```

```
{
```

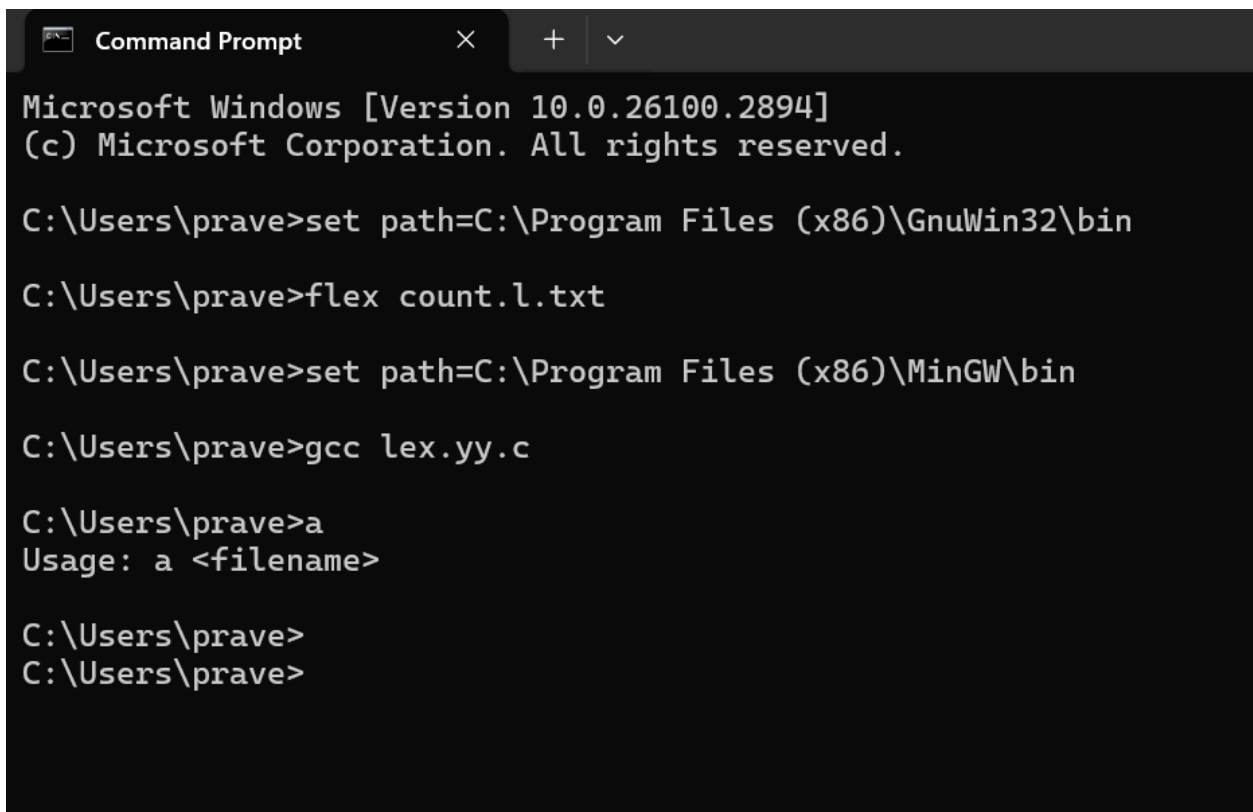
```
    yyin=fopen(argv[1],"r");
```

```
    yyout=fopen("output.c","w");
```

```
    yylex( );
```

```
    printf("The number of comment lines=%d\n",nc)}
```

OUTPUT:



```
Microsoft Windows [Version 10.0.26100.2894]
(c) Microsoft Corporation. All rights reserved.

C:\Users\prave>set path=C:\Program Files (x86)\GnuWin32\bin

C:\Users\prave>flex count.l.txt

C:\Users\prave>set path=C:\Program Files (x86)\MinGW\bin

C:\Users\prave>gcc lex.yy.c

C:\Users\prave>a
Usage: a <filename>

C:\Users\prave>
C:\Users\prave>
```

## EXP:5-LEX PROGRAM FOR COUNT OF POSITIVE NUMBER AND NEGATIVE NUMBER

```
%{  
  
#include<stdio.h>  
  
int nc=0;  
  
%}  
  
%%  
  
"/"[a-zA-Z0-9\n\t ]*"/" {nc++;}  
  
"//[a-zA-Z0-9\t ]*"\n" {nc++;}  
  
%%  
  
int yywrap( ){}  
  
int main(int argc ,char* argv[])  
{  
  
    yyin=fopen(argv[1],"r");  
  
  
    yyout=fopen("output.c","w");  
  
    yylex( );  
  
    printf("The number of comment lines=%d\n",nc);  
  
}
```

OUTPUT”:

```
Command Prompt - a
Microsoft Windows [Version 10.0.26100.2894]
(c) Microsoft Corporation. All rights reserved.

C:\Users\prave>set path=C:\Program Files (x86)\GnuWin32\bin

C:\Users\prave>flex countpn.l.txt

C:\Users\prave>set path=C:\Program Files (x86)\MinGW\bin

C:\Users\prave>gcc lex.yy.c

C:\Users\prave>a
Enter numbers:
1
positive number = 1
```

EXP:6-LEX PROGRAM FOR COUNT OF POSITIVE NUMBER AND NEGATIVE NUMBER

```
%{
int positive_no = 0, negative_no = 0;
%}

%%

^-[0-9]+ {negative_no++;
           printf("negative number = %s\n",yytext);}

[0-9]+ {positive_no++;
        printf("positive number = %s\n",yytext);}
```



%%

int yywrap(){}

int main()

{

yylex();

printf ("number of positive numbers = %d,"

        "number of negative numbers = %d\n",

        positive\_no, negative\_no);

return 0;

}

OUTPUT

```
Command Prompt - a
Microsoft Windows [Version 10.0.26100.2894]
(c) Microsoft Corporation. All rights reserved.

C:\Users\prave>set path=C:\Program Files (x86)\GnuWin32\bin

C:\Users\prave>flex vowels.l.txt

C:\Users\prave>set path=C:\Program Files (x86)\MinGW\bin

C:\Users\prave>gcc lex.yy.c

C:\Users\prave>a
Enter the string of vowels and consonants:
hello world
vowel=
e
vowel
o
vowel
o
consonent
h
consonent
l
consonent
l
consonent
w
consonent
```

:

## EXP:7-.LEX PROGRAM FOR IDENTIFIER OR NOT

```
%{
```

```
#include<stdio.h>
```

```
%}
```

```
%%
```

```
[a-zA-Z][a-zA-Z0-9]+ { printf("\n%s is IDENTIFIER",  
yytext);}
```

```
.+ { printf("\n%s is NOT AN IDENTIFIER",yytext);}
```

```
%%
```

```
int yywrap(){}
```

```
int main()
```

```
{
```

```
    while( yylex());
```

```
}
```

```
C:\Users\prave\Documents\U  ×  +  ∨  
hello is IDENTIFIER  
123abc is NOT AN IDENTIFIER  
_varName is NOT AN IDENTIFIER  
x1y2 is IDENTIFIER  
@symbol is NOT AN IDENTIFIER  
  
-----  
Process exited after 0.1552 seconds with return value 0  
Press any key to continue . . .
```

## EXP:8-LEX PROGRAM FOR COUNT VOWELS AND CONSONENTS

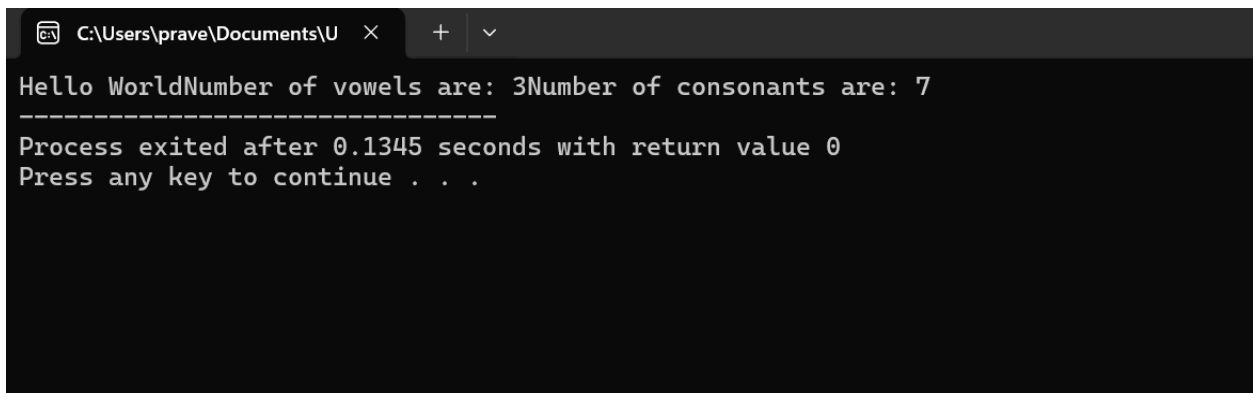
```
%{  
  
int vow_count=0;  
  
int const_count=0;  
  
%}  
  
%%  
  
[aeiouAEIOU] {vow_count++;}  
[a-zA-Z] {const_count++;}  
  
%%
```

```

int yywrap(){
}

int main()
{
printf("enter the string of vowels and consonents:");
yylex();
printf("number of vowels are:%d\n",vow_count);
printf("number of consonents are:%d\n",const_count);
return 0;
}

```



```

C:\Users\prave\Documents\U
Hello WorldNumber of vowels are: 3Number of consonants are: 7
-----
Process exited after 0.1345 seconds with return value 0
Press any key to continue . . .

```

## EXP:9-LEX PROGRAM FOR ADD LINE NUMBER

```

%{
#include<stdio.h>

int ln=0;

```

```
%}
```

```
%%
```

```
. * {ln++; fprintf(yyout, "\n%d:%s", ln, yytext);}
```

```
%%
```

```
int yywrap(){}
```

```
int main()
```

```
{
```

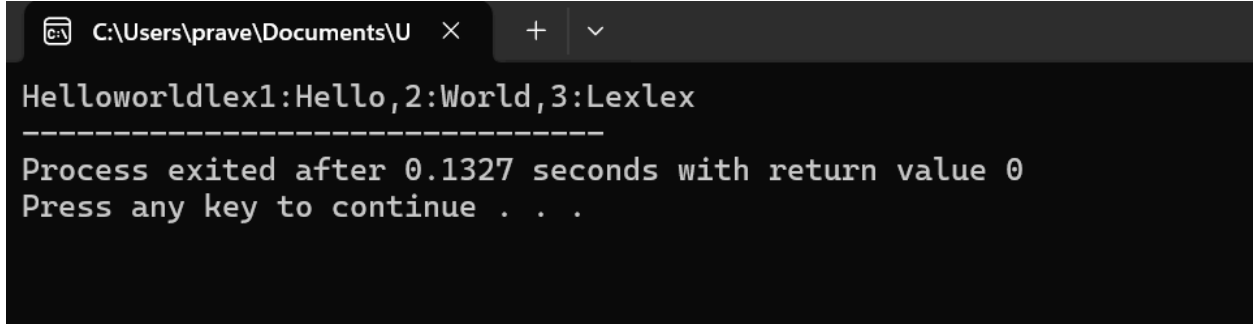
```
yyin=fopen("simple.txt", "r");
```

```
yyout=fopen("out.txt", "w");
```

```
yylex();
```

```
return 0;
```

```
}
```

A screenshot of a Windows command prompt window. The title bar shows the file path "C:\Users\prave\Documents\U" and standard window controls. The command prompt displays the output of a Lex program: "Helloworldlex1:Hello,2:World,3:Lexlex" followed by a line of dashes. Below this, it says "Process exited after 0.1327 seconds with return value 0" and "Press any key to continue . . .".

```
C:\Users\prave\Documents\U > Helloworldlex1:Hello,2:World,3:Lexlex
-----
Process exited after 0.1327 seconds with return value 0
Press any key to continue . . .
```

## EXP:10-LEX PROGRAM FOR COMMENT OR NOT

```
%{
```

```
#include<stdio.h>
```

```
int ln=0;
```

```
%}
```

```
%%
```

```
.* {ln++; fprintf(yyout,"\n%d:%s",ln,yytext);}
```

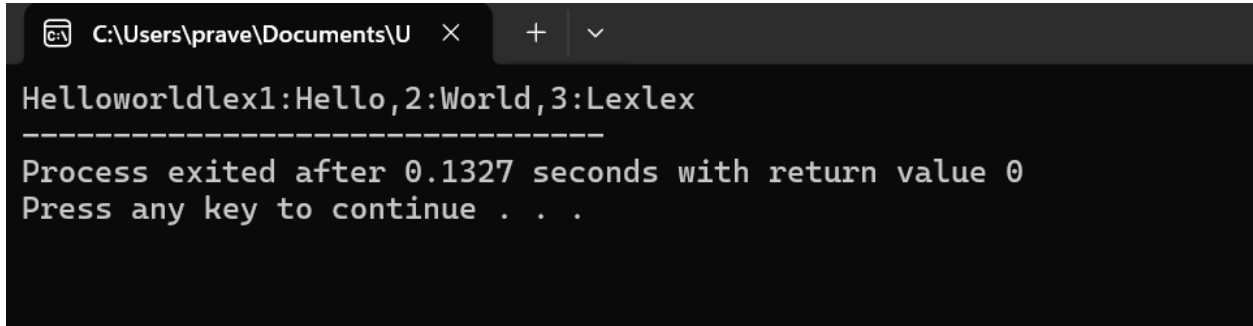
```
%%
```

```
int yywrap(){}
```

```

int main()
{
yyin=fopen("simple.txt","r");
yyout=fopen("out.txt","w");
yylex();
return 0;
}

```



```

C:\Users\prave\Documents\U
Helloworldlex1:Hello,2:World,3:Lexlex
-----
Process exited after 0.1327 seconds with return value 0
Press any key to continue . . .

```

## EXP:11-LEX PROGRAM FOR DIGIT OR NOT

```

%{
#include<stdio.h>

%}

%%

[0-9]+|[0-9]*\.[0-9]+ { printf("\n%s is DIGIT", yytext);}

```



```
.+ { printf("\n%s is NOT A DIGIT",yytext);}
```

```
%%
```

```
int yywrap(){}
```

```
int main()
```

```
{
```

```
while( yylex());
```

```
}
```

EXPT-12:LEX PROGRAM FOR MACROS AND HEADER FILES

```
{
```

```
int nmacro, nheader;
```

```
}
```

```
%%
```

```
^#define { nmacro++; }
```

```
^#include { nheader++; }
```

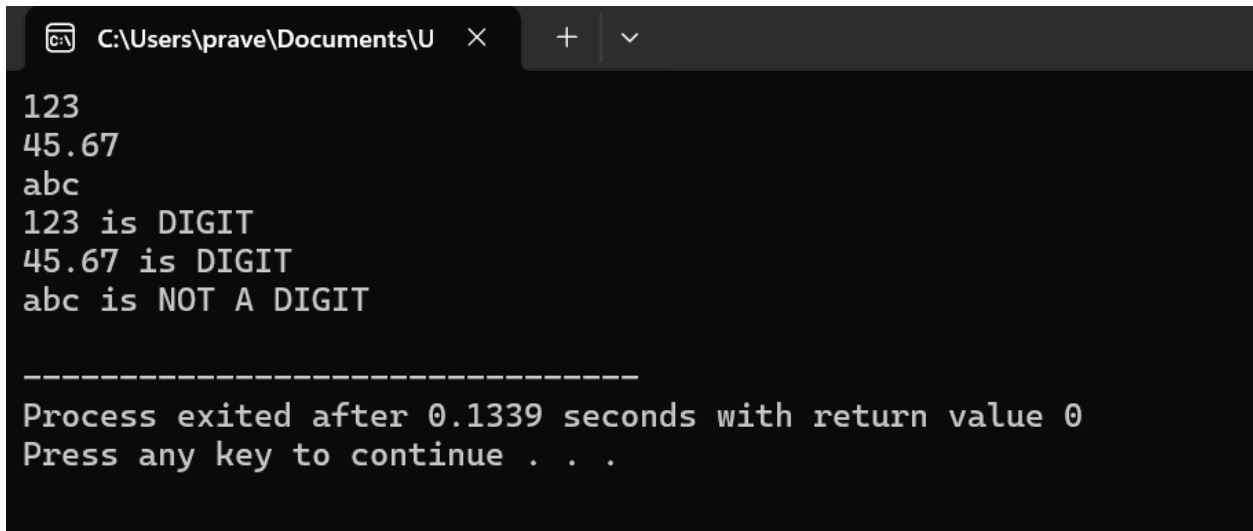
```
%%
```

```
int yywrap(void) {
```

```
return 1;
```

```
}
```

```
int main() {  
    yylex();  
    printf("Number of macros defined = %d\n", nmacro);  
    printf("Number of header files included = %d\n", nheader);  
}
```



```
C:\Users\prave\Documents\U  ×  +  ∨  
123  
45.67  
abc  
123 is DIGIT  
45.67 is DIGIT  
abc is NOT A DIGIT  
  
-----  
Process exited after 0.1339 seconds with return value 0  
Press any key to continue . . .
```