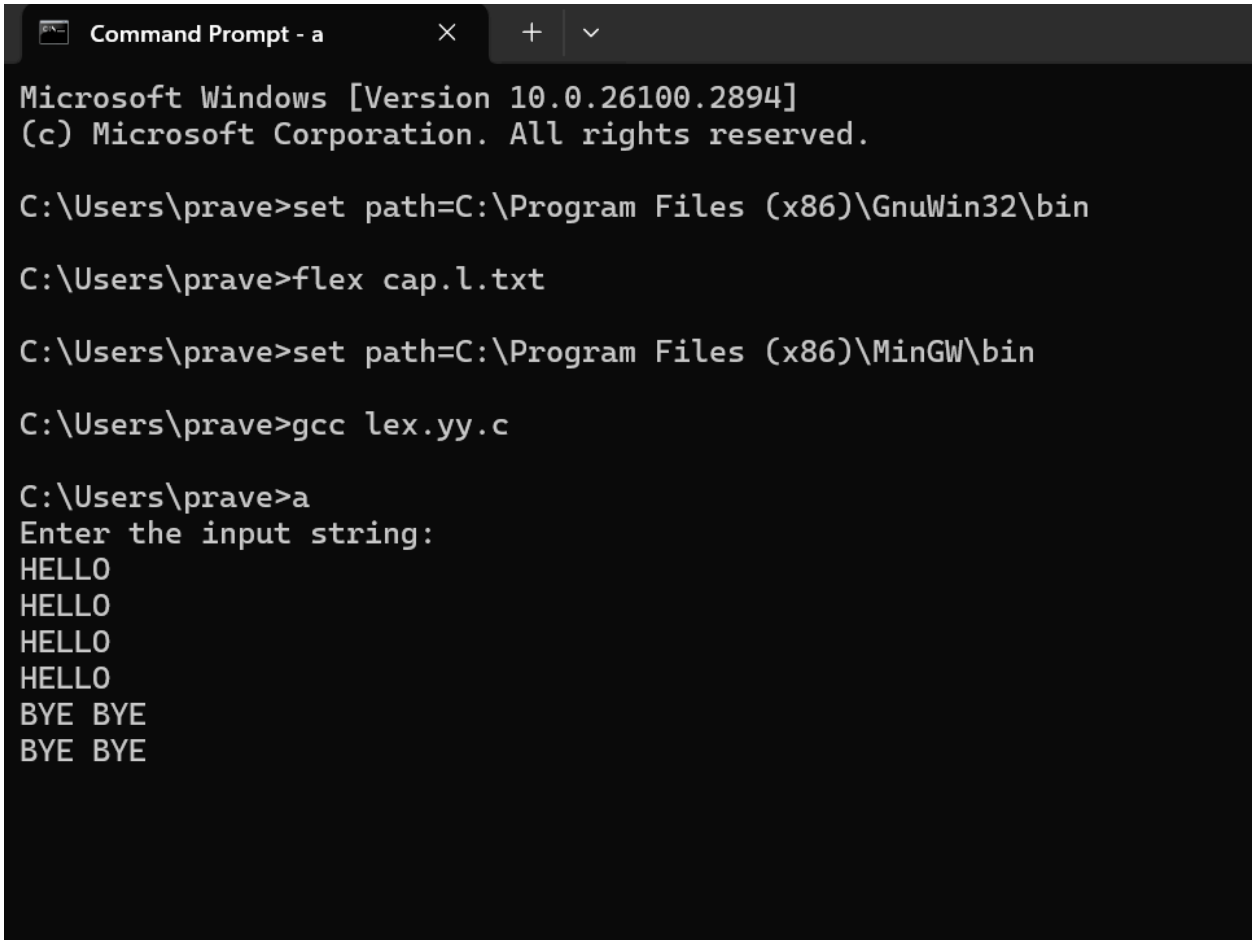
EXP:1-LEX PROGRAM FOR CAPITAL WORDS

LEX CODE :

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


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

OUTPUT:

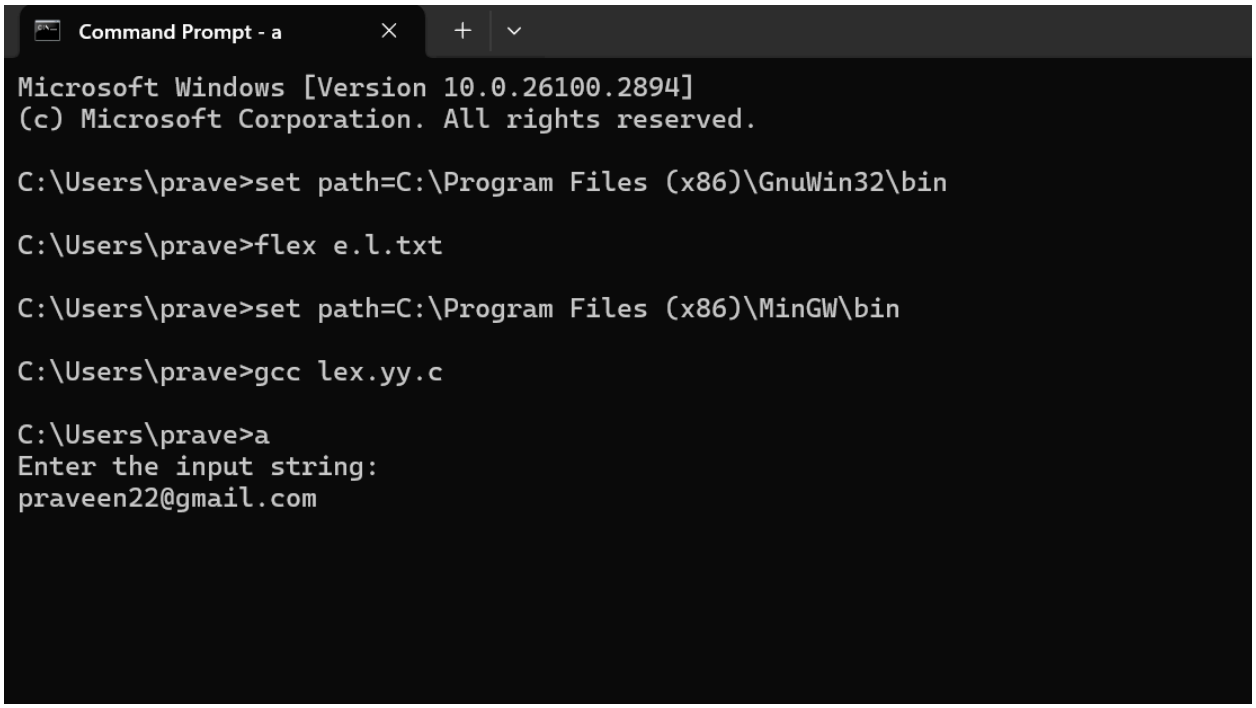


EXP:2-LEX PROGRAM FOR EMAIL VALID OR NOT

```
%{

%}


%%
```

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

.+  { printf(“it is not valid”);}

%%

int yywrap(){}


int main()

{

printf("enter the mail:");

yylex();

}
```

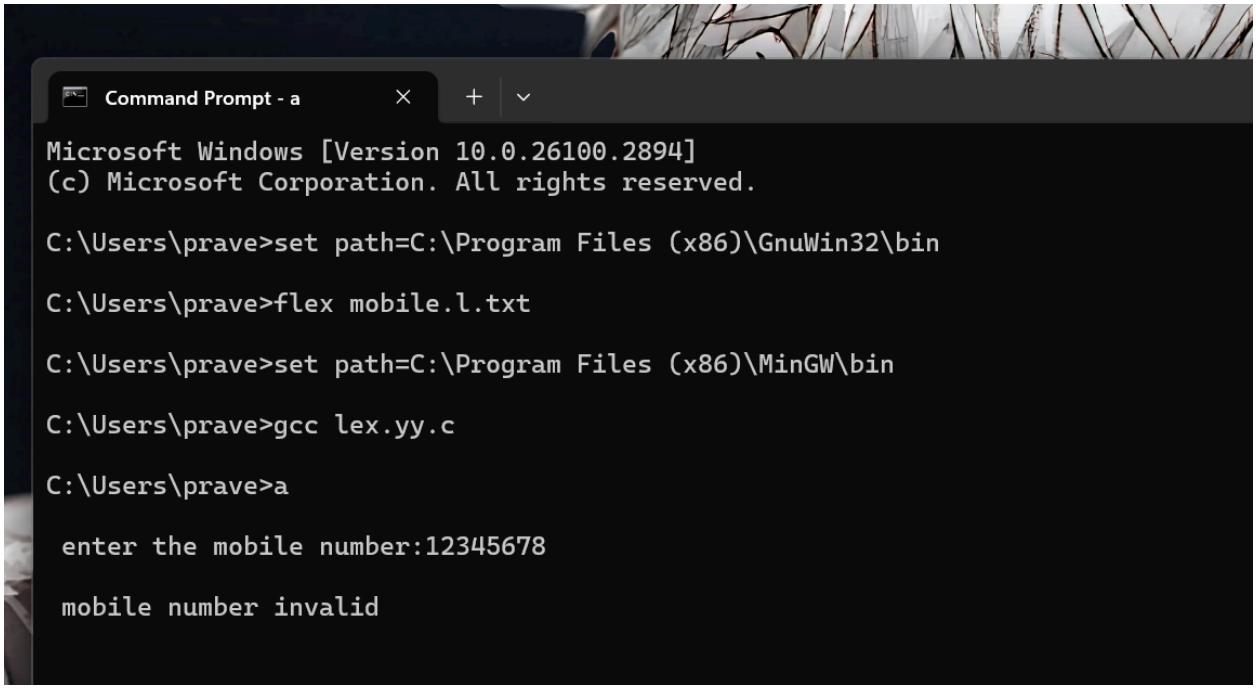
OUTPUT:



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:

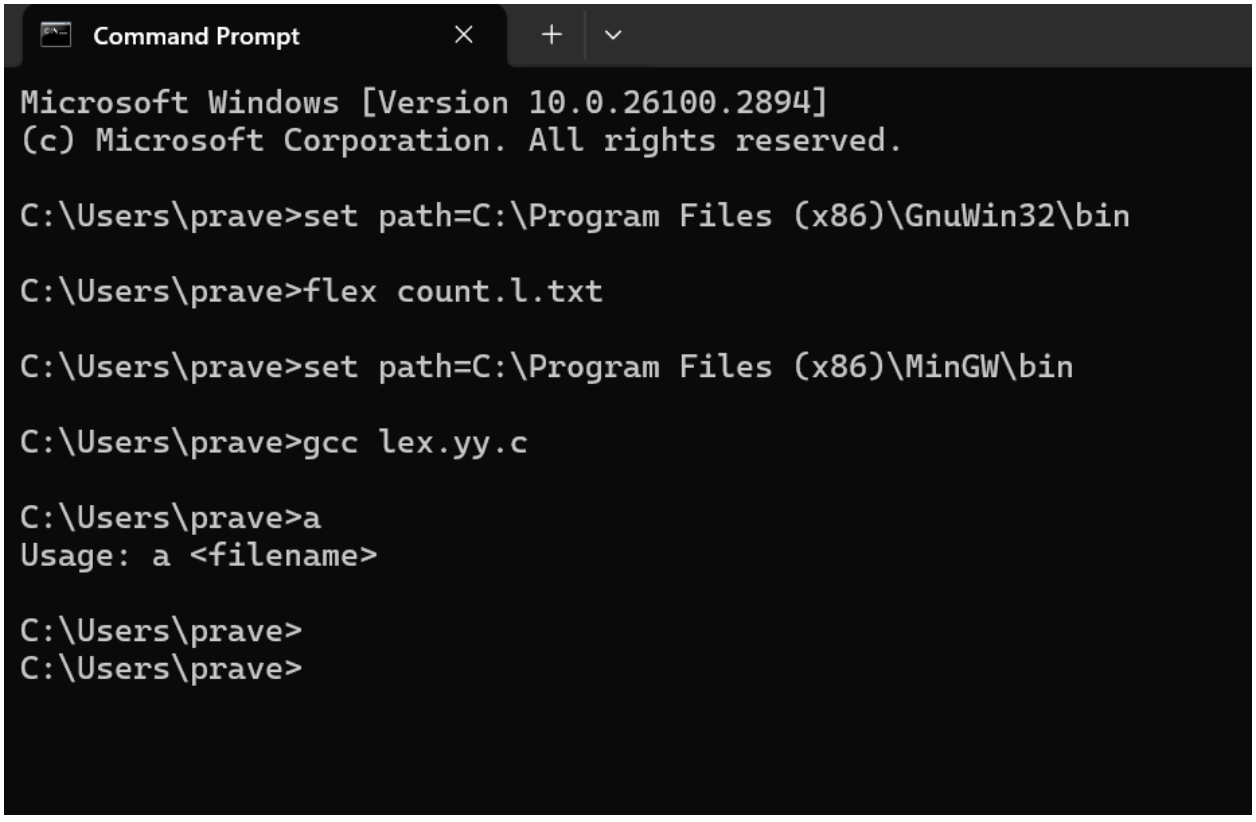


EXP:4-LEX PROGRAM FOR COUNT COMMENT LINES

```
%{
#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)}
```

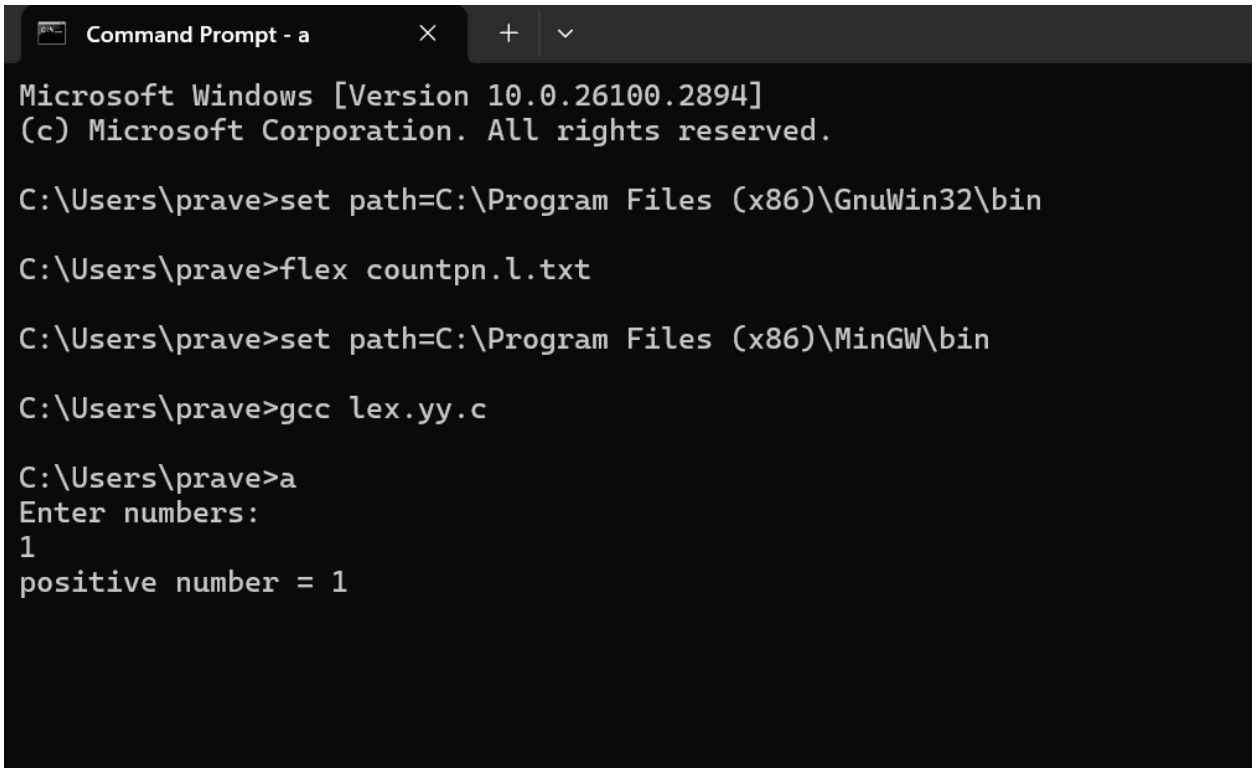
OUTPUT:



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);
}
```

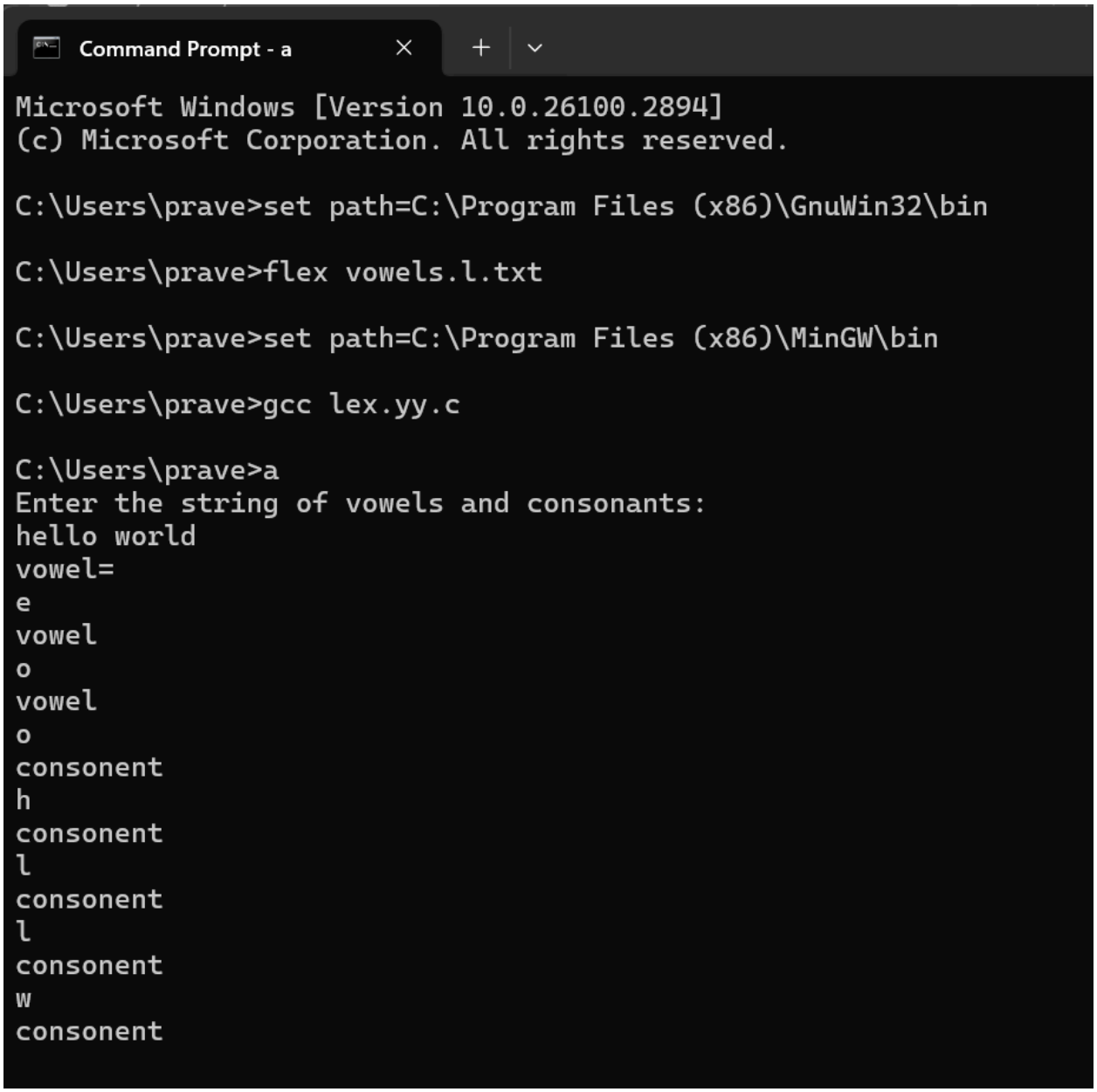
OUTPUT":



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

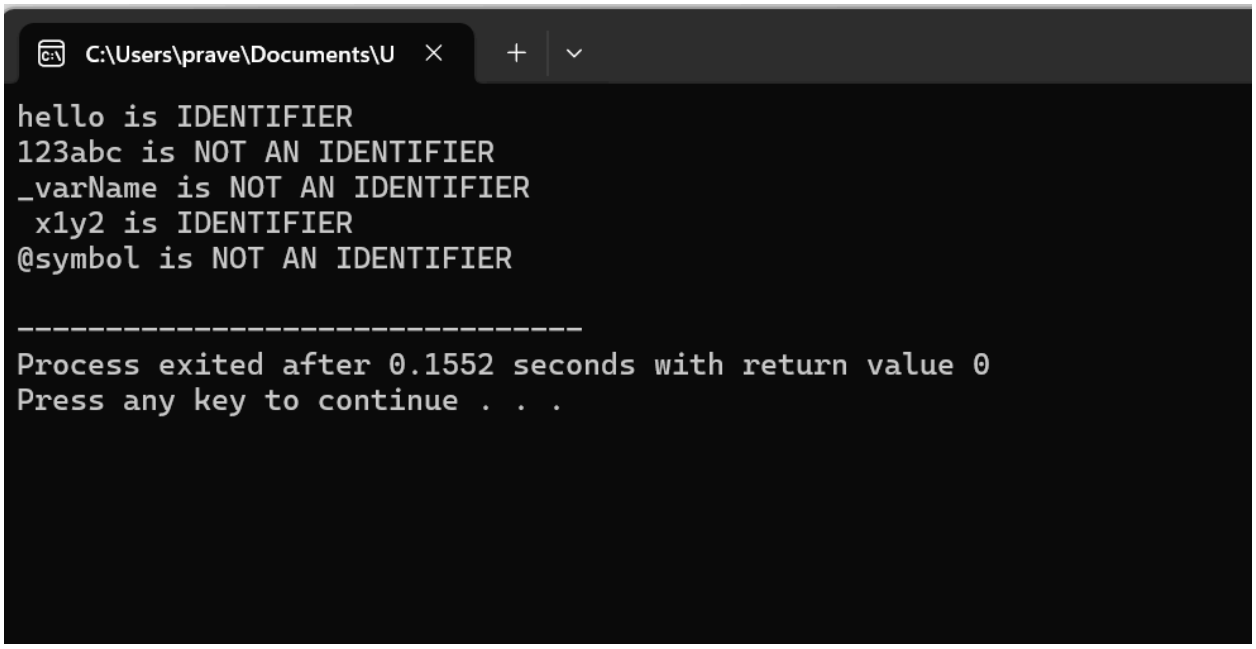
```
%{
int positive_no = 0, negative_no = 0;
%}

%%
^[-][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

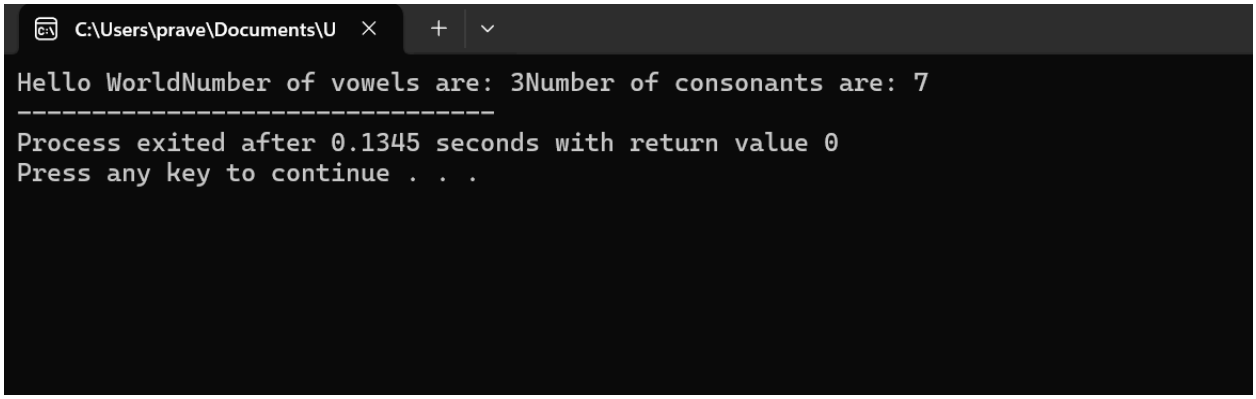
```
%{
#include<stdio.h>
%}

%%

[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());
}
```



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;
}
```

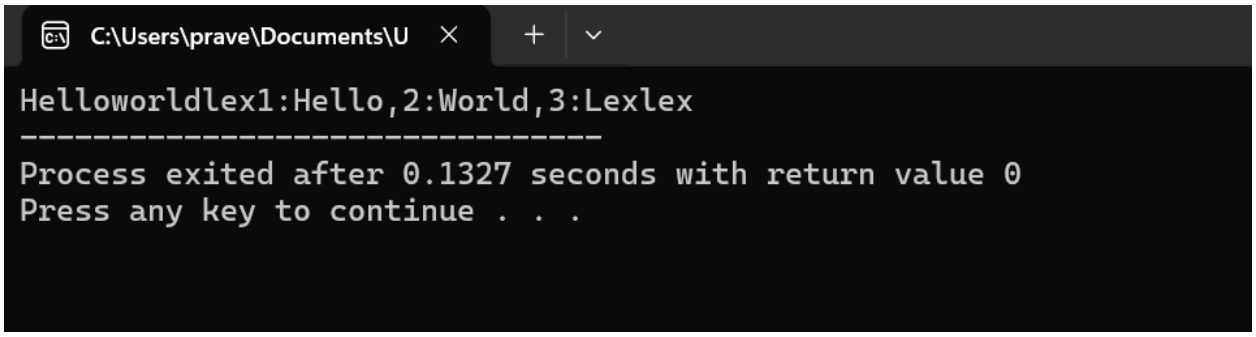


EXP:9-LEX PROGRAM FOR ADD LINE NUMBER

```
%{
#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;
```

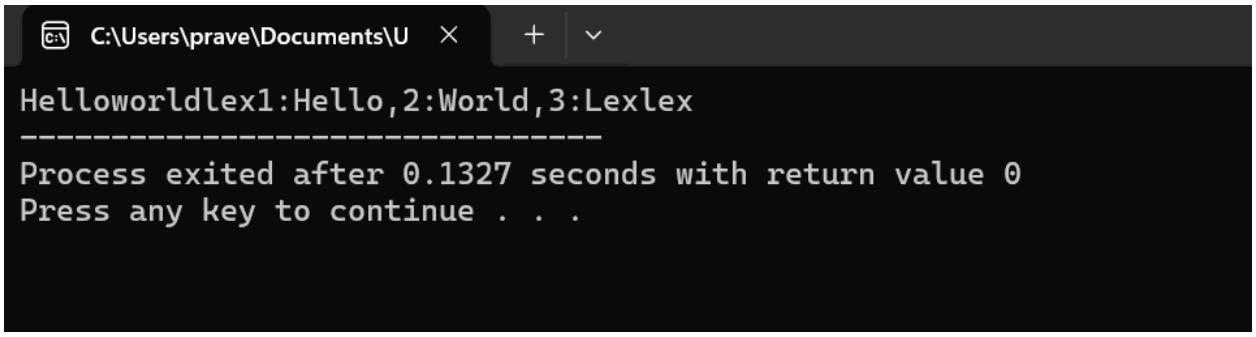
}



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;
}
```



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);
}
```