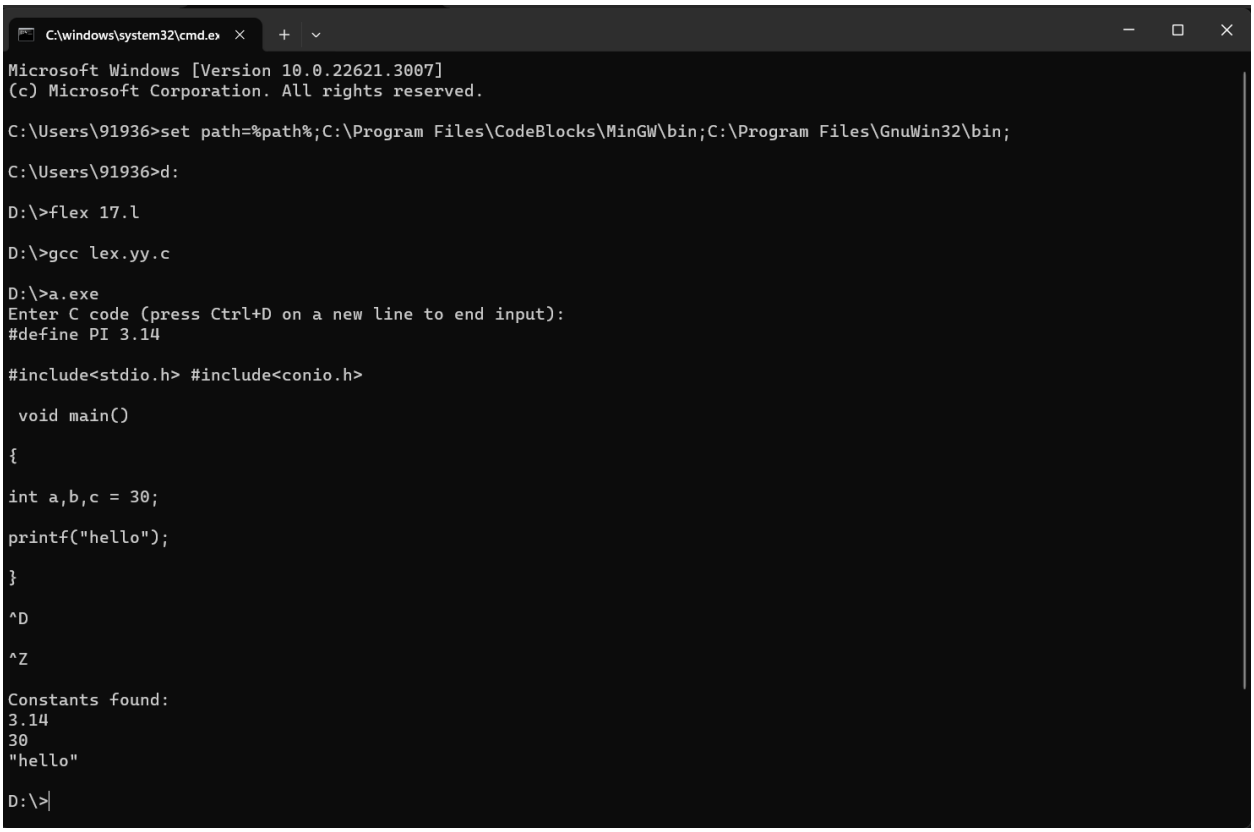
17. Write a LEX program to print all the constants in the given C source program file.

Input Source Program: (sample.c)

```
#define PI 3.14
#include<stdio.h> #include<conio.h>
  void main()
  {
  int a,b,c = 30;
  printf("hello");
}
```

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

#define MAX_CONSTANTS 100
char constants[MAX_CONSTANTS][256];
int constCount = 0;

void addConstant(const char *constant) {
   if (constCount < MAX_CONSTANTS) {
      snprintf(constants[constCount], sizeof(constants[constCount]), "%s", constant);
      constCount++;
   }
}
%}

%%

[0-9]+          { addConstant(yytext); }
[0-9]+\.[0-9]+  { addConstant(yytext); }
"\""([^"\\]|\\.)*"\"" { addConstant(yytext); }
```

```
.               ; /* Ignore other characters */

%%

int main() {
    printf("Enter C code (press Ctrl+D on a new line to end input):\n");

    yylex();

    printf("\nConstants found:\n");
    for (int i = 0; i < constCount; i++) {
        printf("%s\n", constants[i]);
    }

    return 0;
}

int yywrap() {
    return 1; // indicate that there is no more input
}
```


C:\windows\system32\cmd.e×
Microsoft Windows [Version 10.0.22621.3007]
(c) Microsoft Corporation. All rights reserved.
C:\Users\91936>set path=%path%;C:\Program Files\CodeBlocks\MinGW\bin;C:\Program Files\GnuWin32\bin;
C:\Users\91936>d:
D:\>flex 17.l
D:\>gcc lex.yy.c
D:\>a.exe
Enter C code (press Ctrl+D on a new line to end input):
#define PI 3.14
#include<stdio.h> #include<conio.h>
void main()
{
int a,b,c = 30;
printf("hello");
}
^D
^Z
Constants found:
3.14
30
"hello"
D:\>