

## lang.lxi

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

int line = 1;
%}

%option noyywrap

IDENTIFIER      \#([A-Za-z]+)
INTEGER_CONSTANT \-?[1-9][0-9]*|0
STRING_CONSTANT  \"[a-zA-Z0-9]+\\"
CHARACTER_CONSTANT '[a-zA-Z0-9]\''

%%

"+"|"-"|"*"|"/"|"%"|"="|"<="|"=="|"!="|">="|">"      {printf("OPERATOR -> %s\n",
yytext);}

"{"|"}"|"("|")"|"["|"]"|" ":"|";"|" ,"              {printf("SEPARATOR -> %s\n", yytext);}

"program"|"input"|"output"|"int"|"char"|"str"|"given"|"then"|"otherwise"|"aslongas"|"r
epeat"          {printf("RESERVED WORD -> %s\n", yytext);}

{IDENTIFIER}      {printf("IDENTIFIER -> %s\n", yytext);}

{INTEGER_CONSTANT} {printf("INTEGER CONSTANT -> %s\n", yytext);}
```

```
{STRING_CONSTANT}      {printf("STRING CONSTANT -> %s\n", yytext);}
{CHARACTER_CONSTANT}    {printf("CHARACTER CONSTANT -> %s\n", yytext);}
```

```
[ \t]+      {}
```

```
[\n]+  {line++;}
```

```
. {printf("Error for token %s on line %d!\n", yytext, line); exit(1);}
```

```
%%
```

```
void main(int argc, char** argv) {
```

```
    if (argc > 1)
```

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

```
    else
```

```
        yyin = stdin;
```

```
    yylex();
```

```
}
```

## demo

1. Save the file lang.lxi in a folder
2. Open the folder and enter cmd
3. Run the command: *flex lang.lxi*
4. Run the command: *gcc lex.yy.c*
5. Run the command: *a.exe p1.txt*