

```

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

/*definitions*/
digit    [0-9]
letter   [a-zA-Z]
integer  {digit}+
float_number {digit}+"."{digit}+
real_number {integer}"E"[-+]?{integer}
identifier {letter}({letter}|{digit})*

/*rules*/
%%
"for"|"while"|"if"|"else" { printf("Keyword: %s\n", yytext); }
"++"|"--"|"+"|"- " { printf("Operator: %s\n", yytext); }
{integer}      { printf("Literal (INT): %s\n", yytext); }
{float_number} { printf("Literal (FLOAT): %s\n", yytext); }
{real_number}  { printf("Literal (REAL): %s\n", yytext); }
";"|"|"\"|\"\\n|\"\\t|\"(|\"|\"{|\"|\"}|" " { printf("Separator: %s\n", yytext); }
{identifier}   { printf("Identifier: %s\n", yytext); }
.              { printf("Unrecognized token: %s\n", yytext); }
%%

/*user code function*/
int yywrap(){
int main(int argc, char *argv[]) {
    yyin = fopen(argv[1], "r");
    yylex();
    fclose(yyin);
    return 0;
}

```

```

lab@PC: ~/211210008_CompilerDesignLab/Lab3_290124
Separator: "
Separator: )
Separator: ;

^C
lab@PC:~/211210008_CompilerDesignLab/Lab3_290124$ flex q1.l
lab@PC:~/211210008_CompilerDesignLab/Lab3_290124$ gcc lex.yy.c
lab@PC:~/211210008_CompilerDesignLab/Lab3_290124$ ./a.out
printf("Hi Ahan 2024\n");
Identifier: printf
Separator: (
Separator: "
Identifier: Hi
Separator:
Identifier: Ahan
Separator:
Literal (INT): 2024
Separator: \n
Separator: "
Separator: )
Separator: ;

^C
lab@PC:~/211210008_CompilerDesignLab/Lab3_290124$

```