

# Compiler

## Lab 3: Jflex with scanner (Lexical analysis)

Write a lexical analyzer using JFLEX program which, given C programming sources as input, recognizes all the language elements (numerical constants, strings, keywords and comments) and produces as output an HTML file where each element results highlighted with a different color. All the input files must appear in a unique HTML file preceded by the name of the original source file. Note that in HTML colors are expressed with a “#” followed by three pairs of hexadecimal digits, each one represented by a fundamental component of the RGB tern (e.g. “#FF0000” is a bright red, “#0000FF” is blue and so on).

### Example:

Given the following input file (named test.c)

```
#include <stdio.h>
int main (int i)
{
    if (i==1) return 1;
    /* Comment is here */
    else return 0;
}
```

the HTML output will be:

```
<HTML> <BODY bgcolor="#FFFFFF">
<H2>main.c</H2>
<CODE> <FONT COLOR="#00FF00">#include &lt;stdio.h&gt;</FONT> <BR>
<FONT COLOR="#0000FF">int</FONT> main(
    <FONT COLOR="#0000FF">int</FONT> i) <BR> {<BR>
    <FONT COLOR="#0000FF">if</FONT> (i==
    <FONT COLOR="#FF0000">1</FONT>)
    <FONT COLOR="#0000FF">return</FONT>
    <FONT COLOR="#FF0000">1</FONT>;<BR>
    <FONT COLOR="#C0C0C0">/* Comment is here */ </FONT><BR>
    <FONT COLOR="#0000FF">else</FONT>
    <FONT COLOR="#0000FF">return</FONT>
    <FONT COLOR="#FF0000">0</FONT>;<BR> }<BR>
</CODE></BODY></HTML>
```