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| **CIS 675**  **Homework 2** | **Name:\_Nathan Hull\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |

Write a lexer for dot. dot is a part of the graphviz graph visualization software suite. It is designed to support directed graphs. It is a fairly sophisticated DSL, but we will consider only a subpart of it. You can find full information at www.graphviz.org. In particular, check out the [dot documentation](http://www.graphviz.org/pdf/dotguide.pdf) and the [grammar](http://www.graphviz.org/content/dot-language).

For this homework, design a lexer for a subset of dot that will support the following dot file:

digraph G {

main [shape=box]; /\* this is a comment \*/

main -> parse [weight=8];

parse -> execute;

main -> init [style=dotted];

main -> cleanup;

execute -> make\_string;

init -> make\_string;

main -> printf [style=bold,label="100 times"];

make\_string [label="make a\nstring"];

node [shape=box,style=filled,color=".7 .3 1.0"];

execute -> compare;

}

Turn in the source code for your lexer (any language you choose), and a screenshot showing you executing your lexer on the input file above (as well as the output). Your lexer should simply print out the list of tokens. So something like

DIGRAPH ID L\_BRACE ID L\_BRACKET...