Recap
What is a token?

Program fragment with atomic meaning.
How can we specify tokens?

With regular expressions.
How can we recognize tokens efficiently?

With DFAs.
Why is there a separate lexical analysis phase?

To simplify the following syntactical analysis phase.
Does an assembler need a lexical analysis phase?

Yes, it needs to recognize instructions, operands, and macros.
How do we get from a regular expression to a DFA?

Via an NFA.
Draw the NFA corresponding to the regular expression:

\texttt{abc}
Draw the NFA corresponding to the regular expression:

abc
Draw the NFA corresponding to the regular expression:

\[ a | 01 \]
Draw the NFA corresponding to the regular expression:

\[ a \lor 01 \]
Draw the NFA corresponding to the regular expression:

\[ x(yx)^*0 \]
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\[ x(yx)^*0 \]