Lexical Analysis

Lecture 3

Exercise
Consider the string **abbbaaacc**. Which of the following lexical specifications produces the tokenization: **ab/bb/a/acc**

Choose all that apply

- c*
- a\((b + c^*)\)
- ab
- b+
- b+
- ab*
- ab
- ac*
- ac*
Consider the string \texttt{abbbaacc}. Which of the following lexical specifications produces the tokenization: \texttt{ab/bb/a/acc}?

Choose all that apply:

- \(c^*\)
- \(a(b + c^*)\)
- \(ab\)
- \(b^+\)
- \(b^+\)
- \(b^+\)
- \(ab^*\)
- \(ac^*\)
- \(ac^*\)
Question?

Using the lexical specification below, how is the string “dictatorial” tokenized?

Choose all that apply

- dict (1)  ○ 1, 3
- dictator (2)  ○ 3
- [a-z]* (3)  ○ 4
- dictatorial (4)  ○ 2, 3
Using the lexical specification below, how is the string “dictatorial” tokenized?

Choose all that apply

- dict (1)
- dictator (2)
- [a-z]* (3)
- dictatorial (4)
Given the following lexical specification:

\[ a(ba)^* \]
\[ b^*(ab)^* \]
\[ abd \]
\[ d^+ \]

Which of the following statements is true?

Choose all that apply

- babad will be tokenized as: bab/a/d
- ababdddd will be tokenized as: abab/dddd
- dddabbabab will be tokenized as: ddd/a/bbabab
- ababddababa will be tokenized as: ab/abd/d/ababa
Given the following lexical specification:

\[
\begin{align*}
  &a(ba)^* \\
  &b^*(ab)^* \\
  &ab \\
  &d^+
\end{align*}
\]

Which of the following statements is true? Choose all that apply

- babad will be tokenized as: bab/a/d
- ababdddd will be tokenized as: abab/dddd
- dddabbababab will be tokenized as: ddd/a/bbabab
- ababddababa will be tokenized as: ab/abd/d/ababa
Question?

Given the following lexical specification:

\[(00)^*\]
\[01^+\]
\[10^+\]

Which strings are NOT successfully processed by this specification?

Choose all that apply

- 011110
- 01100100
- 01100110
- 01100110
- 0001101
Given the following lexical specification:

$$(00)^*$$

$$(01)^+$$

$$(10)^+$$

Which strings are NOT successfully processed by this specification?

Choose all that apply

- 011110
- 01100100
- 01100110
- 011001110
- 0001101
Which of the following regular expressions generate the same language as the one recognized by this NFA?

- $(000)^*(01)^+$
- $0(000)^*1(01)^*$
- $(000)^*(10)^+$
- $0(00)^*(10)^*$
- $0(000)^*(01)^*$

Choose all that apply.
Answer!

Which of the following regular expressions generate the same language as the one recognized by this NFA?

- $(000)^*(01)^+$
- $0(000)^*1(01)^*$
- $(000)^*(10)^+$
- $0(00)^*(10)^*$
- $0(000)^*(01)^*$
Question?

Which of the following automata are DFA? Choose all that apply.
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Question?

Which of the following automata are NFA? Choose all that apply
Answer!

Which of the following automata are NFA? Choose all that apply