

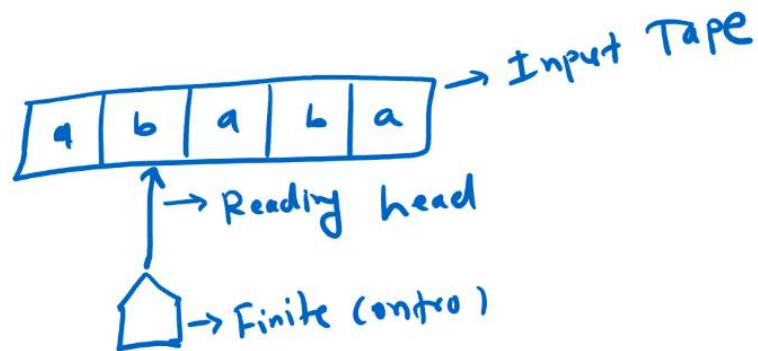
Dr. Balu L. Parne SVNIT is presenting

Microsoft Whiteboard



Finite Automaton Model :

Σ



11:35 AM | CS208 | AFL Theory Class | 18.01.2022 @11:30am



Dr. Balu L. Parne SVNIT

B108 OZA DHAIRYA MA...

B

B119 YASH SHAH SVNIT

B

B072 SHASHIKANT DAN...

B133 KAMBHAM KAVYA ...

B

B129 K SACHIN NAIK SV...

B

B117 NEELAV BHATIYA S...

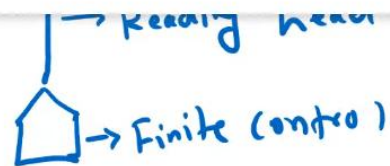
B B

28 others

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BP



Properties of Transition Function δ :

① $\delta(q, \epsilon) = q$

$\delta(q, aw) = \delta(\delta(q, a), w)$

\Rightarrow Transition diagram

\Rightarrow Transition Table



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B072 SHASHIKANT DAN...

B133 KAMBHAM KAVYA ...

B

B129 K SACHIN NAIK SV...

B

B117 NEELAV BHATIYA S...

B B

35 others

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→ Design a DFA which accepts only input
101 over the set $\{0,1\}$



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B108 OZA DHAIRYA MA...

B119 YASH SHAH SVNIT

B098 Neelagiri Vijay

B124 ANJALI SVNIT

B109 CH ADITHYA SVNIT

B117 NEELAV BHATIYA S...

43 others

You



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← accepts
→ Draw a DFA that recognizes the set all strings
with $\Sigma = \{a, b\}$ starting with prefix ab.
②



11:53 AM | CS208 | AFL Theory Class | 18.01.2022 @11:30am



Dr. Balu L. Parne SVNIT

B108 OZA DHAIRYA MA...

B

B119 YASH SHAH SVNIT

B124 ANJALI SVNIT

A

B081 ADITYA YADAV SV...

#CAMPUS4UG
B109 CH ADITHYA SVNIT

B

B096 SNEHARSH BELSA...

B B

44 others

You

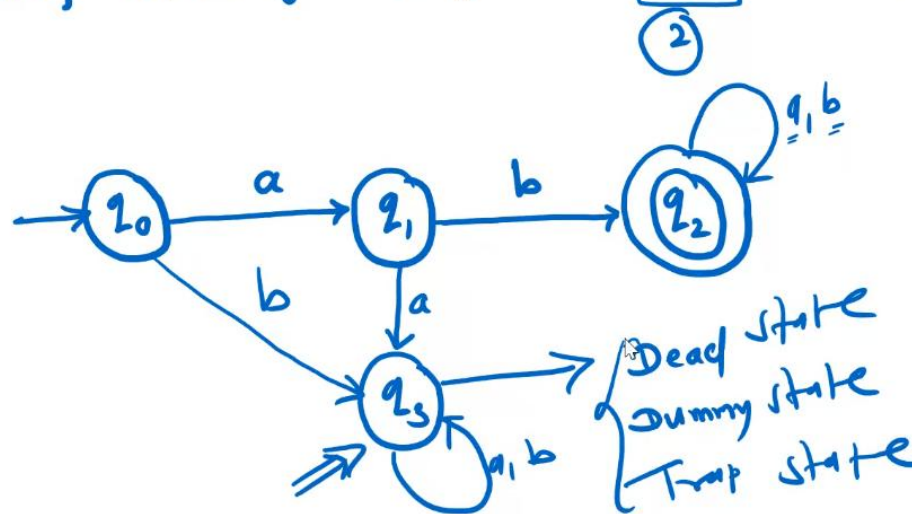


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→ Draw a DFA that recognizes the set all strings
with $\Sigma = \{a, b\}$ starting with prefix ab.

DFA
 $\begin{matrix} ab^*a \\ ab^*b \\ ab^*aa \\ ab^*ab \end{matrix}$



Dr. Balu L. Parne SVNIT

B108 OZA DHAIRYA MA...

B

B119 YASH SHAH SVNIT

B124 ANJALI SVNIT

A

B081 ADITYA YADAV SV...

B109 CH ADITHYA SVNIT

B

B096 SNEHARSH BELSA...

B B

45 others

You

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Handwritten notes on a Microsoft Whiteboard:

→ DFA can accept the empty string 'ε' iff

Initial state = Final/Accept state

$L = \{\epsilon\}$ →

Participant list:

- Dr. Balu L. Parne SVNIT
- B108 OZA DHAIRYA MA...
- B119 YASH SHAH SVNIT
- B124 ANJALI SVNIT
- B081 ADITYA YADAV SV...
- B109 CH ADITHYA SVNIT
- B096 SNEHARSH BELSA...
- 45 others
- You

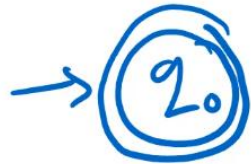
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→ DFA can accept

Initial state = Final/Accept state

$L = \{\epsilon\}$



$L = \{\epsilon, a\}$



Windows taskbar showing various application icons and system status (12:01 PM, 1/18/2022).

Zoom meeting controls: mute, video, chat, share screen, and other options.

Dr. Balu L. Parne SVNIT

B108 OZA DHAIRYA MA...

B119 YASH SHAH SVNIT

B124 ANJALI SVNIT

B081 ADITYA YADAV SV...

B109 CH ADITHYA SVNIT

B096 SNEHARSH BELSA...

44 others

You

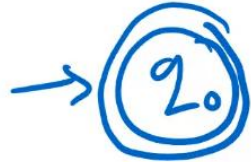
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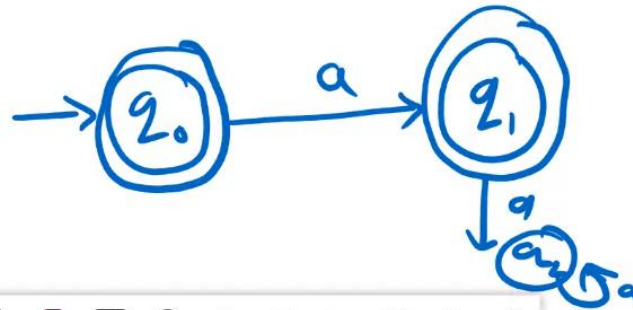
→ DFA can accept

Initial state = Final/Accept state

$L = \{\epsilon\}$



$L = \{\epsilon, a\}$



Windows taskbar showing system tray icons (network, volume, battery) and the time/date: 12:02 PM 1/18/2022.

Zoom meeting controls: mute, video, chat, share screen, and other options.

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B108 OZA DHAIRYA MA...

B

B119 YASH SHAH SVNIT

B124 ANJALI SVNIT

A

B081 ADITYA YADAV SV...

B109 CH ADITHYA SVNIT

B

B096 SNEHARSH BELSA...

B B

44 others

You

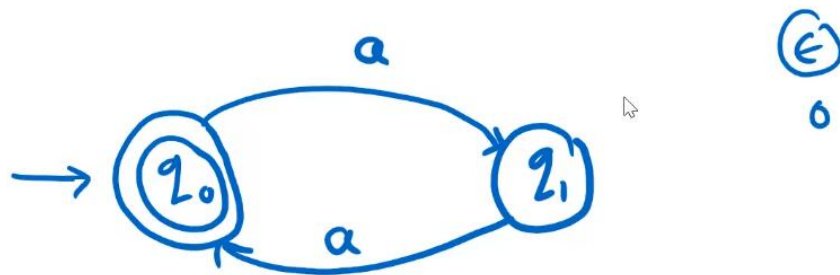
53

Zoom meeting controls: info, participants, chat, and other options.

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→ Design a DFA that accepts an even number
of a's over $\Sigma = \{a\}$.



52

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B119 YASH SHAH SVNIT

B117 NEELAV BHATIYA S...

B081 ADITYA YADAV SV...

B109 CH ADITHYA SVNIT

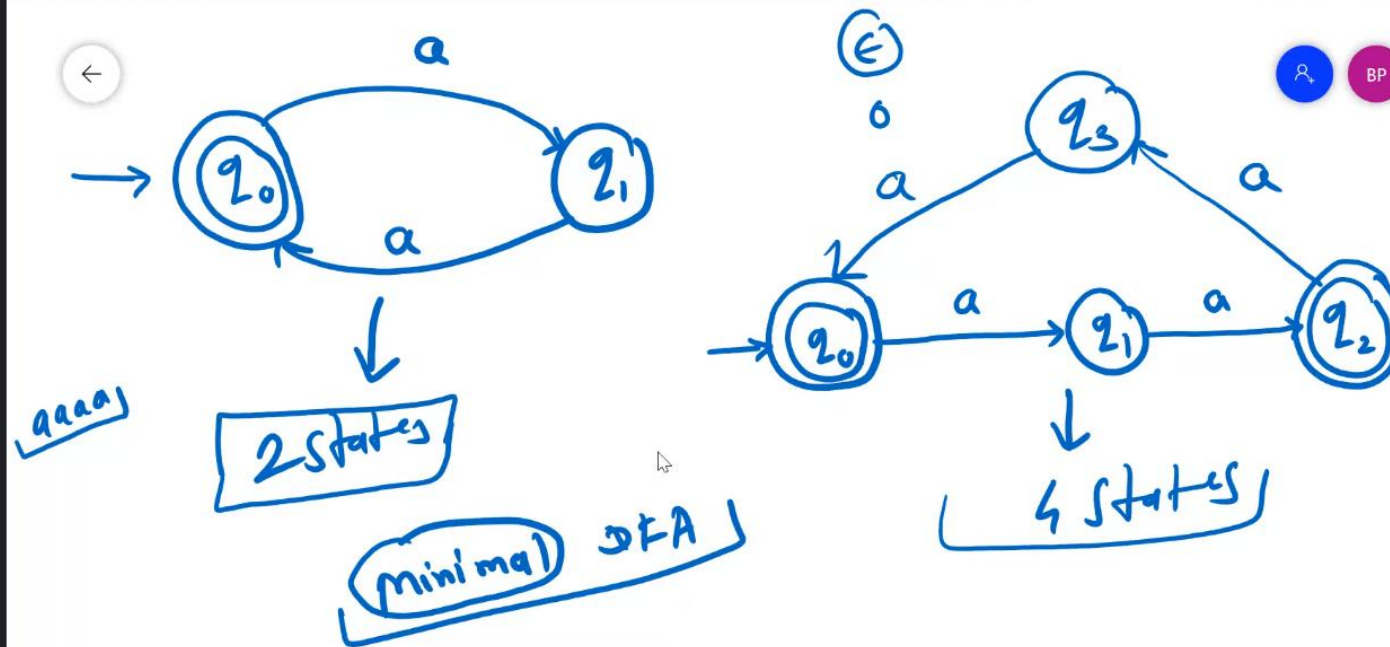
B096 SNEHARSH BELSA...

43 others

You

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B108 OZA DHAIRYA MA...

B

B119 YASH SHAH SVNIT

B110 KRISHNA PANDEY ...

A

B081 ADITYA YADAV SV...

B109 CH ADITHYA SVNIT

B

B096 SNEHARSH BELSA...

B B

43 others

You

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$\{1, 01, 0001, 10101, 01111\}$

$\left\{ \begin{array}{l} 0001 \\ 0111 \end{array} \right\}$



BP



$L(m) = \{ \omega / \omega \text{ ends with } 1 \text{ on } \leq \{0, 1\} \}$



12:14 PM | CS208 | AFL Theory Class | 18.01.2022 @11:30am



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B108 OZA DHAIRYA MA...

B117 NEELAV BHATIYA S...

B110 KRISHNA PANDEY ...

B081 ADITYA YADAV SV...

B109 CH ADITHYA SVNIT

B096 SNEHARSH BELSA...

43 others

You

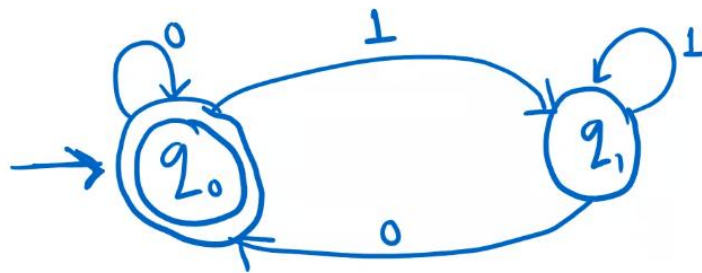
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Press **F11** to exit full screen

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Machine.
←

010
011
0110



∈

→ $L(M) = \{ w / w \text{ is } \epsilon \text{ or all string that end with } 0 \}$
or

— $L(M) = \{ w / w \text{ is } \epsilon \text{ or all strings that do not end with } 1 \}$



Dr. Balu L. Parne SVNIT

B119 YASH SHAH SVNIT

B117 NEELAV BHATIYA S...

B110 KRISHNA PANDEY ...

B081 ADITYA YADAV SV...

B109 CH ADITHYA SVNIT

B096 SNEHARSH BELSA...

43 others

You