

Leksiline analüüs

Determineeritud lõpliku automaadi koostamine

Determineeritud lõpliku automaadi koostamine

- Mittedetermineeritud lõpliku automaadiga
 $A = \langle Q, \Sigma, \delta, q_0, F \rangle$ ekvivalentse determineeritud lõpliku automaadi $A' = \langle Q', \Sigma, \delta', q'_0, F' \rangle$ konstrueerimine **osahulkade moodustamise** abil.

- Abifunktsioonid:

- tühikäigusulundi funktsioon ε -closure : $2^Q \rightarrow 2^Q$

$$\varepsilon\text{-closure}(S) = \{p \mid q \in S, (q, \varepsilon, p) \in \delta^*\}$$

- ühe sammu funktsioon $move : 2^Q \times \Sigma \rightarrow 2^Q$

$$move(S, a) = \varepsilon\text{-closure}(\{p \mid q \in S, (q, a, p) \in \delta\})$$

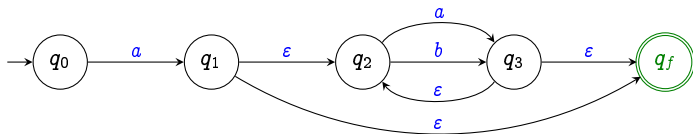
Determineeritud lõpliku automaadi koostamine

Algoritm:

```
 $Q' := \emptyset; F' := \emptyset; \delta' := \emptyset;$   
 $q'_0 := \varepsilon\text{-closure}(\{q_0\}); U := \{q'_0\};$   
while  $\exists S \in U$  do  
   $U := U \setminus \{S\}; Q' := Q' \cup \{S\};$   
  foreach  $a \in \Sigma$  do  
     $T := \text{move}(S, a);$   
    if  $T \notin U \cup Q'$  then  $U := U \cup \{T\};$   
     $\delta' := \delta' \cup \{(S, a) \mapsto T\};$   
  end  
end  
 $F' := \{S \in Q' \mid S \cap F \neq \emptyset\};$ 
```

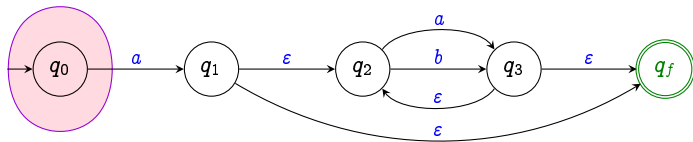
Determineeritud lõpliku automaadi koostamine

Näide:



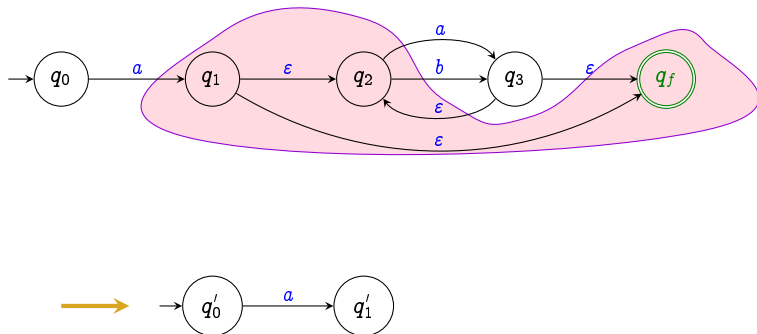
Determineeritud lõpliku automaadi koostamine

Näide:



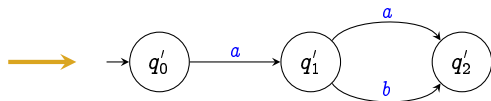
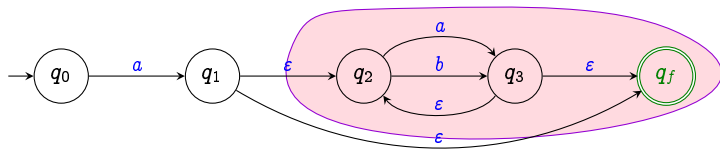
Determineeritud lõpliku automaadi koostamine

Näide:



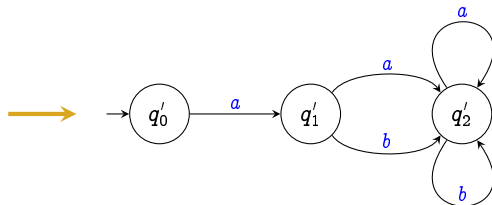
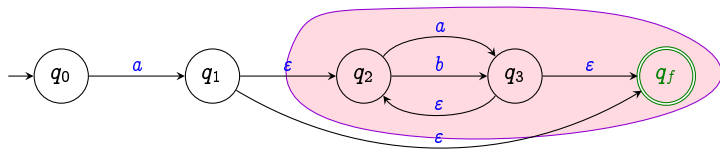
Determineeritud lõpliku automaadi koostamine

Näide:



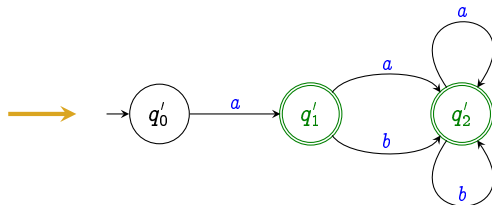
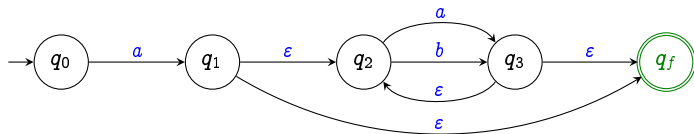
Determineeritud lõpliku automaadi koostamine

Näide:



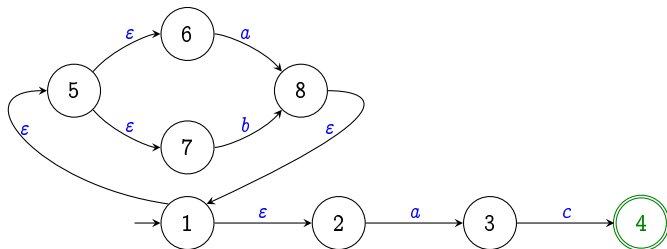
Determineeritud lõpliku automaadi koostamine

Näide:



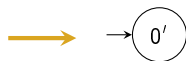
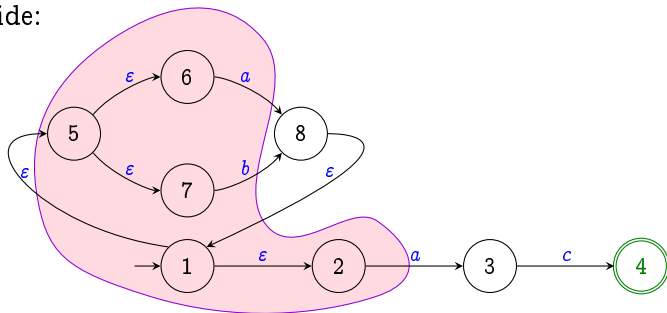
Determineeritud lõpliku automaadi koostamine

Näide:



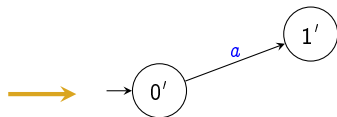
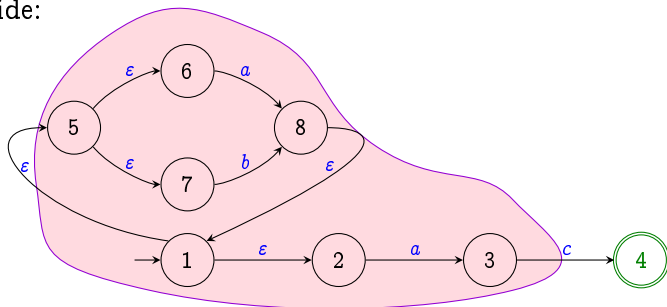
Determineeritud lõpliku automaadi koostamine

Näide:



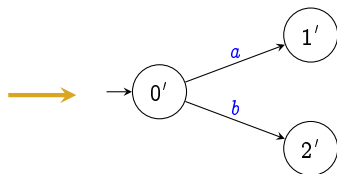
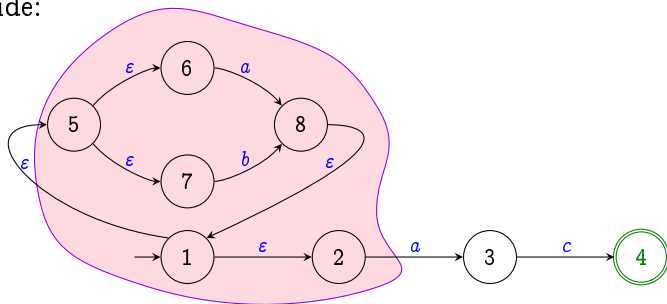
Determineeritud lõpliku automaadi koostamine

Näide:



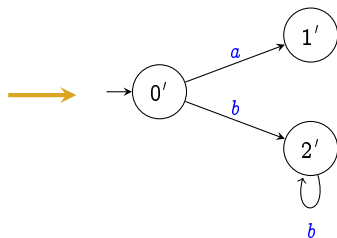
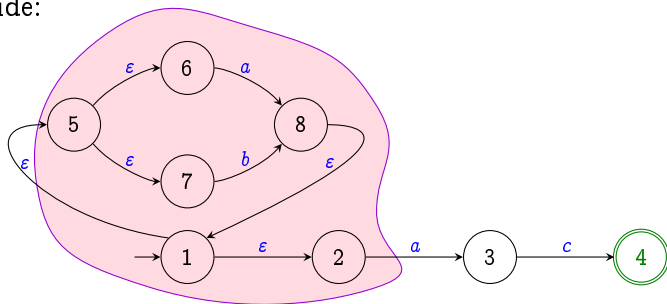
Determineeritud lõpliku automaadi koostamine

Näide:



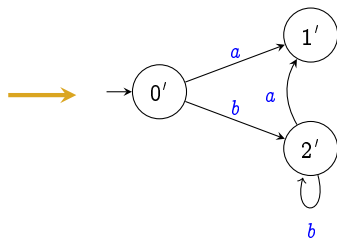
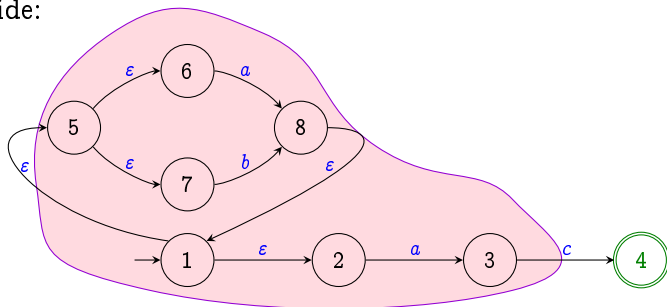
Determineeritud lõpliku automaadi koostamine

Näide:



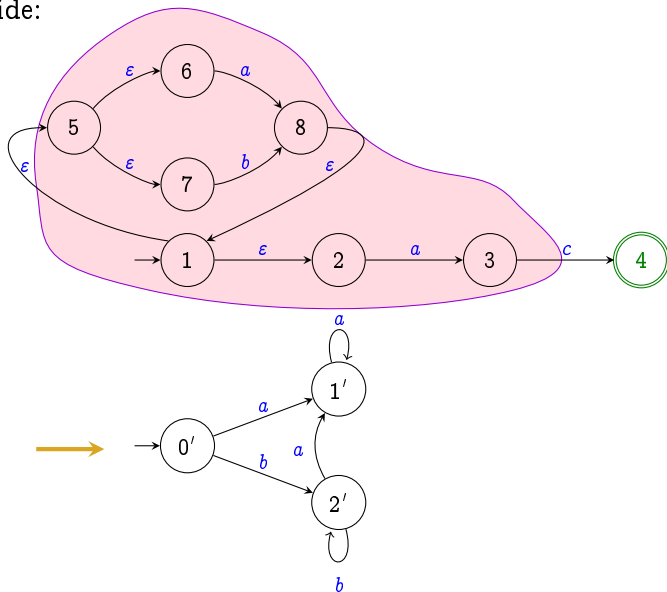
Determineeritud lõpliku automaadi koostamine

Näide:



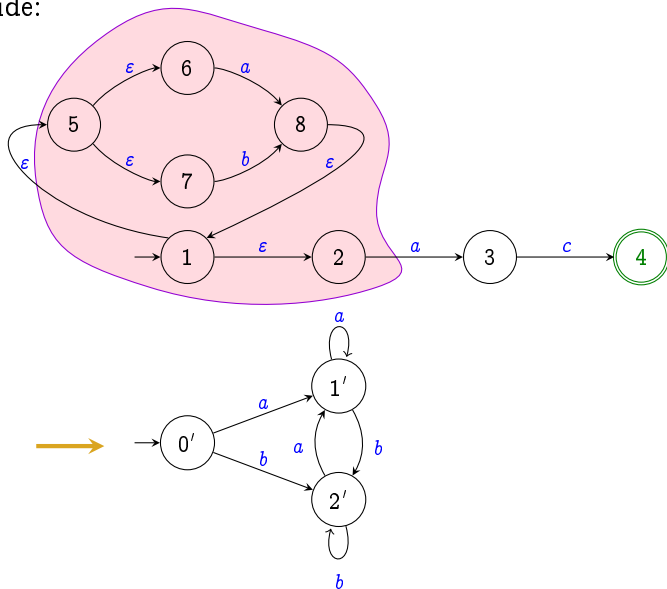
Determineeritud lõpliku automaadi koostamine

Näide:



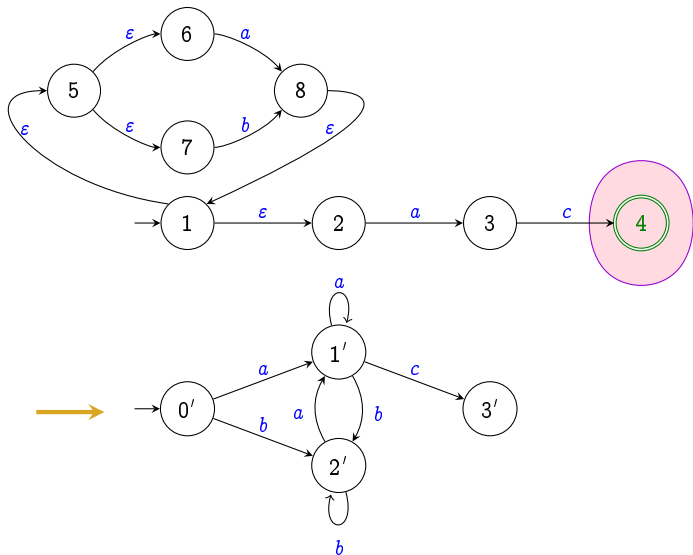
Determineeritud lõpliku automaadi koostamine

Näide:



Determineeritud lõpliku automaadi koostamine

Näide:



Determineeritud lõpliku automaadi koostamine

Näide:

