Homework 2

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Homework Description

Introduction assignment to languages, grammar, and finite state machines.

Course Details

- **Course** - CS435
- **Instructor** - Dr. Chi-Cheng Lin

Homework Results

Problem Set 1

Exercises from Chapter 5.

- JFLAP file for DFSM
- A picture of diagram and accepting/rejecting runs

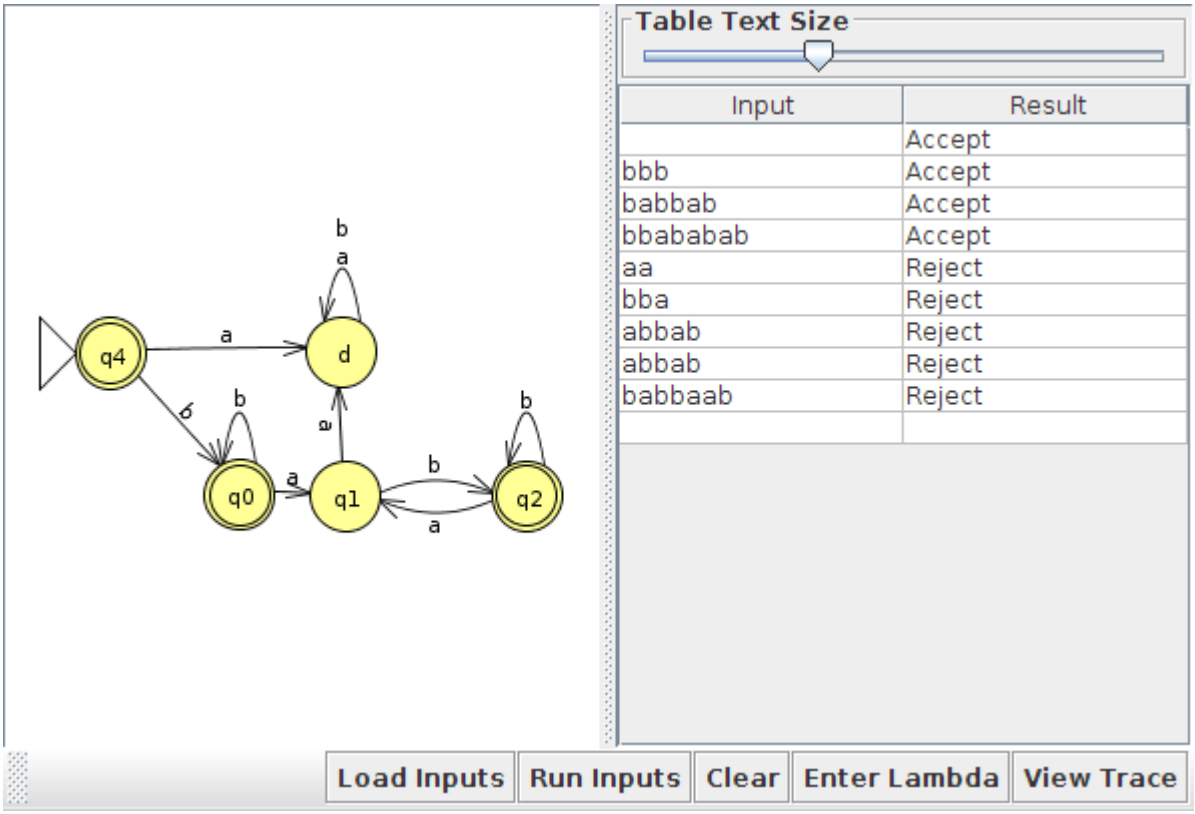
Problem 2a

$\{w \in \{a, b\}^\star$: every a in w is immediately preceded and followed by $b\}$

JFLAP file

jflap/2a.jff

Results



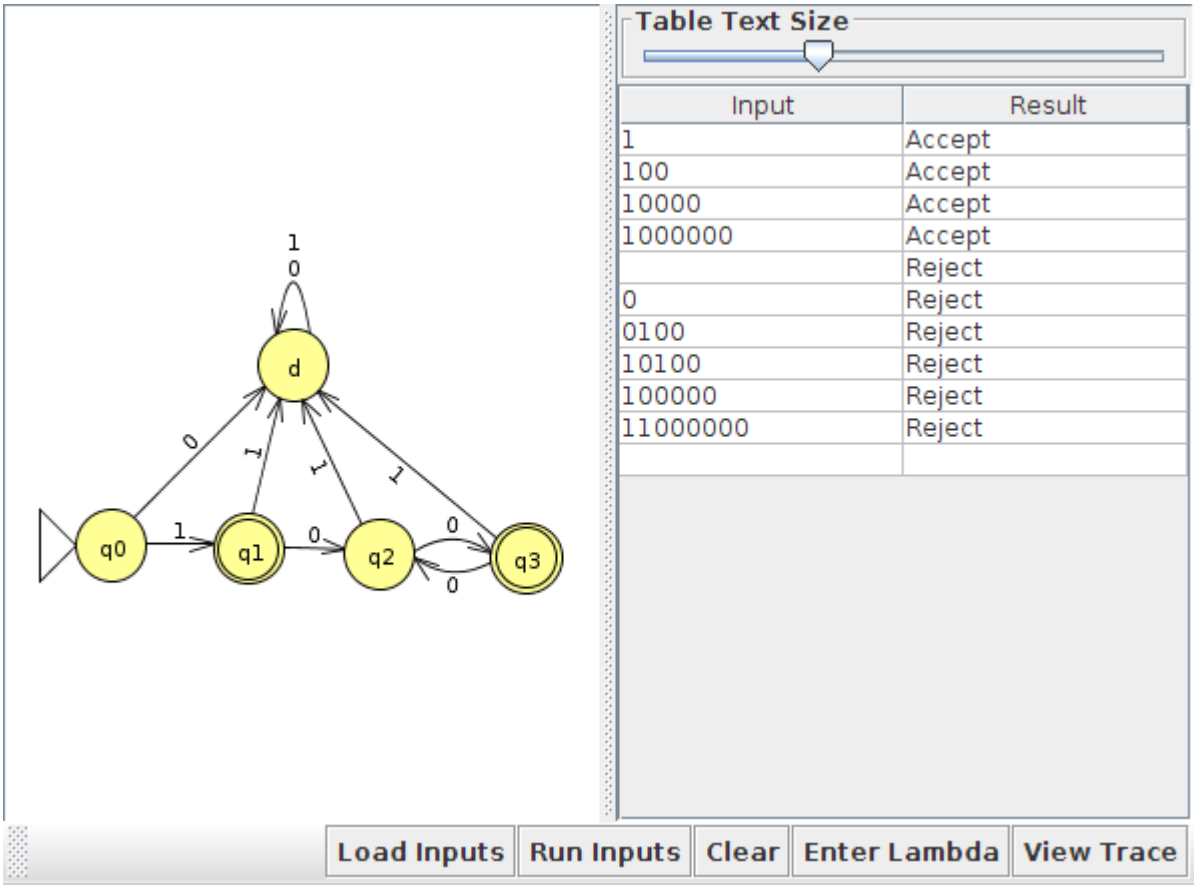
Problem 2d

$\{w \in \{0,1\}^\star : w$ corresponds to the binary encoding, without leading 0's, of natural numbers that are powers of 4$\}$

JFLAP file

jflap/2d.jff

Results



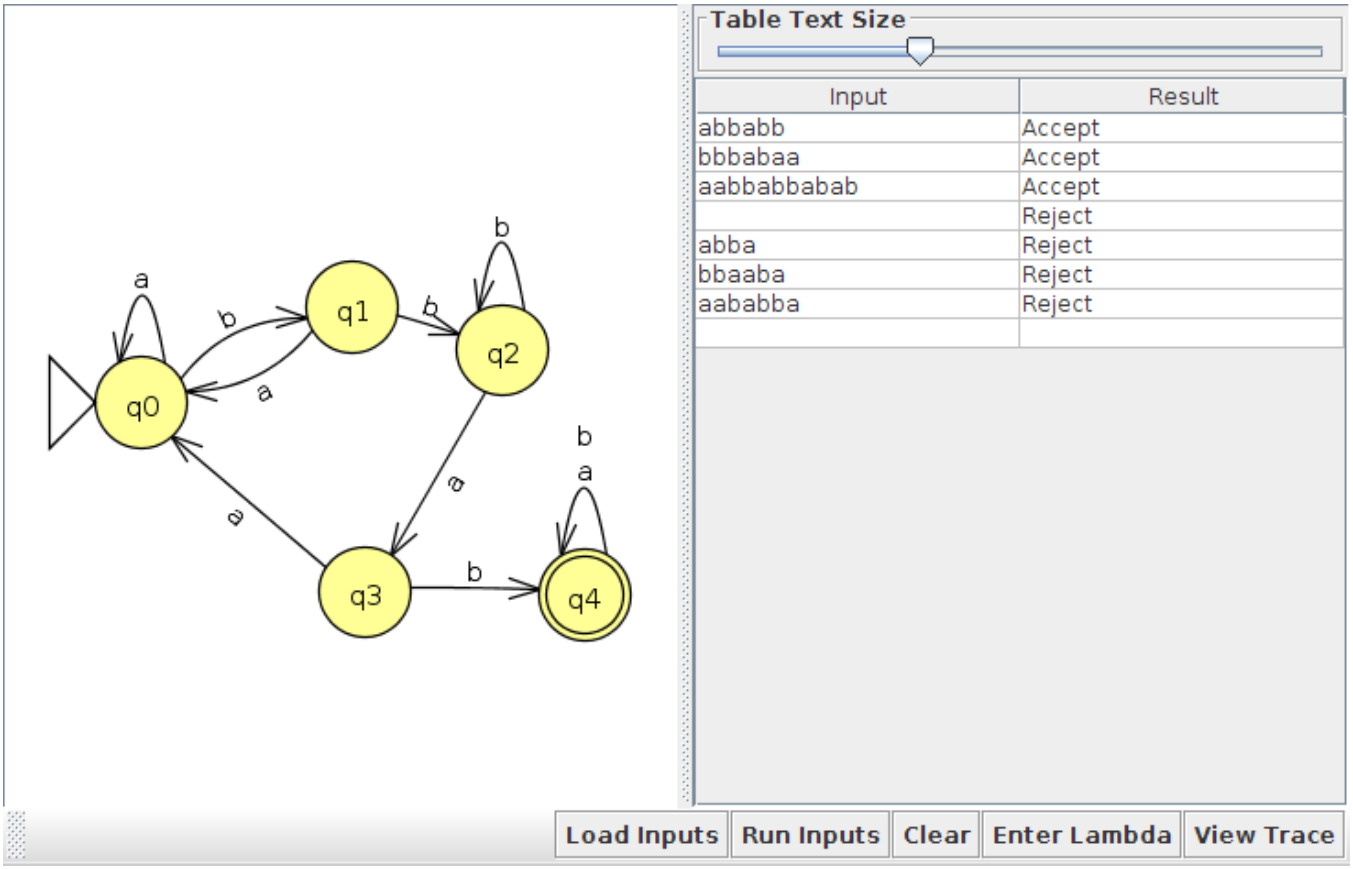
Problem 2h

$\{w \in \{a, b\}^\star : w$ has $bbab$ as a substring$\}$

JFLAP file

jflap/2h.jff

Results



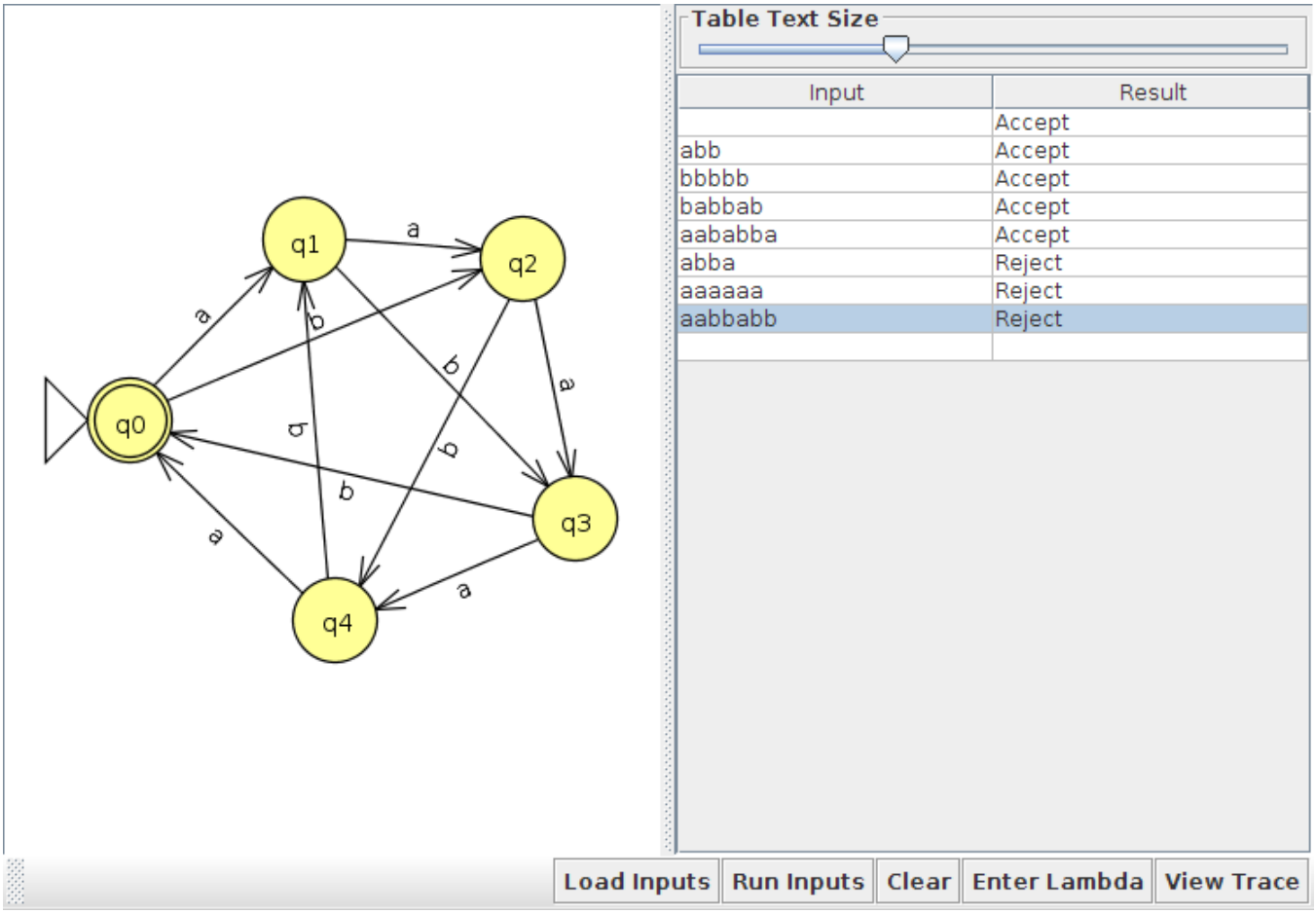
Problem 2n

$\{w \in \{a,b\}^\star : (\#_a(w) + 2\#_b(w)) \equiv_5 0\}\}$.

JFLAP file

jflap/2n.jff

Results



Problem Set 2

Exercises from Chapter 5

- JFLAP file for the NDFSM
- A picture of diagram and accepting/rejecting runs

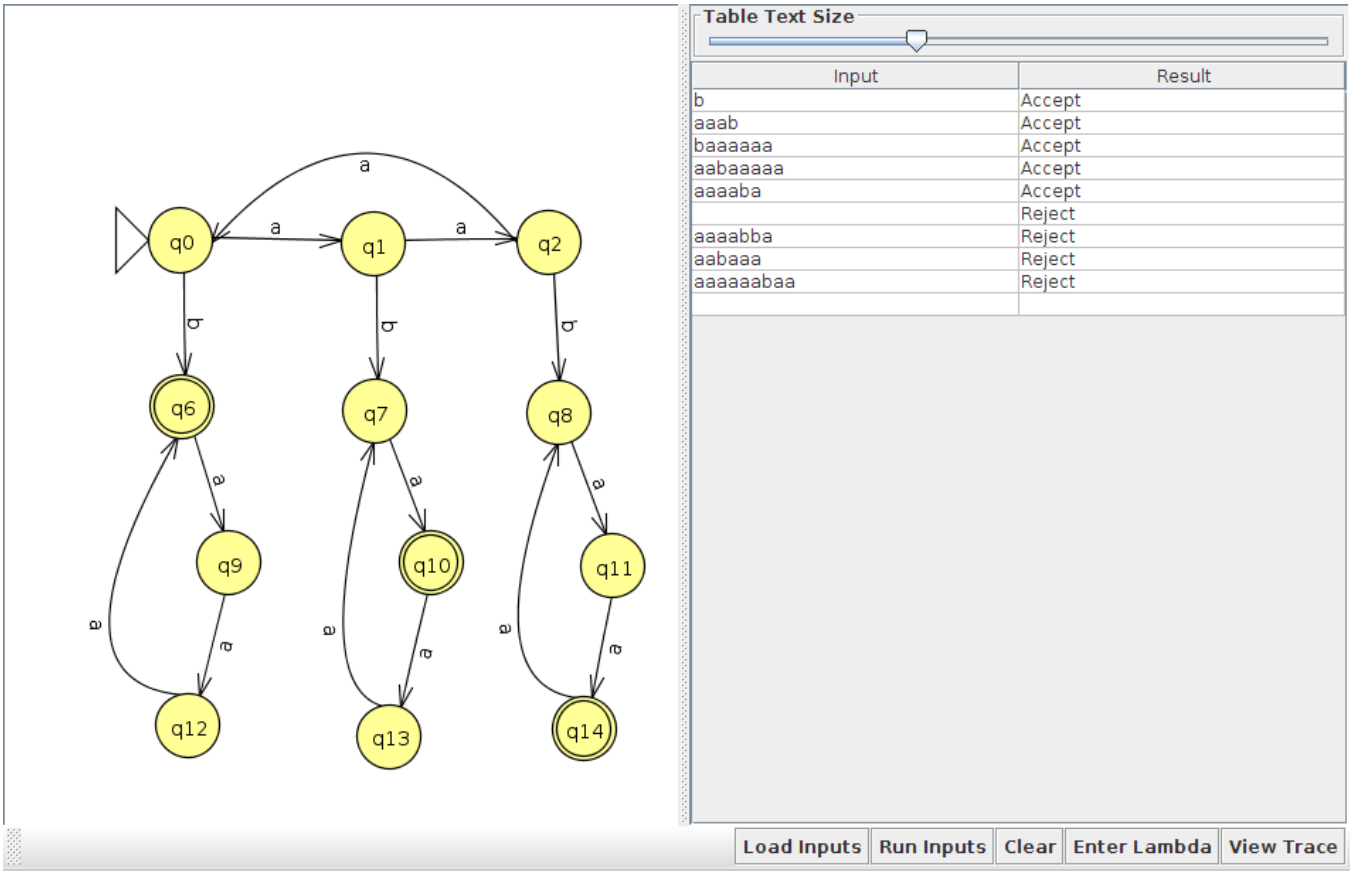
Problem 6a

$\{a^n ba^m : n, m \geq 0, n \equiv_3 m\}$.

JFLAP file

jflap/6a.jff

Results



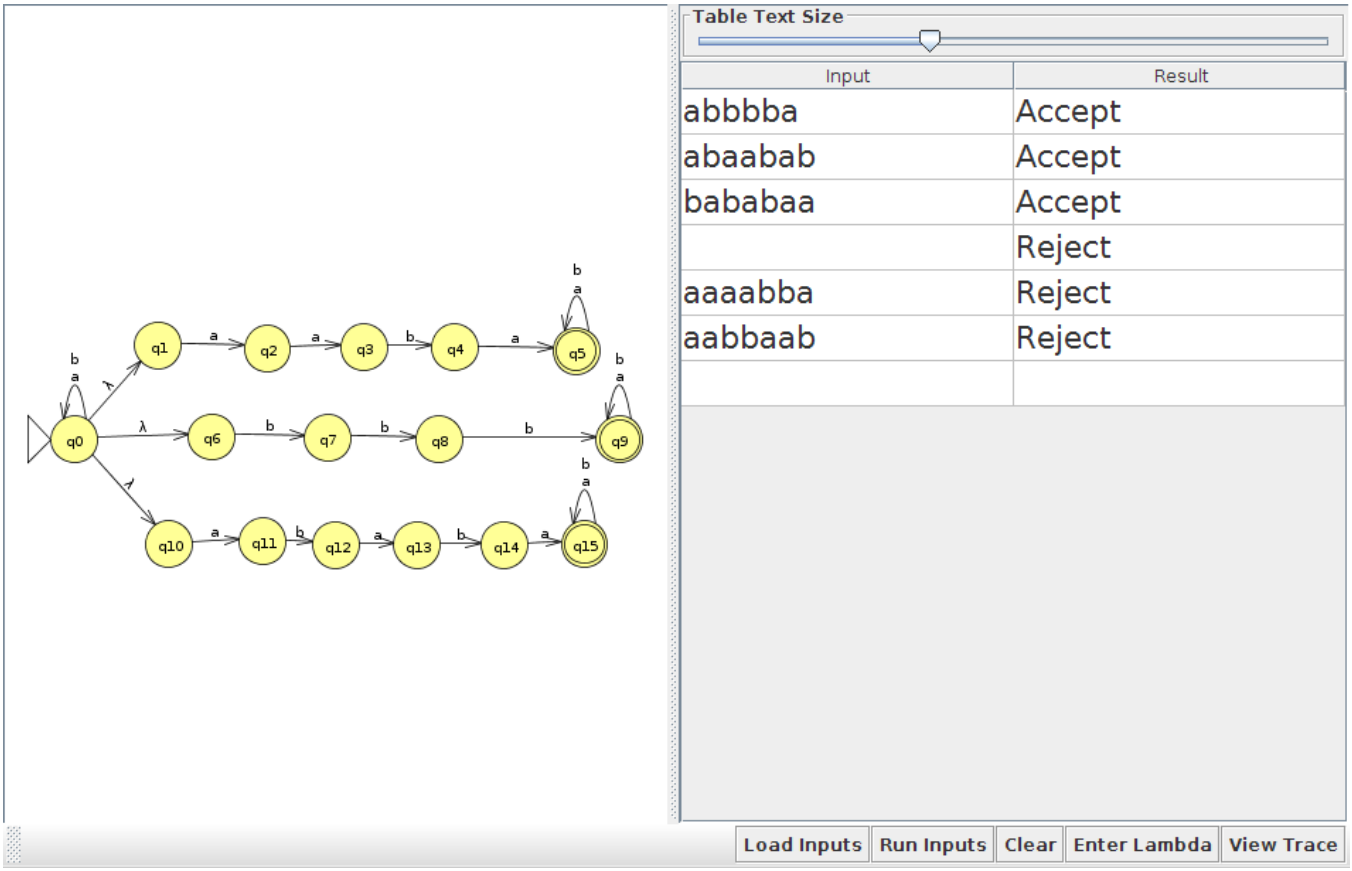
Problem 6b

$\{w \in \{a, b\}^\star : w$ contains at least one instance of *aaba*, *bbb* or *ababa*$\}$.

JFLAP file

jflap/6b.jff

Results



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