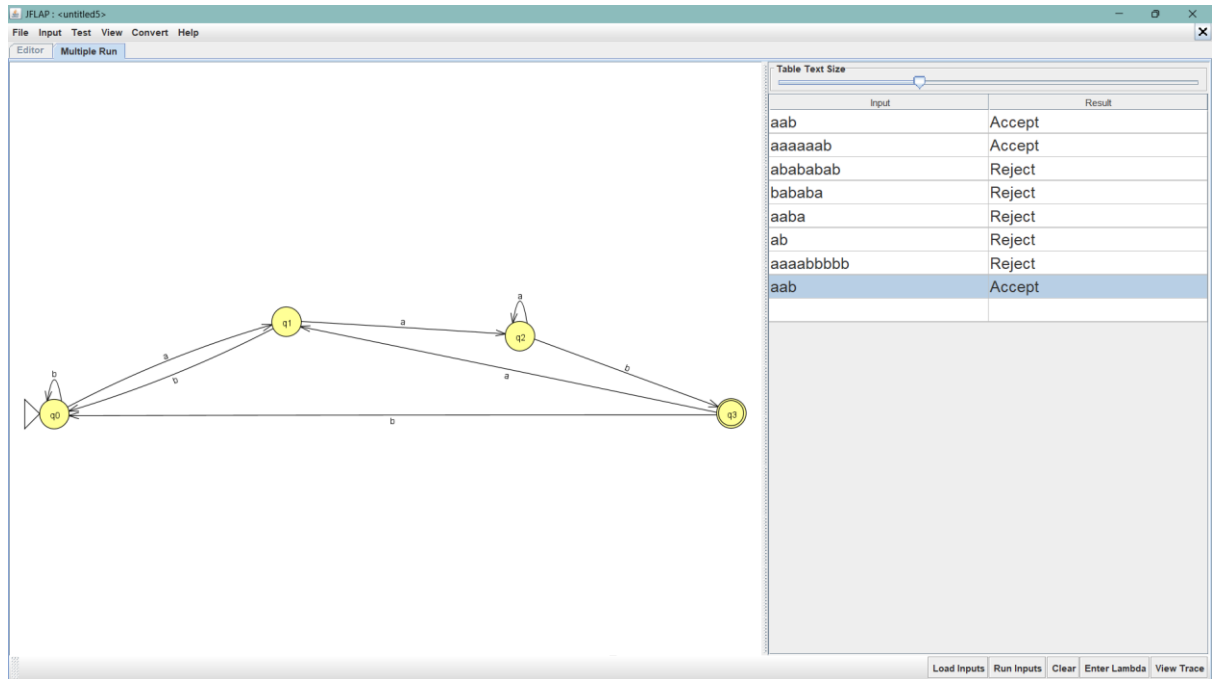**Name: Ketaki Mahajan**
Batch: B-1
Date: 05 / 08 / 2024
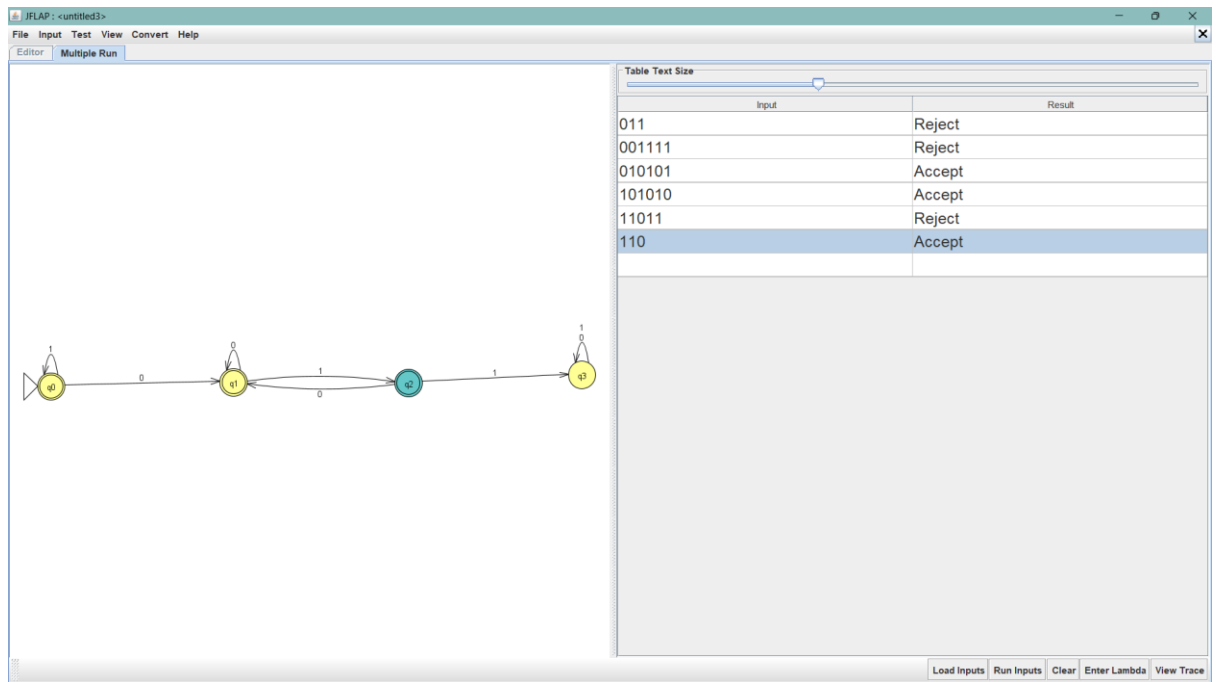
Tutorial 1: DFA

1. Draw a DFA for the language ending with same symbol aab over an input alphabet Σ={a,b}.---5M
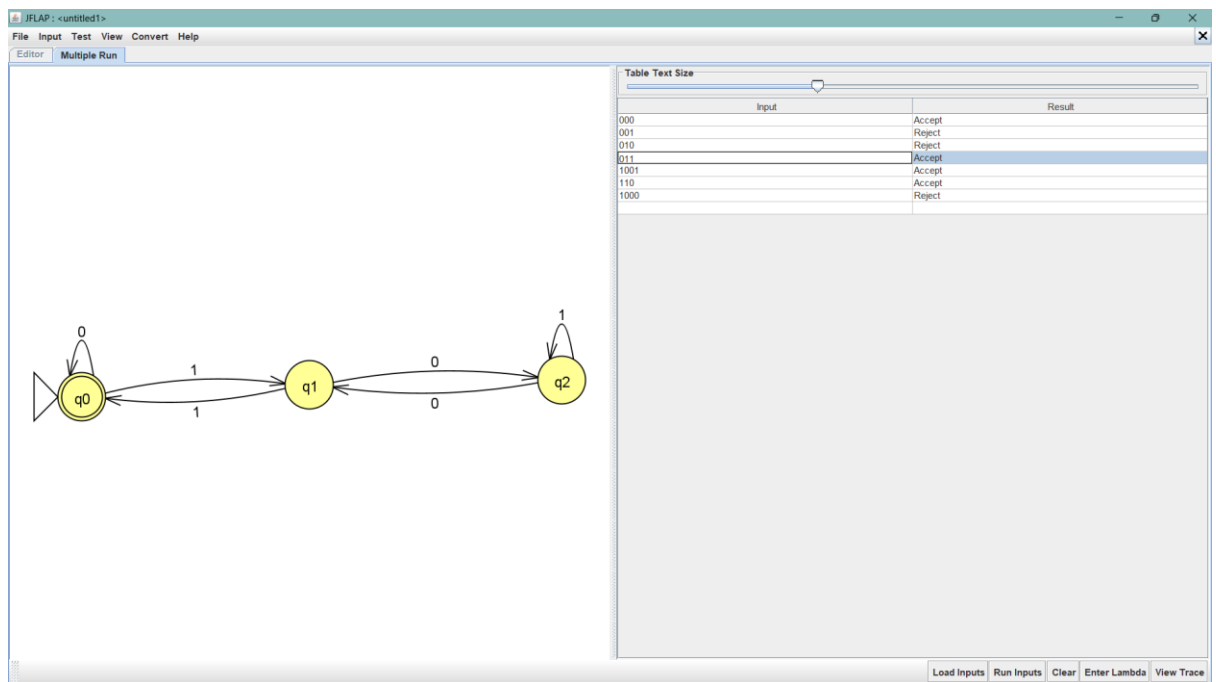

$Q = \{q0, q1, q2, q3\}$ $Q_0 = \{Q_0\}$ $\sum = \{a, b, c\}$ $F = \{q3\}$

2. Construct DFA for all possible conditions of 0's and 1's which does not have substring 011.-- 5M

$Q = \{q0, q1, q2, q3\}$ $Q_0 = \{Q_0\}$ $\Sigma = \{0, 1\}$ $F = \{q0, q1, q2\}$

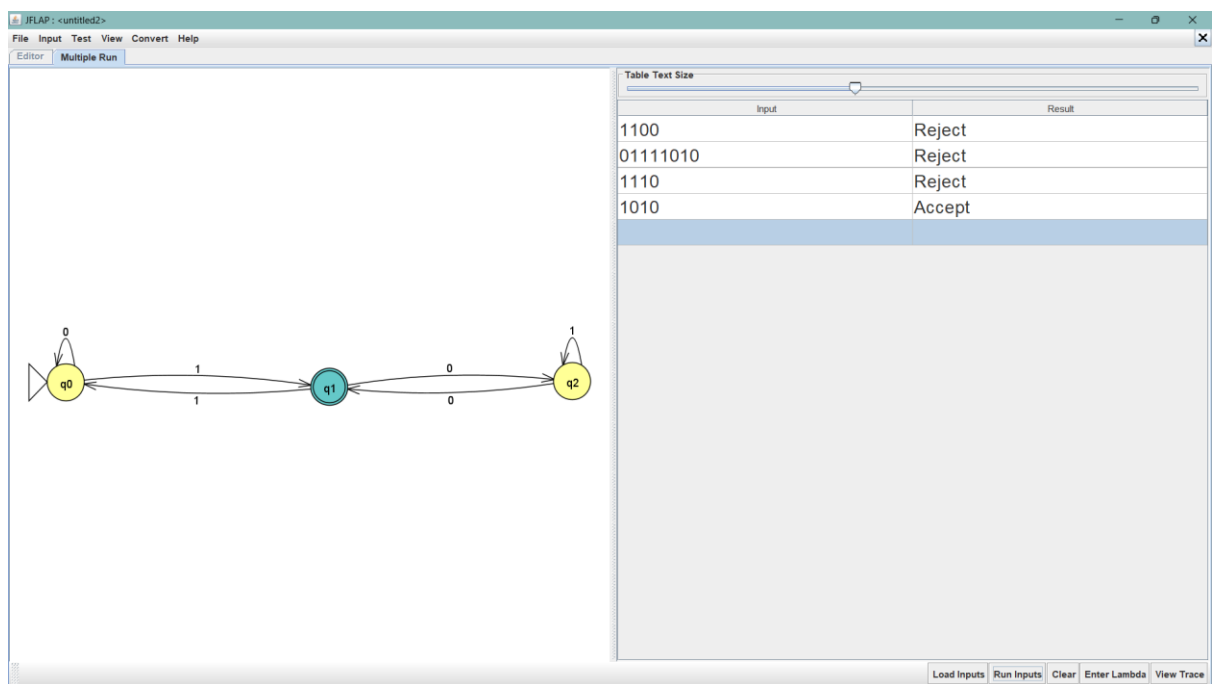## 3. Construct DFA for binary number divisible by 3--5M

$Q = \{q0, q1, q2\}$ $Q_0 = \{Q_0\}$ $\sum = \{0, 1\}$ $F = \{q0\}$

4. Construct DFA for the given Tuple definition-------------------------5M
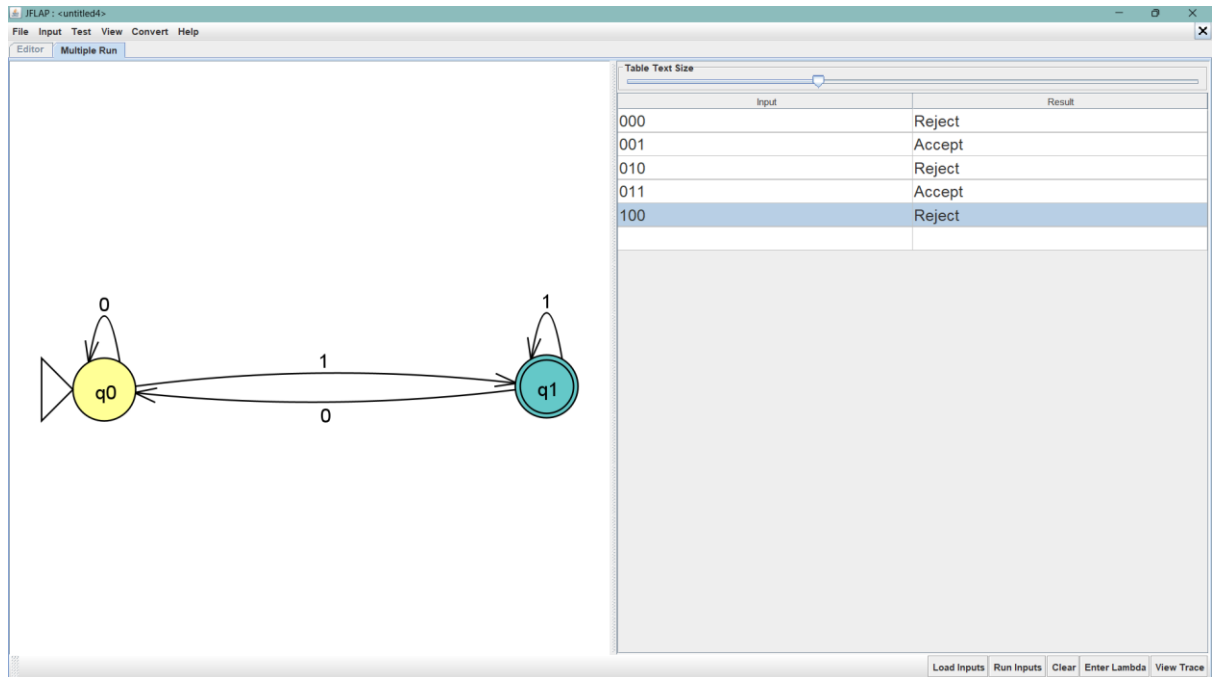Q={a,b,c} qo= {a} Σ={0,1} F={c}

Present state	0	1
→a	a	b
b*	c	a
C	b	c

$Q = \{a, b, c\}\ Q_0 = \{a\}\ \sum = \{0, 1\}\ F = \{c\}$

5. Design DFA that checks whether the given 2-bit binary number is odd .-------------------- -5M

Table Text Size

Input	Result
000	Reject
001	Accept
010	Reject
011	Accept
100	Reject

0

1

1

q0

0

q1

Load Inputs   Run Inputs   Clear   Enter Lambda   View Trace

$Q = \{q0, q1, q2\}$ $Q_0 = \{Q_0\}$ $\Sigma = \{0, 1\}$ $F = \{q1\}$