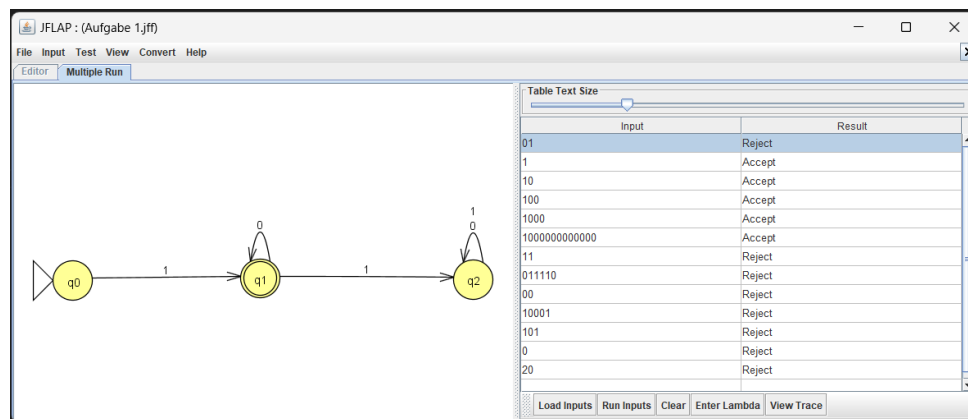


# **Blatt 3**

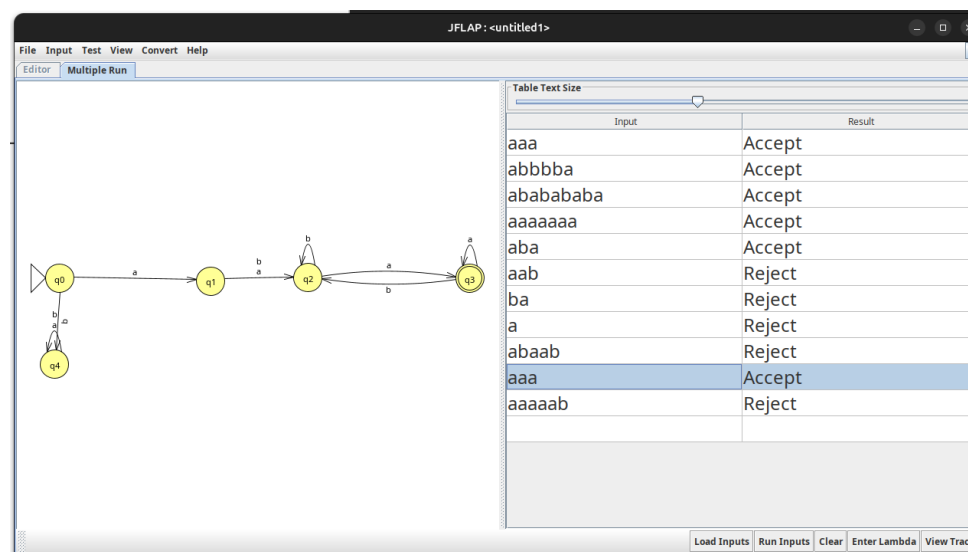
## Automaten und formale Sprachen Praktikum

Teammitglieder: Luis Staudt  
Dominik Meurer

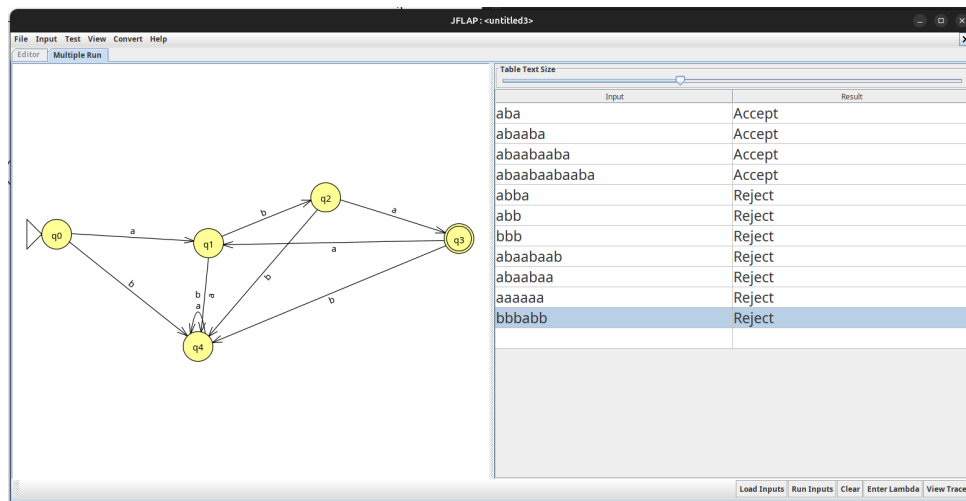
1



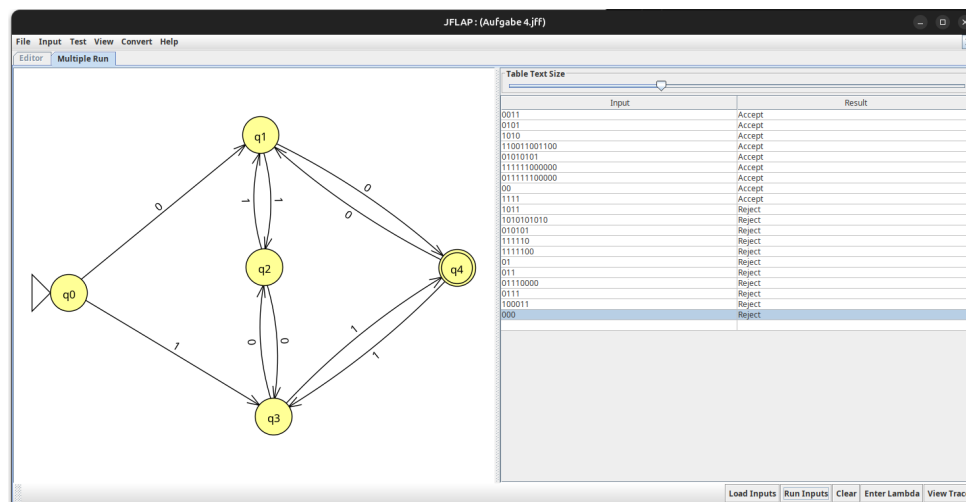
2



3

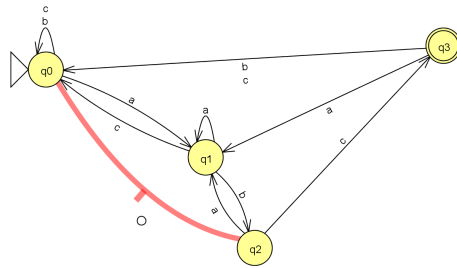


4



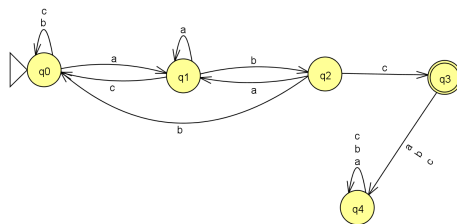
## 5

## 5.1



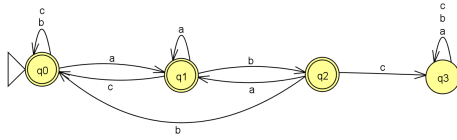
Input	Result
abc	Accept
cabc	Accept
aabbccaabbccabc	Accept
aabbccaabccabc	Accept
abababcacacabc	Accept
ababab	Reject
aaaaaaa	Reject
cccc	Reject
abbacacbaaaaaab	Reject
abababab	Reject
babab	Reject

## 5.2



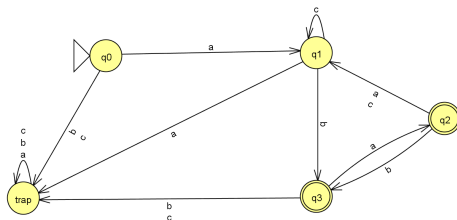
Input	Result
abc	Accept
cabc	Accept
aabbccaabbccabc	Accept
aabbccaabccabc	Reject
abababcacacabc	Reject
ababab	Reject
aaaaaaa	Reject
cccc	Reject
abbacacacbaaaaaab	Reject
ababababab	Reject
babab	Reject

## 5.3



Input	Result
abc	Reject
cabc	Reject
aabbccaabbccabc	Reject
aabbccaabccabc	Reject
abababcacacabc	Reject
ababab	Accept
aaaaaaaa	Accept
cccc	Accept
abbacacacbaaaaaab	Accept
ababababab	Accept
babab	Accept

## 6



Input	Result
ab	Accept
aba	Accept
accba	Accept
accbaab	Accept
abab	Accept
acba	Accept
abbb	Reject
bba	Reject
cba	Reject
ccc	Reject
cbbab	Reject
aa	Reject
acbacb	Accept
acbaac	Reject
c	Reject

$$(ac + (c * b | c * ba))^*$$

## 7

1.  $10^*$

2.  $a(a|b) + a$

3.  $(aba)^+$

4.  $(00|11|(01|10)(00|11) * (01|10))^*$

5. Mehrere

a)  $(a|b|c) * abc$

b)  $(a|(b|c) * a)(a?|c(b|c) * a) * b((a|b)(b|c) * a(a?|c(b|c) * a) * b) * c$

c)  $((a|(b|c) * a)(a?|c(b|c) * a) * b|(a|(b|c) * a)(a?|c(b|c) * a) * b((a|b)(b|c) * a(a?|c(b|c) * a) * b)|a|(b|c) * a(a?|c(b|c) * a) * b) * ((a|b)(b|c) * a|(a|b)(b|c) * a(a?|c(b|c) * a) + |a|(b|c) * a|(a|(b|c) * a)(a?|c(b|c) * a) * b((a|b)(b|c) * a(a?|c(b|c) * a) * b) * ((a|b)(b|c) * a(a?|c(b|c) * a) * (c|c(b|c)*)|(a|b)(b|c) * |a|b)|(b|c) |(a|(b|c) * a)(a?|c(b|c) * a) * (c|c(b|c)*)$



$$(b|(ab * a(b + a+)*))a*$$

**10**

Es wird nur die leere Sprache akzeptiert.