

## Accept Cases:

1. String: aaabbbccc

```
$ python3 traceNTM_ekoran.py test-files/check_abc_star_ekoran.csv aaabbbccc 100
Nondeterministic Turing Machine Info:
  Machine Name: a*b*c* Nondeterministic
    States: q1, q2, q3, q4, qacc, qrej
    Sigma: a, b, c
    Gamma: a, b, c_
  Start State: q0
  Accept State: qacc
  Reject State: qrej
Input String: aaabbbccc
Transitions Simulated: 43
String accepted in 10 steps:
  q0 aaabbbccc_
  a q0 aaabbbccc_
  aa q0 abbbccc_
  aaa q0 bbbccc_
  aaab q1 bbbccc_
  aaabb q1 bccc_
  aaabbb q2 ccc_
  aaabbbc q2 cc_
  aaabbbcc q2 c_
  aaabbbccc q3 _
  aaabbbccc_ qacc
Degree of Nondeterminism: 4.0
Nondeterminism Summary:
  Level    # Configs    # Outgoing Transitions    # NonLeaves    Transitions/NonLeaves
    0         1             4             1             4.0
    1         4             4             1             4.0
    2         4             4             1             4.0
    3         4             6             2             3.0
    4         6             6             2             3.0
    5         6             6             2             3.0
    6         6             4             2             2.0
    7         4             4             2             2.0
    8         4             4             2             2.0
    9         4             1             2             0.5
   10        1             0             0             0
```

2. String: aaabbc

```
$ python3 traceNTM_ekoran.py test-files/check_abc_star_DTM_ekoran.csv aaabbc 100
Deterministic Turing Machine Info:
  Machine Name: a*b*c* Deterministic
    States: q1, q2, q3, q4, qacc, qrej
    Sigma: a, b, c
    Gamma: a, b, c_
  Start State: q0
  Accept State: qacc
  Reject State: qrej
Input String: aaabbc
Transitions Simulated: 7
String accepted in 7 steps:
  q0 aaabbc_
  a q1 aaabbc_
  aa q1 abbc_
  aaa q1 bbc_
  aaab q2 bc_
  aaabb q2 c_
  aaabbc q3 _
  aaabbc_ qacc
Degree of Nondeterminism: 1.0
```

3. String: bbbc

```
$ python3 traceNTM_ekoran.py test-files/check_abc_star_DTM_ekoran.csv bbbc 100
Deterministic Turing Machine Info:
  Machine Name: a*b*c* Deterministic
    States: q1, q2, q3, q4, qacc, qrej
    Sigma: a, b, c
    Gamma: a, b, c_
  Start State: q0
  Accept State: qacc
  Reject State: qrej
Input String: bbbc
Transitions Simulated: 5
String accepted in 5 steps:
  q0 bbbc_
  b q2 bbc_
  bb q2 bc_
  bbb q2 c_
  bbbc q3 _
  bbbc_ qacc
Degree of Nondeterminism: 1.0
```

#### Reject Cases:

1. String: abca

```
$ python3 traceNTM_ekoran.py test-files/check_abc_star_DTM_ekoran.csv abca 100
Deterministic Turing Machine Info:
  Machine Name: a*b*c* Deterministic
    States: q1, q2, q3, q4, qacc, qrej
    Sigma: a, b, c
    Gamma: a, b, c_
  Start State: q0
  Accept State: qacc
  Reject State: qrej
Input String: abca
Transitions Simulated: 4
String rejected in 4 steps
Degree of Nondeterminism: 1.0
```