

## Esercizio 1.1:

```
C:\Users\Daniel\Desktop\EserciziLFT\DFA>javac Esercizio1.java  
  
C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio1 000  
OK  
  
C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio1 001  
NOPE  
  
C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio1 10001  
OK  
  
C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio1 010101  
NOPE  
  
C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio1 1100011001  
OK  
  
C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio1 10214  
NOPE  
  
C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio1 marco  
NOPE  
  
C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio1 0001000  
OK  
  
C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio1 000100  
OK  
  
C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio1 111  
NOPE  
  
C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio1 0000000000100000000000  
OK
```

Per ottenere un DFA che riconosca il complementare del linguaggio ottenuto è necessario invertire gli stati finali:

```
return state == 0 || state==1 || state==2;
```

```
C:\Users\Daniel\Desktop\EserciziLFT\DFA>javac Esercizio1.java

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio1 000
NOPE

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio1 001
OK

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio1 10001
NOPE

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio1 010101
OK

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio1 1100011001
NOPE

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio1 10214
NOPE

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio1 marco
NOPE

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio1 0001000
NOPE

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio1 0000000000100000000000
NOPE

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio1 111
OK
```

## Esercizio 1.2:

```
C:\Users\Daniel\Desktop\EserciziLFT\DFA>javac Esercizio2.java
C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio2 x
OK
C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio2 flag1
OK
C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio2 x2y2
OK
C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio2 x_1
OK
C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio2 lft_lab
OK
C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio2 _temp
OK
C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio2 x_1_y_2
OK
C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio2 x___
OK
C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio2 __5
OK
C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio2 5
NOPE
C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio2 221B
NOPE
C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio2 123
NOPE
C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio2 9_to_5
NOPE
C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio2 ___
NOPE
C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio2 ---
NOPE
C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio2 z
OK
C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio2 .
NOPE
```

### Esercizio 1.3:

```
C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio3 Rossi
NOPE

C:\Users\Daniel\Desktop\EserciziLFT\DFA>javac Esercizio3.java

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio3 123451Zianchi
OK

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio3 654321Rossi
OK

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio3 123456Rossi
NOPE

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio3 654321Bianchi
NOPE

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio3 2Bianchi
OK

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio3 122B
OK

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio3 654322
NOPE

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio3 Rossi
NOPE
```

I nodi dell'automa sono distinguibili.

## Esercizio 1.4:

```
C:\Users\Daniel\Desktop\EserciziLFT\DFA>javac Esercizio4.java

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio4 "654321 Rossi"
OK

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio4 "123456 Bianchi"
OK

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio4 "1234 56Bianchi"
NOPE

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio4 "1234 56Bianchi"
NOPE

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio4 " 1234 56Bianchi "
NOPE

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio4 " 123456Bianchi "
OK

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio4 " 123456  Bianchi  "
OK

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio4 " 12 3456  Bia nchi  "
NOPE
```

I nodi dell'automa sono distinguibili.

## Esercizio 1.5:

```
C:\Users\Daniel\Desktop\EserciziLFT\DFA>javac Esercizio5.java

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio5 "Bianchi123456"
OK

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio5 "Rossi654321"
OK

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio5 "Bianchi654321"
NOPE

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio5 "Rossi123456"
NOPE

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio5 "Bianchi2"
OK

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio5 "B122"
OK

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio5 "654321"
NOPE

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio5 "Rossi"
NOPE

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio5 "654321Rossi"
NOPE

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio5 "123456Rossi"
NOPE

C:\Users\Daniel\Desktop\EserciziLFT\DFA>java Esercizio5 "--"
NOPE
```

I nodi dell'automa sono distinguibili.

## Esercizio 1.6:

```
C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>javac Esercizio7.java
C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio7 abb
OK
C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio7 abbbbbb
OK
C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio7 baaaaaa
OK
C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio7 bbaba
OK
C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio7 aaaaaaaa
OK
C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio7 a
OK
C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio7 ba
OK
C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio7 bbbababab
NOPE
C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio7 b
NOPE
C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio7 bbba
NOPE
C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio7 bab
OK
```

## Esercizio 1.7:

```
C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio6 bbaba
OK

C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio6 baaaaaaaa
OK

C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio6 aaaaaaaa
OK

C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio6 a
OK

C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio6 ba
OK

C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio6 bba
OK

C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio6 aa
OK

C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio6 bbbababab
OK

C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio6 abbbbbbbb
NOPE

C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio6 babbbbbbbb
NOPE

C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio6 b
NOPE
```



## Esercizio 1.8:

```
C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>javac Esercizio8.java
C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio8 Daniel
OK
C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio8 *aniel
OK
C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio8 *ani*1
NOPE
C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio8 %aniel
OK
C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio8 %anie&
NOPE
C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio8 dan$el
OK
C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio8 #a#$sl
NOPE
```

## Esercizio 1.9:

```
C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>javac Esercizio9.java

C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio9 \"/****/"
readed argument: /****/
OK

C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio9 \"/*a*a*/"
readed argument: /*a*a*/
OK

C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio9 \"/a/**/"
readed argument: /a/**/
OK

C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio9 \"/**/"
readed argument: /**/
OK

C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio9 \"/*/"/
readed argument: /**/
OK

C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio9 \"/*/"
readed argument: /*/
NOPE

C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio9 \"/**/**/"
readed argument: /**/**/
NOPE
```

## Esercizio 1.10:

```
C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>javac Esercizio10.java

C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio10 aaa/*/aa
readed argument: aaa/*/aa
NOPE

C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio10 a/**//***a
readed argument: a/**//***a
NOPE

C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio10 aa/*aa
readed argument: aa/*aa
NOPE

C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio10 aaa/****/aa
readed argument: aaa/****/aa
OK

C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio10 aa/*a*a*/
readed argument: aa/*a*a*/
OK

C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio10 aaaa
readed argument: aaaa
OK

C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio10 \"/****/"
readed argument: /****/
OK

C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio10 \"/*aa*/"
readed argument: /*aa*/
OK

C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio10 \"/a"
readed argument: */a
OK

C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio10 a/**/***a
readed argument: a/**/***a
OK

C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio10 a/**/***a
readed argument: a/**/***a
OK

C:\Users\Daniel\Desktop\EserciziLFT\1.DFA>java Esercizio10 a/**/aa/***a
readed argument: a/**/aa/***a
OK
```