

Tutorato 01

Giulio Umbrella

14 March 2022

Nota questa versione delle soluzioni e' una bozza e puo' essere soggetta a modifiche

1 DFA

1.1 Ex 1

$$w \in \Sigma \mid |w| = 2$$

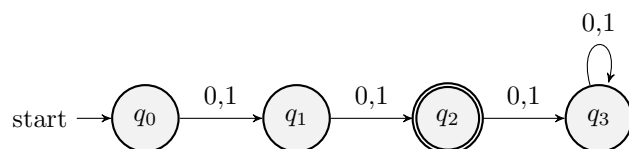


Figure 1: Esercizio 01

1.2 Ex 2

$$w \in \Sigma \mid |w| \leq 2$$

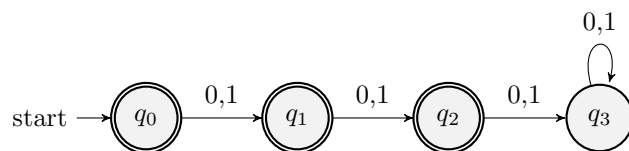


Figure 2: Esercizio 02

1.3 Ex 3

$$w \in \Sigma \mid |w| \bmod 2 = 0$$

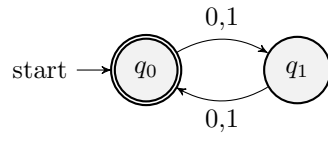


Figure 3: Esercizio 03

1.4 Ex 4

$w \in \Sigma^* | \text{ogni } 0e' \text{ seguita da } 11$

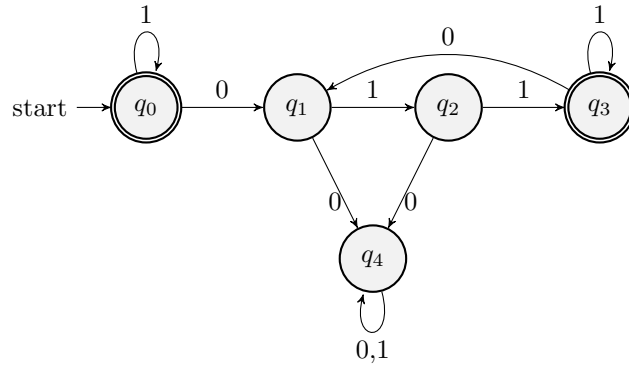


Figure 4: Esercizio 04

1.5 Ex 5

$w \in \Sigma^* | \text{contiene } 000 \text{ come sottostringa}$

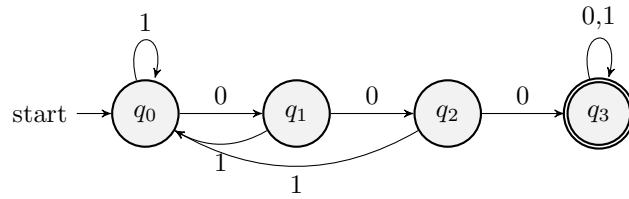


Figure 5: Esercizio 05

1.6 Ex 6

$w \in \Sigma^* | |w| \bmod 3 = 0$

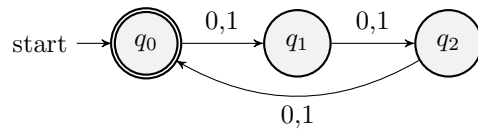


Figure 6: Esercizio 06

1.7 Ex 7

$w \in \Sigma \mid |w| \bmod 3 = 1$

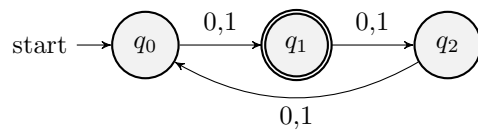


Figure 7: Esercizio 07

2 NFA ϵ -NFA

2.1 Ex 1

$w \in a, b, c \mid$ non compaiono tutti i simboli

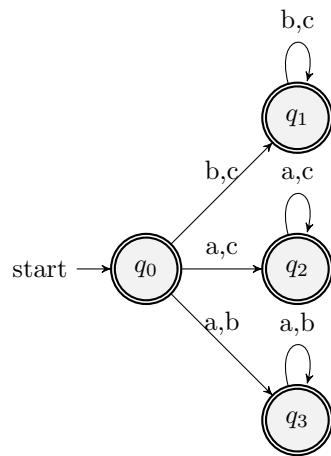


Figure 8: Esercizio 02

2.2 Ex 2

$w \in 0,1_*$ contiene tre zero consecutivi

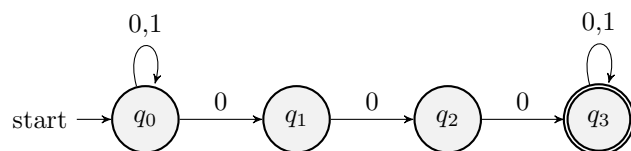


Figure 9: Esercizio 02

2.3 Ex 3

$w \in 0,1_*$ contiene al suo interno la stringa 11 oppure 101

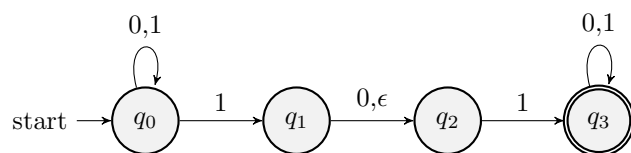


Figure 10: Esercizio 03

3 Conversione NFA → DFA

3.1 Ex 1

	0	1
\emptyset	\emptyset	\emptyset
$\rightarrow * \{q0, q1, q3\}$	$\{q1, q3\}$	$\{q2, q4\}$
$\{q1, q3\}$	$\{q1, q3\}$	$\{q2, q4\}$
$* \{q2, q4\}$	$\{q2, q5\}$	\emptyset
$* \{q2, q5\}$	$\{q2\}$	$\{q4\}$
$* \{q2\}$	$\{q2\}$	\emptyset
$* \{q4\}$	$\{q5\}$	\emptyset
$\{q5\}$	\emptyset	$\{q4\}$