ZSV

Turingov stroj

$M = (Q, \Sigma, \delta, q_0, F)$ — končno stanje

stanja — abeceda $\{0, 1, \lambda\}$ — prelazna funkcija

$q_0 \in F \quad F \subseteq Q$

$\delta : Q \times \Gamma \to Q \times \Gamma \times \{R, N, L\}$ — pomak

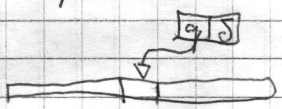
zad. 1)

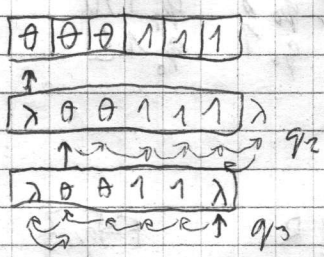
$L = \{ 0^n 1^n \mid n \geq 0 \}$

$Q = \{ q_0, q_1, q_2, q_3, q_4, q_5 \} \cup \{ \perp \}$

$F = \{ q_1 \}$

prelaz nedefiniran (⇒ prijelaz u $\perp$)





q_0	λ	→	q_1	λ N
q_0	0		q_2	λ R
q_2	0		q_2	0 R
q_2	1		q_2	1 R
q_2	λ		q_3	λ L
q_2	1		q_3	λ L
q_3	1		q_3	1 L
q_3	0		q_3	0 L
q_3	λ		q_0	λ R

2) palindromi

$L = \{ w \in \{0,1\}^* \mid w = w^R \}$

1 0 1 1 1 0 1 1 1 0 1

1 0 1

zapamtiš si znak na početku do kraja ili nađeš isti znak i obrišeš ga pa ideš na početak

q_0	λ	q_1	λ N	- prazna riječ
q_0	0	q_2	λ R	- zapamti prvi 0 i idi desno
q_2	0	q_2	0 R	
q_2	1	q_2	1 R	
q_2	λ	q_3	λ L	- na kraju se obriše a zapamti 0
q_3	0	q_4	λ L	ako
q_3	0	q_4	0 L	- prazan ispis
q_4	1	q_5	1 L	
q_0	1	q_5	λ R	- isto 1 na početku
q_5	0	q_5	0 R	
q_5	1	q_5	1 R	
q_5	λ	q_6	λ L	
q_6	1	q_7	λ L	
q_7	0	q_7	0 L	
q_7	1	q_7	1 L	
q_4	λ	q_8	λ R	- obrisao na početku
q_8	0	q_8	0 N	
q_8	1	q_8	1 N	
q_8	λ	q_9	λ R	
q_9	0	q_9	0 N	
q_9	1	q_9	1 N	
q_3	λ	q_1	λ N	- prazna riječ
q_6	λ	q_1	λ N	