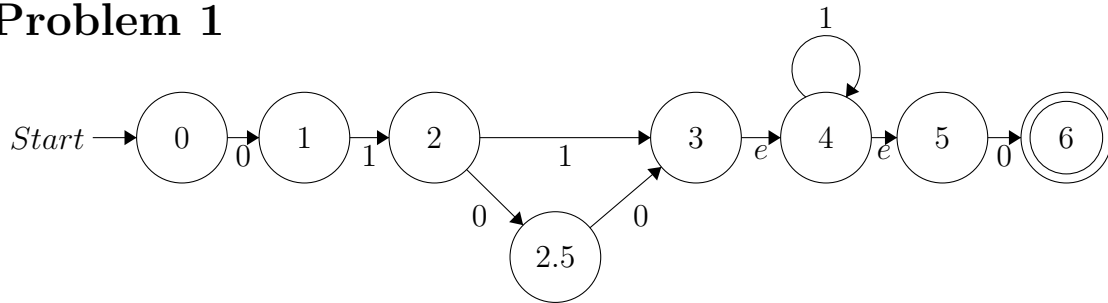


CSCI 301 HW 5

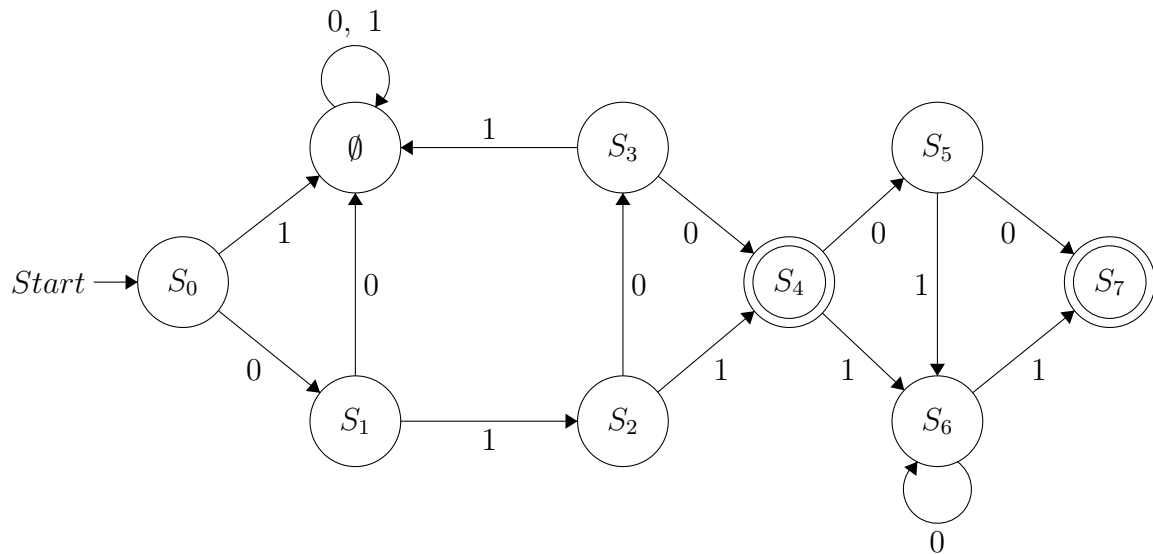
Isaac Boaz

May 20, 2023

Problem 1



Start/Final	States	0	1		Start/Final	States	0	1
S	{0}	{1}	\emptyset	\rightarrow	S	{ S_0 }	{ S_1 }	\emptyset
	{1}	\emptyset	{2}			{ S_1 }	\emptyset	{ S_2 }
	{2}	{2.5}	{3}			{ S_2 }	{ S_3 }	{ S_4 }
	{2.5}	{3}	\emptyset			{ S_3 }	{ S_4 }	\emptyset
F	{3}	{4, 5, 6}	{4}		F	{ S_4 }	{ S_5 }	{ S_6 }
F	{4, 5, 6}	{6}	{4}		F	{ S_5 }	{ S_7 }	{ S_6 }
F	{4}	{4}	{6}		F	{ S_6 }	{ S_6 }	{ S_7 }
						\emptyset	\emptyset	\emptyset



Problem 2

Original DFA Table

Start/Final	State	a	b
S	q_0	q_3	q_1
	q_1	q_2	q_4
F	q_2	q_2	q_4
	q_3	q_2	q_4
	q_4	q_4	q_4

Revised DFA Table

Start/Final	State	a	b
S	q_0	q_5	q_5
	q_5	q_2	q_4
F	q_2	q_2	q_4
	q_4	q_4	q_4

$$E_0 = \{\{q_2\}, \{q_0, q_1, q_3, q_4\}\}$$

$$E_1 = \{\{q_2\}, \{q_0\}, \{q_1, q_3, q_4\}\}$$

$$E_2 = \{\{q_2\}, \{q_0\}, \{q_1, q_3\}, \{q_4\}\}$$

