



Universidad Autónoma del Estado de Hidalgo

INSTITUTO DE CIENCIAS BÁSICAS E INGENIERÍA

**ÁREA ACADÉMICA DE COMPUTACIÓN Y
ELECTRÓNICA**

AUTOMATAS Y COMPILADORES

Práctica. AFD y AFND

Licenciatura en Ciencias Computacionales

LOZADA CASTELÁN LUIS ALONSO

Ejercicio 1.

$F = \{S0\}$

$\Sigma = \{0,1\}$

$Q = \{\text{START}, S0, S1\}$

$q_0 = \text{START}$

$f(\text{START}, 0) = S0$

$f(S0, 0) = S0$

$f(S0, 1) = S0$

$f(\text{START}, 1) = S1$

$f(S1, 0) = S1$

$f(S1, 1) = S1$

PALABRAS :

CORRECTAS

00101

00000

01111

00110

01010

INCORRECTAS

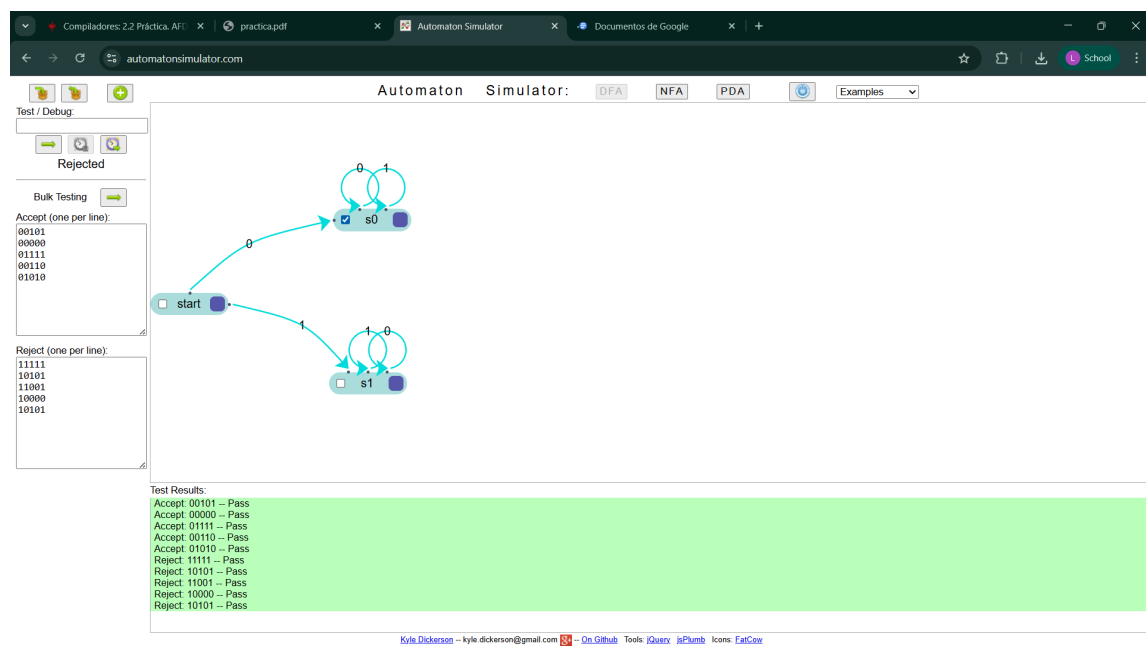
11111

10101

11001

10000

10101



Ejercicio 2.

$F=\{S1\}$

$\Sigma=\{0,1\}$

$Q=\{START, S0, S1\}$

$q_0= START$

$f(START, 0) = S0$

$f(START, 1) = S0$

$f(S0, 0) = S0$

$f(S0, 1) = S1$

$f(S1, 0) = S0$

$f(S1, 1) = S1$

PALABRAS

CORRECTAS

10101

11111

00001

01111

11001

INCORRECTAS

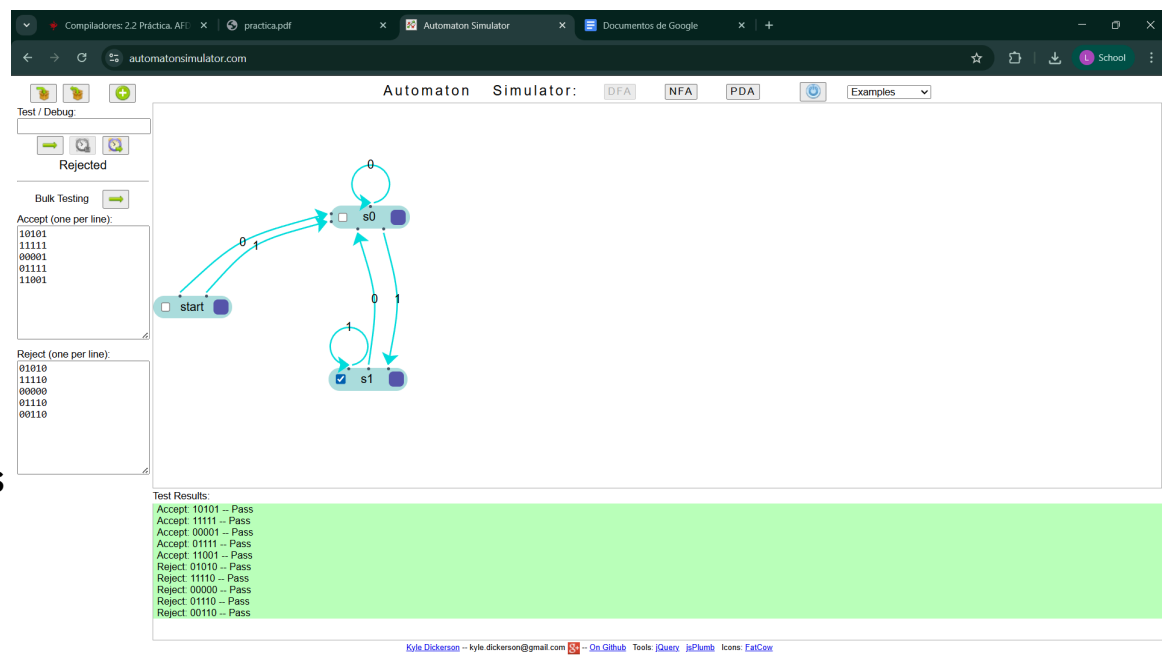
01010

11110

00000

01110

00110



Ejercicio 3.

$F=\{S1\}$

$\Sigma=\{0,1\}$

$Q=\{START, S0, S1\}$

$q_0= START$

$f(START, 0)=S1$

$f(START, 1)=START$

$f(S1, 0)=S1$

$f(S1, 1)=S2$

$f(S2, 0)=S2$

$f(S2, 1)=S2$

CORRECTAS

01010

10011

00101

11010

10111

INCORRECTAS

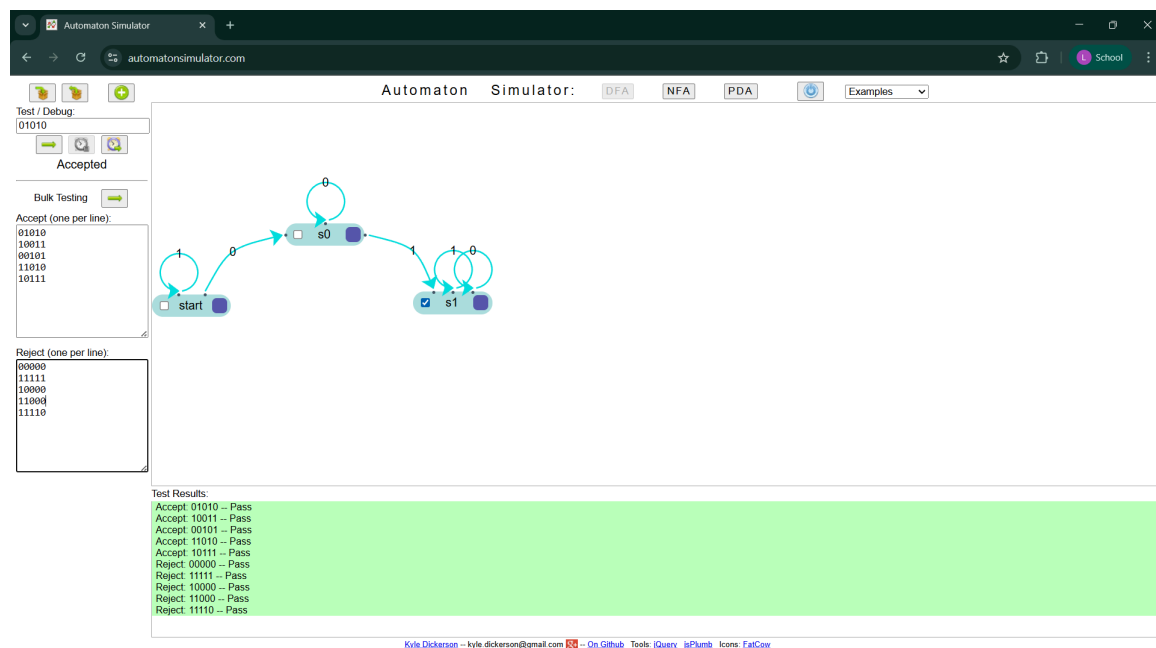
00000

11111

10000

11000

11110



Ejercicio 4.

$F = \{\text{START}, S0\}$

$\Sigma = \{0, 1\}$

$Q = \{\text{START}, S0, S1\}$

$q_0 = \text{START}$

$f(\text{START}, 0) = S0$

$f(\text{START}, 1) = \text{START}$

$f(S0, 0) = S0$

$f(S0, 1) = S1$

$f(S1, 0) = S1$

$f(S1, 1) = S1$

CORRECTAS

11111

11110

11100

11000

10000

INCORRECTAS

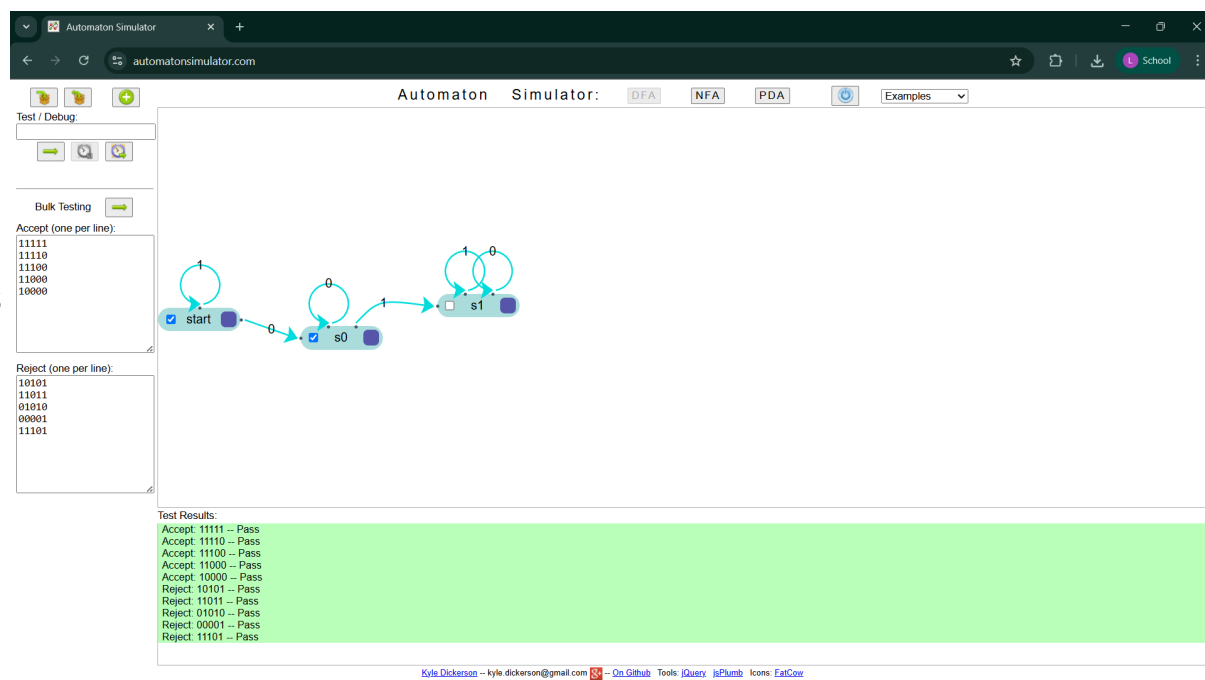
10101

11011

01010

00001

11101



Ejercicio 5.

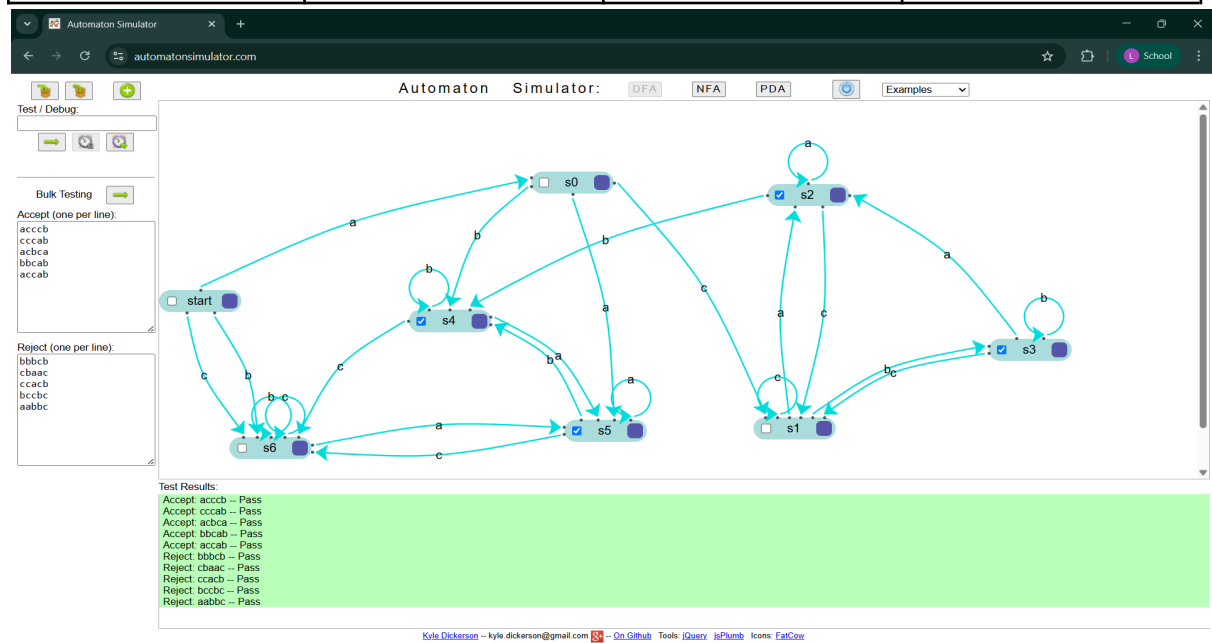
$F=\{S2, S3, S4, S5\}$

$\Sigma=\{a, b, c\}$

$Q=\{START, S0, S1, S2, S3, S4, S5, S6\}$

$q_0= START$

F	a	b	c
START	S0	S6	S6
S0	S5	S4	S1
S1	S2	S3	S1
S2	S2	S4	S1
S3	S2	S3	S1
S4	S5	S4	S6
S5	S5	S4	S6
S6	S5	S6	S6



CORRECTAS	acccb	cccab	acbca	bbcab	accab
INCORRECTAS	bbbcb	cbaac	ccacb	bccbc	aabbc

Ejercicio 6.

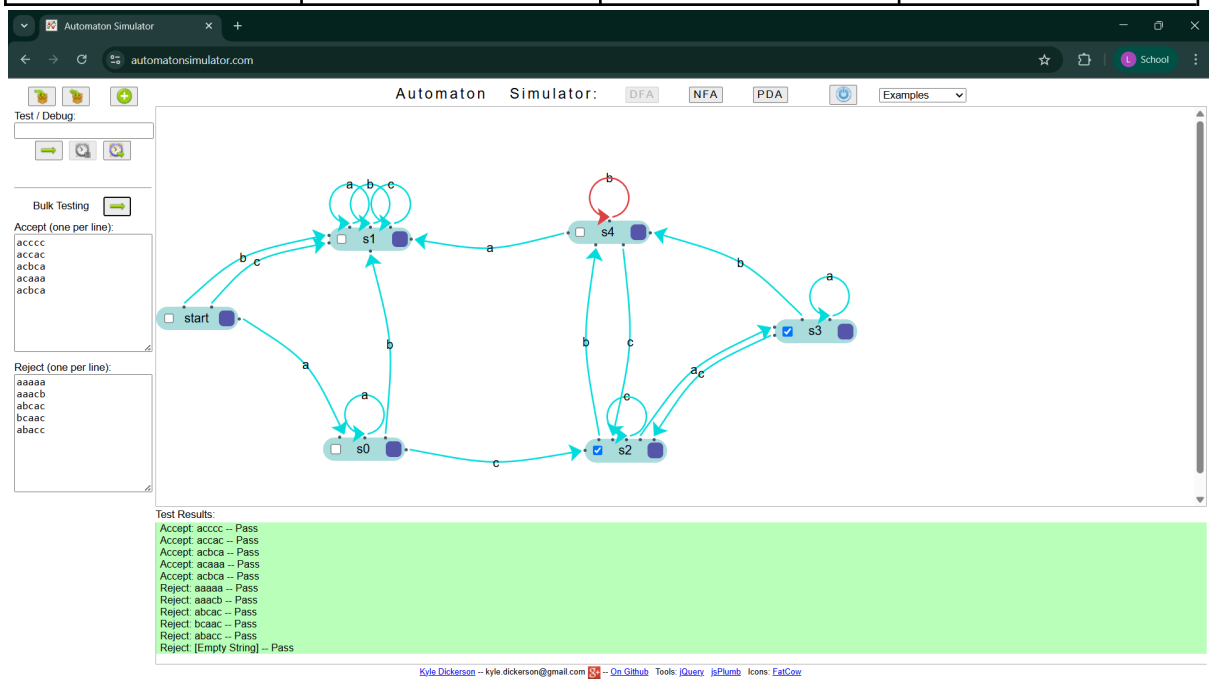
$F=\{S2, S3,\}$

$\Sigma=\{a, b, c\}$

$Q=\{START, S0, S1, S2, S3, S4\}$

$q_0= START$

F	A	B	C
START	S0	S1	S1
S0	S0	S1	S2
S1	S1	S1	S1
S2	S3	S4	S2
S3	S3	S4	S2
S4	S1	S4	S2



CORRECTAS	acccc	accac	acbca	acaaa	acbca
INCORRECTAS	aaaaa	aaacb	abcac	bcaac	abccc

Ejercicio 7.

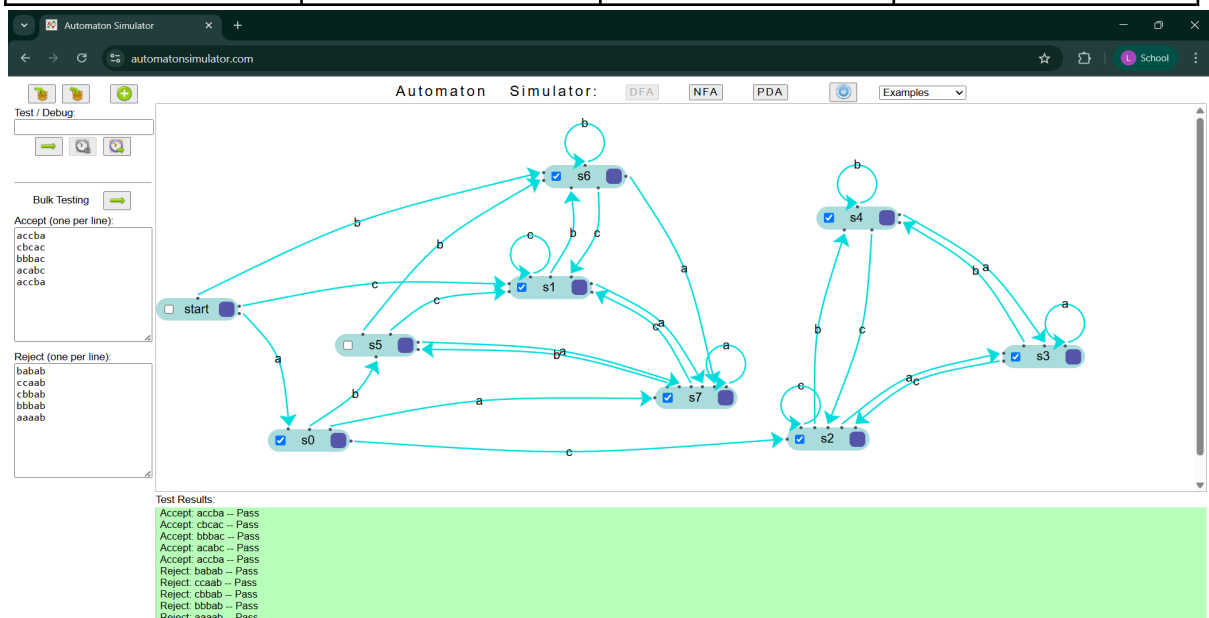
$F = \{\text{START}, S1, S2, S3, S4, S6, S7\}$

$\Sigma = \{a, b, c\}$

$Q = \{\text{START}, S0, S1, S2, S3, S4, S5, S6, S7\}$

$q_0 = \text{START}$

F	a	b	c
START	S0	S6	S1
S0	S7	S5	S2
S1	S7	S6	S1
S2	S3	S4	S2
S3	S3	S4	S2
S4	S3	S4	S2
S5	S7	S6	S1
S6	S7	S6	S1
S7	S7	S5	S1



CORRECTAS	accba	cbcac	bbbac	acabc	accba
INCORRECTAS	babab	ccaab	cbbab	bbbab	aaaab

Ejercicio 8.

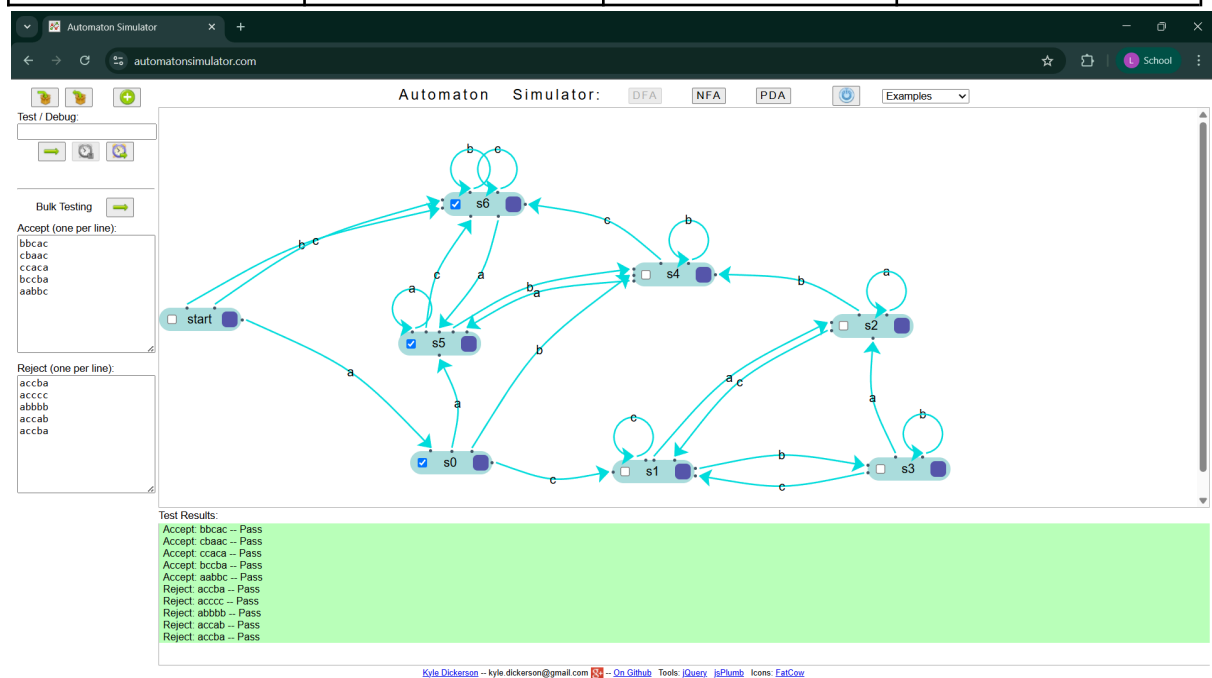
$F = \{S0, S5, S6\}$

$\Sigma = \{a, b, c\}$

$Q = \{START, S0, S1, S2, S3, S4, S5, S6, S7\}$

$q_0 = START$

F	a	b	c
START	S0	S6	S6
S0	S5	S4	S1
S1	S2	S3	S1
S2	S2	S4	S1
S3	S2	S3	S1
S4	S5	S4	S6
S5	S5	S4	S6
S6	S5	S6	S6



CORRECTAS	bbcac	cbaac	aacac	bccba	aabbc
INCORRECTAS	accba	acccc	abbbb	accab	accba

Ejercicio 9.

$F = \{\text{START}, S0\}$

$\Sigma = \{0, 1\}$

$Q = \{\text{START}, S0\}$

$q_0 = \text{START}$

$f(\text{START}, 0) = S0$

$f(\text{START}, 1) = \text{START}$

$f(S0, 0) = S0$

CORRECTAS

11111

11100

10000

00000

11110

INCORRECTAS

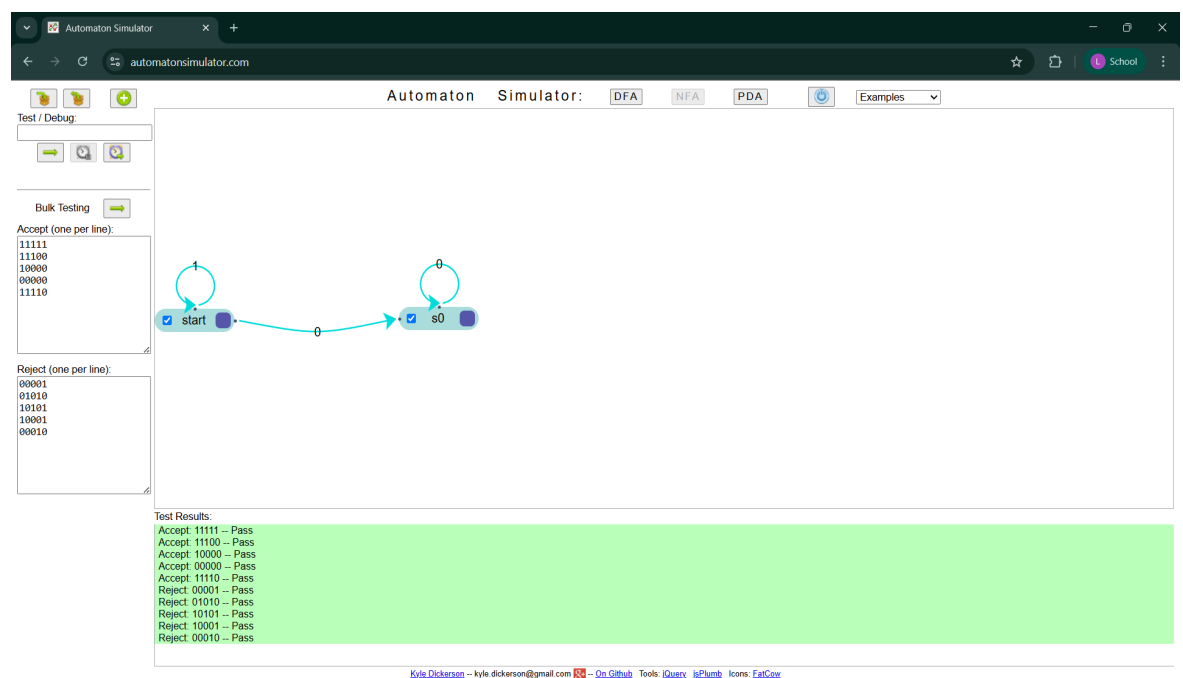
00001

01010

10101

10001

00010



Ejercicio 10.

$F=\{S3\}$

$\Sigma=\{a, b, c\}$

$Q=\{START, S0, S1, S2, S3\}$

$q_0 = START$

$f(START, a)=S0$

$f(S0, b)=S1$

$f(S1, a)=S1$

$f(S0, a)=S2$

$f(S1, b)=S1$

$f(S1, c)=S1$

$f(S1, b)=S3$

CORRECTAS

accab

acbab

acaab

acccab

acbbab

INCORRECTAS

aaaaa

ccccc

bbbbb

abbca

baacc

