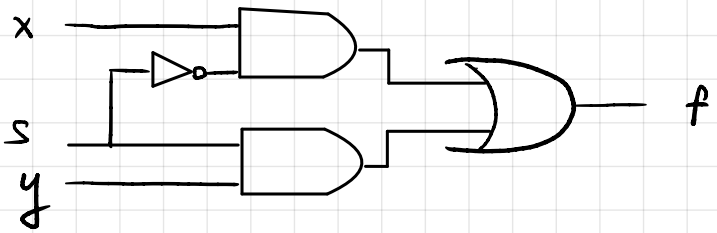
CSC 258 Lab 1

Chenyue Li # 1004767558

- Part 1:

1. Draw the gate diagram

$$f = xs' + ys$$



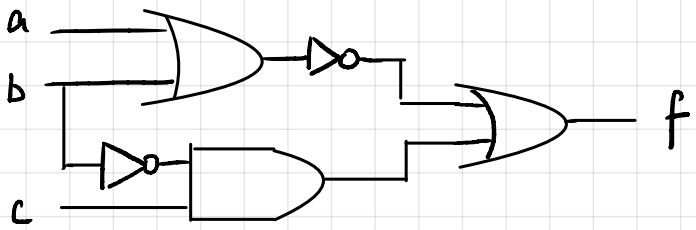
2. - Truth Table:

x	s	y	xs'	ys	f
0	0	0	0	0	0
0	0	1	0	0	0
0	1	0	0	0	0
0	1	1	0	1	1
1	0	0	1	0	1
1	0	1	1	0	1
1	1	0	0	0	0
1	1	1	0	1	1

- Part 2:

1. Draw the diagram

$$f = (a+b)' + cb'$$



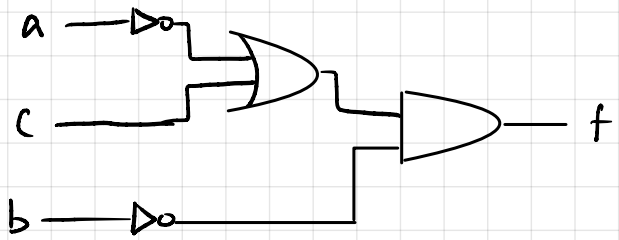
2. truth table

a	b	c	(a+b)'	cb'	f
0	0	0	1	0	1
0	0	1	1	1	1
0	1	0	0	0	0
0	1	1	0	0	0
1	0	0	0	0	0
1	0	1	0	1	1
1	1	0	0	0	0
1	1	1	0	0	0

3. Cheaper implementation

$$f = (a'b') + (cb')$$

$$f = b'(a'+c)$$



4 gates.