NAME: Bobert Martine 7

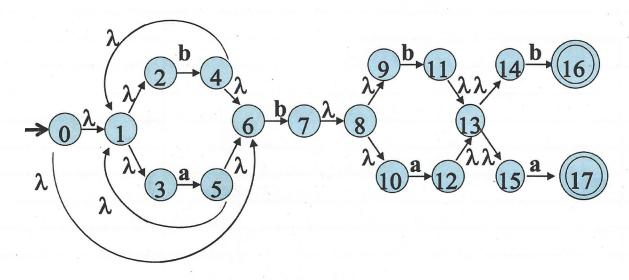
cs3186-Midterm #2 - Take Home Part

A. Construct an NFA for the regular expression:

$$0(0+1)*0 + 1(0+1)*$$

Note: DO NOT NEED TO SHOW ALL intermediate steps just the final NFA

B. Find the DFA's transition table for the NFA below.



C. Given $\Sigma = \{a, b\}$:

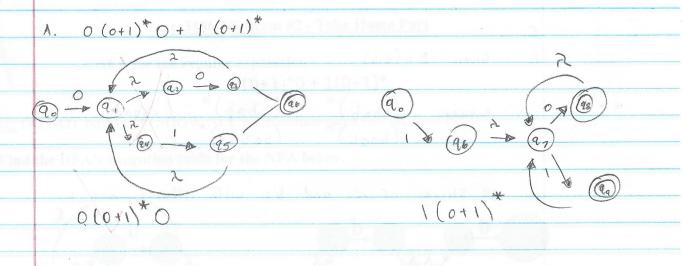
- 1. Write a regular expression for the set: "All strings of a's and b's beginning with bb and not having three consecutive a's "
- 2. Describe in English the languages denoted by the following regular expression: (a + b)*b(a + b)*
- 3. Write a regular expression for the following language:

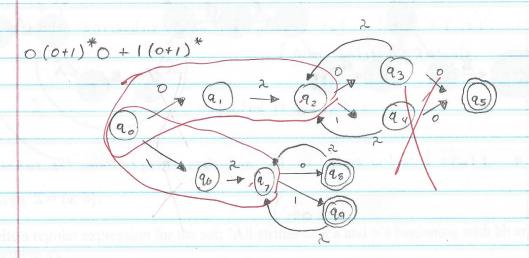
 $L(w) = \{w \mid w \text{ has exactly a single substring abaa or exactly a single substring babb}\}$

4. Write a regular expression for the following language:

 $L(w) = \{w \mid w \text{ ends in bb and does } \frac{1}{w} \text{ contain the substring aba}\}$

	ALLON			ī
National Control	В	A: 2 (losure (0) = {1,2,3,6,0}	
A Commercial Commercia	B =	(A, a)	£ 1, 2, 3, 5, 6 3	V
A CONTRACTOR OF THE PERSON OF	C =	(A, b)	£1,2,3,4,6,7,8,9,10 }	V
Philadeleconomic Name	B =	(B, a)	£1, 2, 3, 5, 6 }	1
SCHOOL STREET	C =	(B,b)	£1,2,3,4,6,7,8,9,103	V/
Properties of the Party of the	p =	((, 01)	21, 1, 3, 5, 6, 12, 13, 14, 15 3	
Standing of the Party of the Pa	E=	((,b)	{1,2,3,4,6,7,8,9,10,11,13,14,15}	V
Annual Control of the last of	F =	(D, a)	{1,2,3,5,6,17} ✓	1
Manage of the section of	6:	(D, b)	£1,7,3,4,6,7,8,9,10,163	IV,
Continues of the same	H =	(E, a)	{1,2,3,5,6,12,13,14,15,17}	
CONTRACTOR VALIDATION OF	I =	(E, b)	{3,4,6,7,8,9,10,11,12,13,14,15,16}	1
- Contractor Contractor	В=	(F,a)	{ 5,6,132;33 ·V	1
Section of the last of the las	C =	(F, b)	€1,2,3;4,6,7,8,9,103	IV.
-	D =	(6, a)	£1,2,3,5,6,12,13,14,153 V	1
-	C =	(6,6)	2 1, 2, 3, 4, 6, 7, 8, 9 (7) 3	1
	F=	(H, a)	£1,2,3,5,6,173V.	V
	6 z	(H,b)	{1,2,3,4,6,7,8,9,10,16}	1
	H =	(1,4)	€1,2,3,5,6,12,13,14,15,173	1/
	J=	(I,b)	{3,4,6,7,8,9,10,11,12,13,14,15,163	
			/\	





2 x 2 = 4

1. Given 2 = (a,b) (bbab)*
(baab)* (abab)* 2. All Strings of a's and b's with atleast one b 3. L(w) = {w|w has exactly a single substring aboa or exactly a single substring babb? = (abaa U babb) 4. L(w): Ew I w ends in bb and does not contain the substring aba }