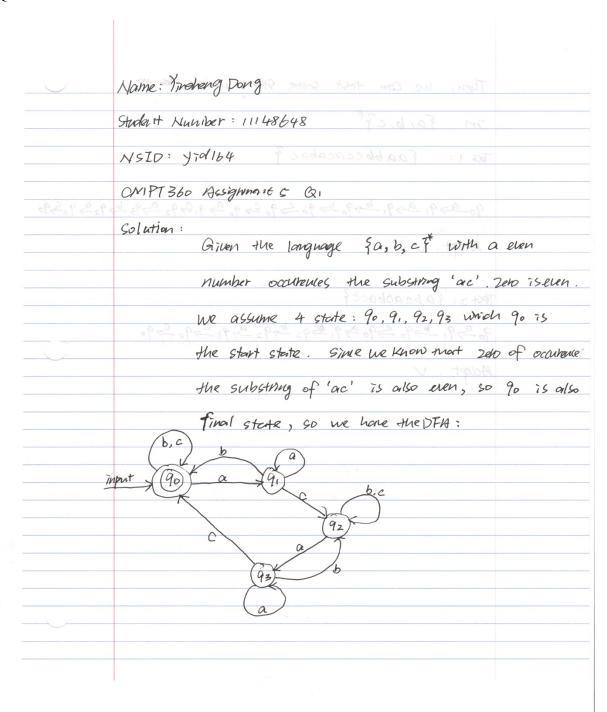
Name: Yinsheng Dong Student Number: 11148648

NSID: yid164

CMPT360 Assignment 5

Question 1.



	Then, we can test some strings which some
	7n {a,b,c}** 8pd84111 = 1301,0101 + 130198
	Tet 1: {aabbccacabac} . Nallor Calab
-	OMPT360 DESAMONEC QI
	90-0-91 0-91 0-90 0-90 0-90 0-90 0-90 0-
	Solution:
Naya	Accept. V. d. O? year pan) and nouse
200 = 000	Line, buttegne on somanno inquin
138351 (13)	Test >: {a bc aobacc}
25 08	US OGUMME 4 CHOPE: 90, 91, 92, 93 WARD
	90 291 - 290 290 291 = 92 29 93 - 90 - 90.
3368147770 20	ART USEAL STANKS AND SHEEK SHOWS AND
	Accept. V
15 9150	of home of the CI DID to fortherms AMA
	Timol state, so we have the DEA:
	ment (90) a fair
	(92)

Question 2.

	Name: Yinsheng Dong	15'F) and	8 (Z(X) = W	
	student Number: 111486	482 6000	Then, we	
	NSID: yid164.	(GAX	MME abale	
	CMPT 360 DSSignment S	Q200	1.UM) = ab"+	
	Solution:		· CMUZ=CMUZ ·	?
	Given MI= (K	, 8, 8, 5,	F):DFA.	
Klind	Solution: Given MI=(K,	פרמעלי זאי צ	It is back be	
		至, 8, 5,7		
Odora	avel LIM's can accept w			
267400	ICE'	Clares the	relation ship between	1/1N) ound 10
	, ,	JULIU TURE	MAL MEAN	20 //
	Let's design	a DEM	Dr M.	
		a vert 7	b (MULDIMILE)	
	M:	(0)	- (1)	
\	TIPUT (90) a (91)	a>(95)	For a and b,	aba
and	b b		9	
	M) Share & Can Occap	Z RAKINS Z	initail, and it has	oulu 1
	(93)			
	aib	F	inal stat : F= 1923	
		•		
	Let's design on DFH	For M':		
	0		For a and b,	9
	M's he samether all SM	Vaib	Intato +akes	both a or
		(92)	'al*n'	
bu		Li= Calph	as initial, an	d 7+ has 2
	one to be the M. (CFINAL Stat	Final State : I = {	9, 927
	(73)		111011 31011 -	(,, ,, ,
	(mb)		he that FCF, a	

	$M=(K,\Sigma, 8, S,T)$ and $M'=(K,\Sigma,8,S,T')$.
	Then, we could see LUM) and LUM')
	IME aba(atb) + HIDER OIDM
	$L(M') = ab^* + a(a+b)^* = 7 ab^* + ab^*a(a+b)^*$
	(i) L(M)=L(M') . : mithile?
	GNAN M=(K, E, B, S, F): DFA.
	It is false because in my construction, LM', definally
My pand (M)	75 not equal to 20M), and 20M') can accept more
(1)	than LCM).
	Let's obegin a DEVA for M:
	(ii) LM)CLM')
1,71,1	dans a gat (10) - (0) - (0) -
50 100,	It is the because LLM') can have more than LUM), and
1 12/	LCMI') can also cotains LUM), since M' can accept LUM)
	for as well.
8	(iii) 7(W) 25(W,) . : , W 25 1420 W 46000 2,401
to o Had	It is false because LUM) can not contains all LUM')
74 Mas 2	For example: Li=(abbbb'). M' can read it and
Fep.,	accept 1, to 9. (final state). M con't read it and
	cannot accept it. Then, the statment is false.

Question 3.

	Name: Yrnsheng Dong.
	Student number: 11148648.
	NSID: yid 164 m + 1900 MO M SHED M AND
	CMPT 360 Assignment 5 Qz.
	IN our only accept and numbers, so LCL
	Solution:
	(o) L' can he accepted pay top loote M' or M
	1) Design FIA for \$ L'= \ \ EL Such that Iw) is odd?
	a such a make make the
f John	input (1)
	wis even with wel
	92
	IWI ·
	This initial state is 90, final state is 91, and dead state
	75 92. This FA only take WEL and waterall win L
	75 odd .
	2) Design FA for L.
	Ms: a is # number
	This initial state is 90, Final state is 90, it means that

	Now, we can say that M can take more varibles
	Trigate runnings : 111 +36+2
	that M' Since M can accept more numbers, but
	M' can only accept odd numbers, so L'CL.
	CHAIR!
	so L' can be accepted by \$1 both M' or M
1 1/4	
	So the madine class in fact accept L' Then
	we can say that L'= \in EL such that IwI is odd?
	75 regular 1911
8	(P.E.)
	· Pays
dend state	This initial state is 90, final state is 91, and
J NI W	75 92. This FA only take WEL and to see for all
	. bbo 27
	. 1000 (1
	2) Design IN for L.
	and May illease of
	Mo: If Y a number
	$((\circ P))$
ieans that	This initial shote is go, Final shote is go it in
	It can take all a numbers he acceptable.