DFA from Regular Expression:-

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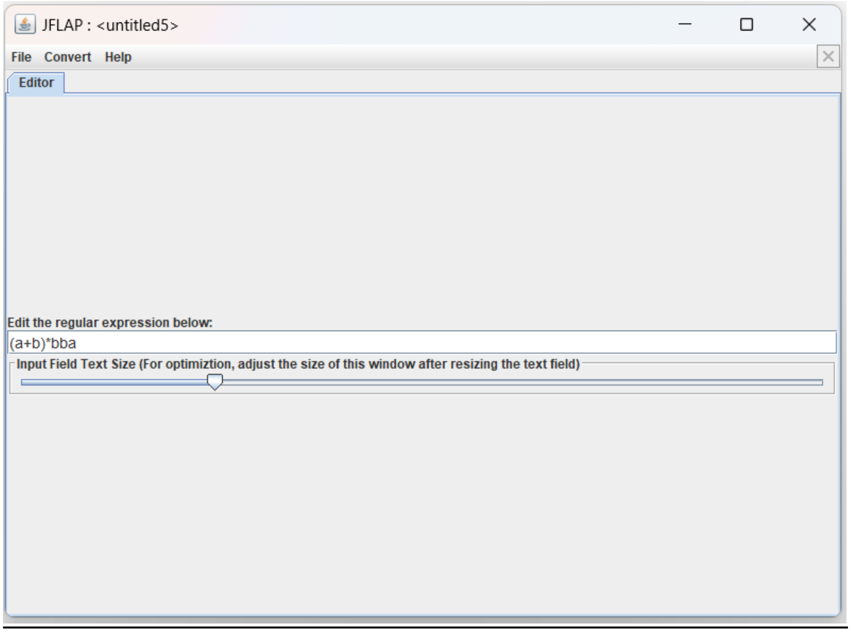
STEP 1- Enter Regular Expression

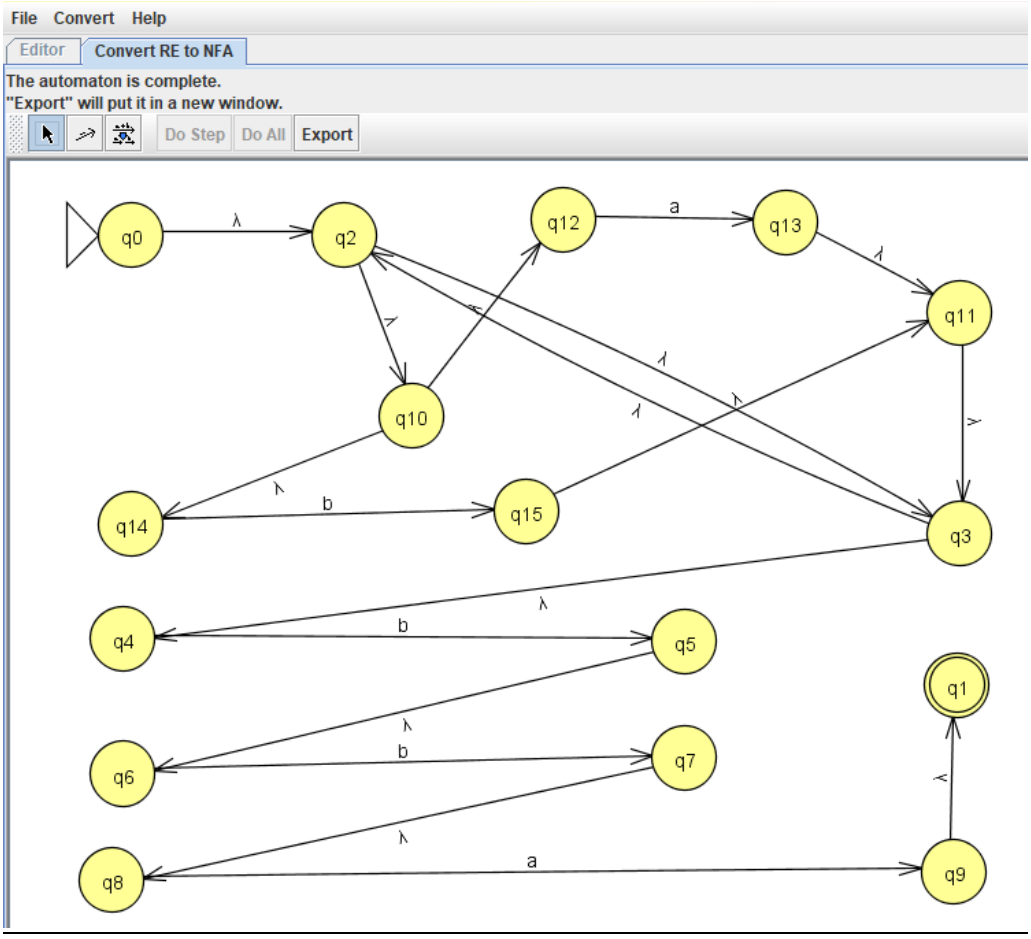


Edit the regular expression below:

(a+b)*bba

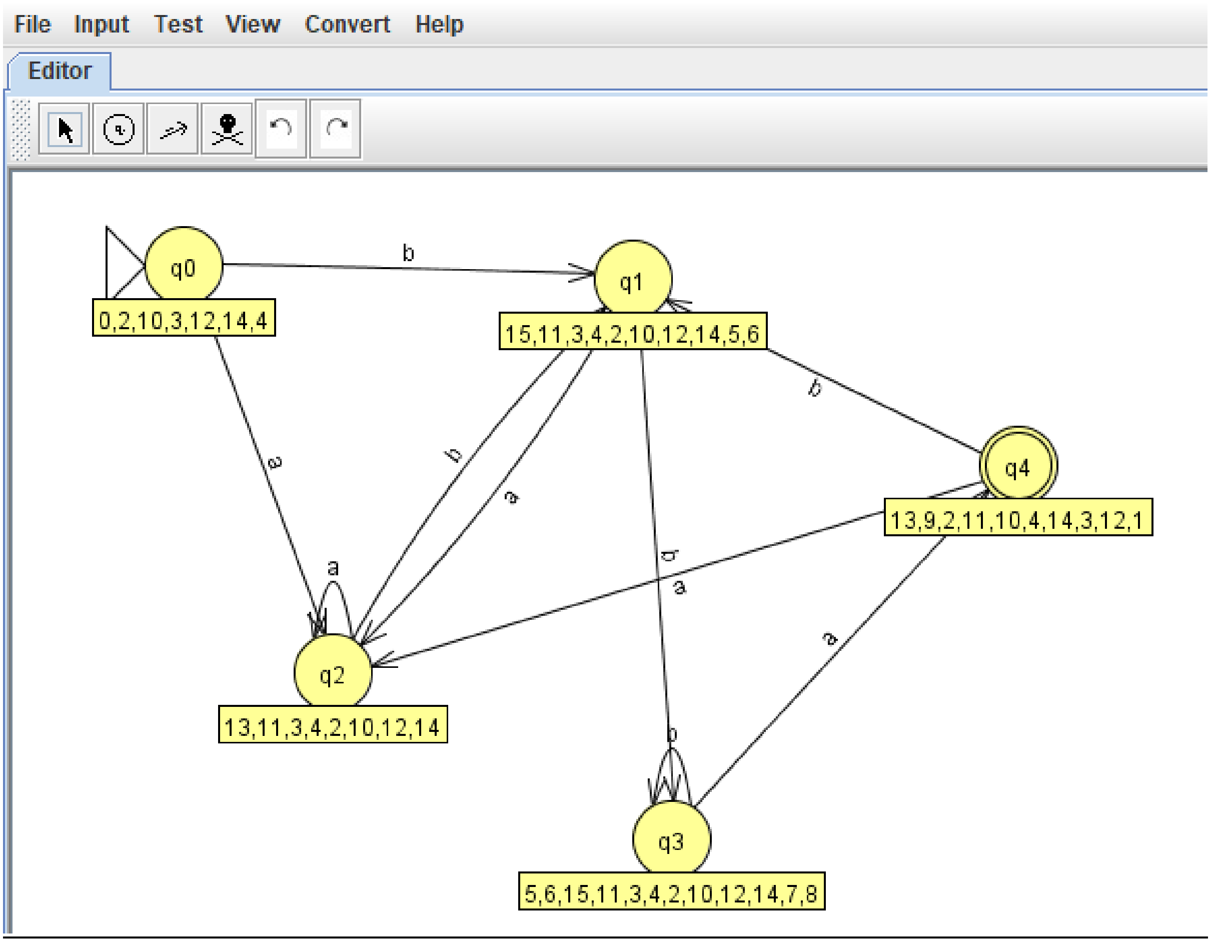
Input Field Text Size (For optimiztion, adjust the size of this window after resizing the text field)

STEP 2- RE to NFA



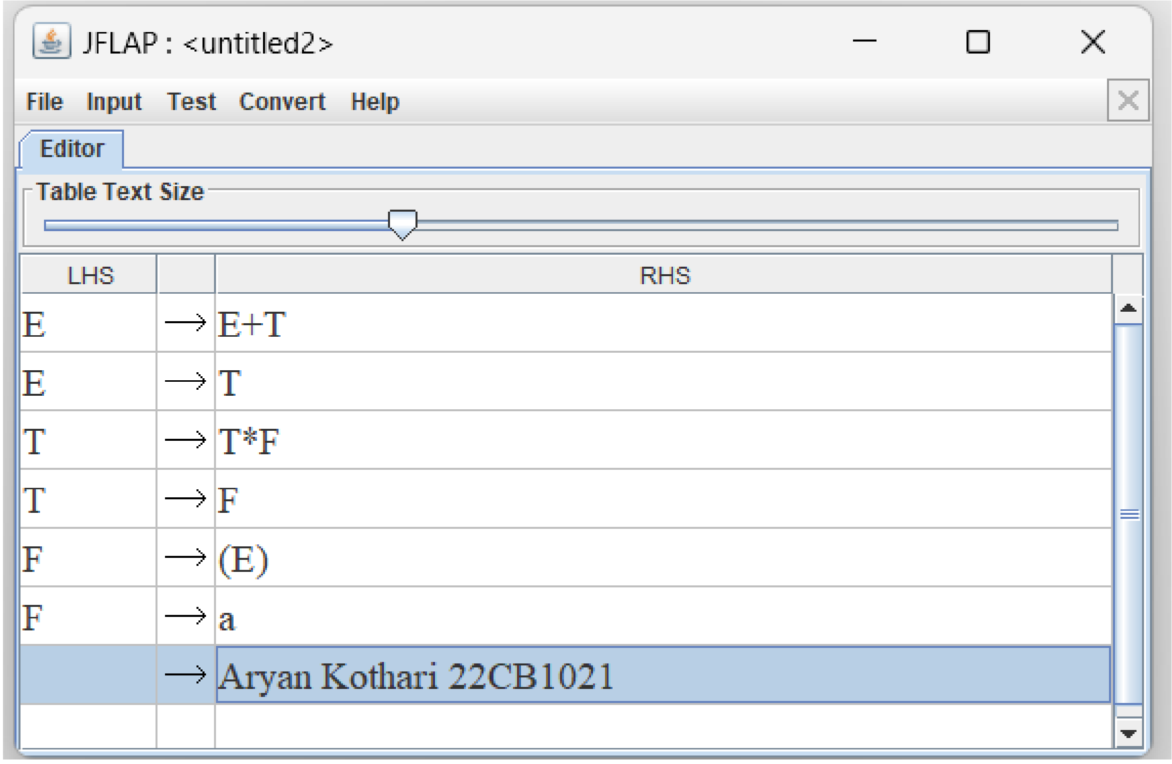
The automaton is complete.
"Export" will put it in a new window.

STEP 3- NFA to DFA



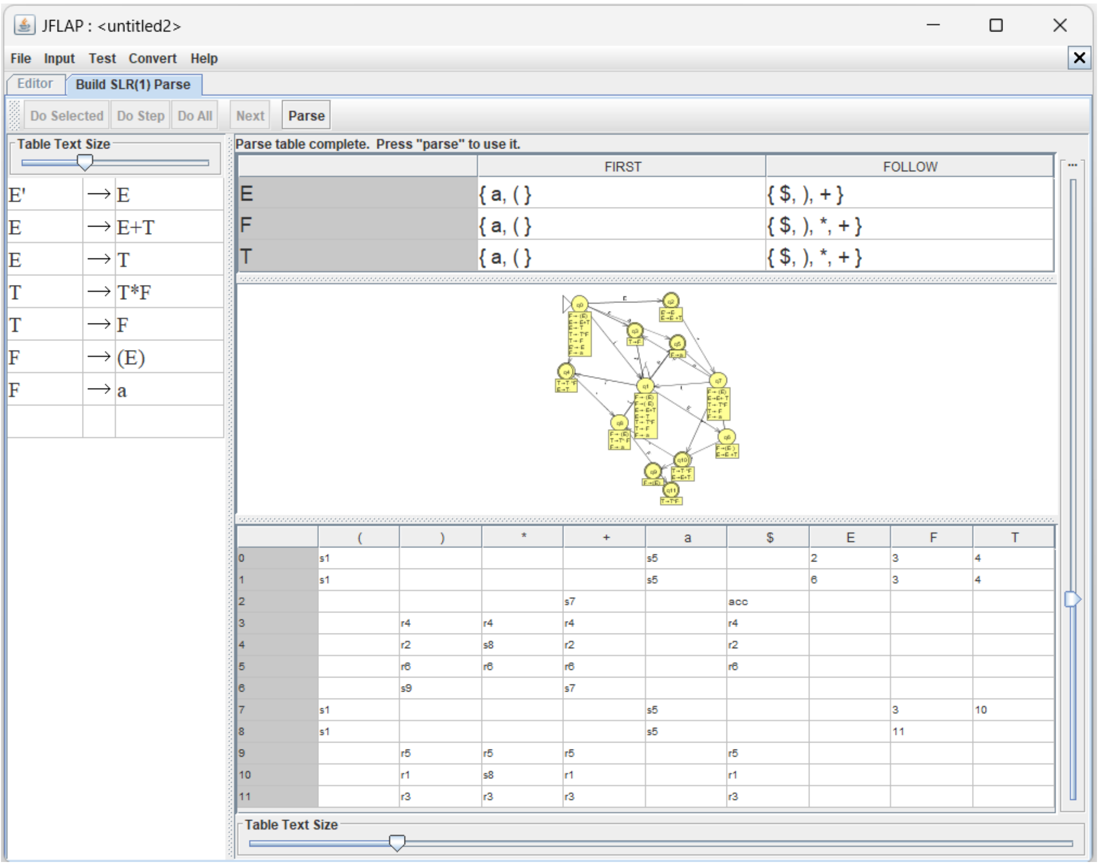
SLR(1) parse table for a given grammar:-

STEP 1- Insert Grammar



LHS		RHS
E	→	E+T
E	→	T
T	→	T*F
T	→	F
F	→	(E)
F	→	a
	→	Aryan Kothari 22CB1021

STEP 2- Creating SLR (1) PARSING TABLE



E'	→	E
E	→	E+T
E	→	T
T	→	T*F
T	→	F
F	→	(E)
F	→	a

Parse table complete. Press "parse" to use it.

	FIRST	FOLLOW
E	{ a, (}	{ $,), + }
F	{ a, (}	{ $,), *, + }
T	{ a, (}	{ $,), *, + }

	(	)	*	+	a	$	E	F	T
0	s1				s5		2	3	4
1	s1				s5		6	3	4
2				s7		acc			
3		r4	r4	r4		r4			
4		r2	s8	r2		r2			
5		r6	r6	r6		r6			
6		s9		s7					
7	s1				s5			3	10
8	s1				s5			11	
9		r5	r5	r5		r5			
10		r1	s8	r1		r1			
11		r3	r3	r3		r3			

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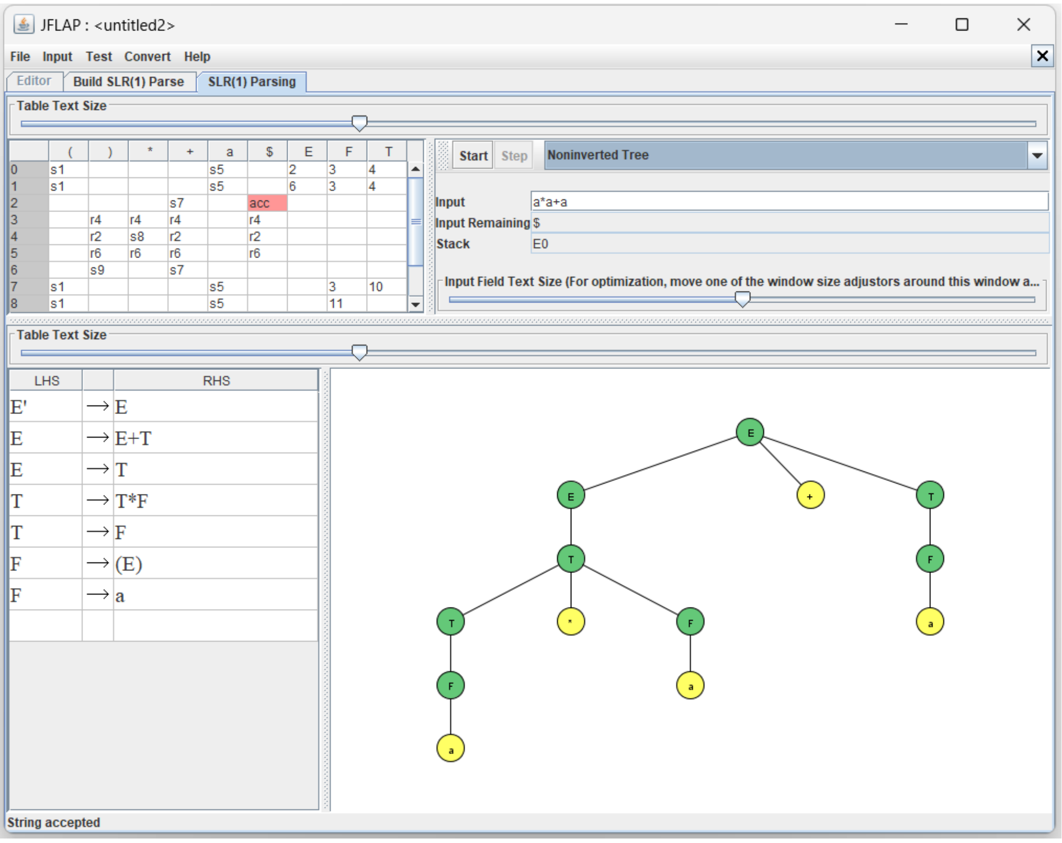
STEP 3- Create PARSE TREE



	(	)	*	+	a	$	E	F	T
0	s1				s5		2	3	4
1	s1				s5		6	3	4
2				s7		acc			
3		r4	r4	r4		r4			
4		r2	s8	r2		r2			
5		r6	r6	r6		r6			
6		s9		s7					
7	s1				s5			3	10
8	s1				s5			11	

Input a*a+a
Input Remaining $
Stack E0

Input Field Text Size (For optimization, move one of the window size adjustors around this window a...

LHS		RHS
E'	→	E
E	→	E+T
E	→	T
T	→	T*F
T	→	F
F	→	(E)
F	→	a

String accepted