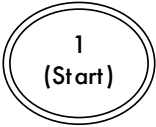
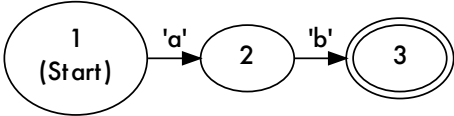
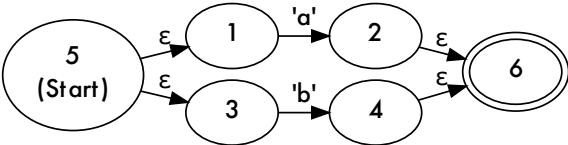
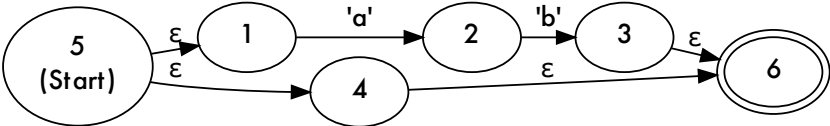
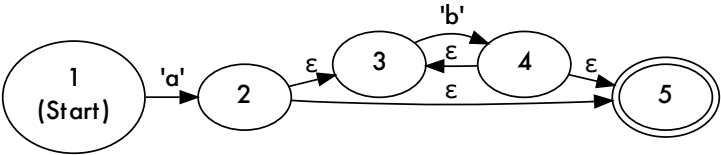


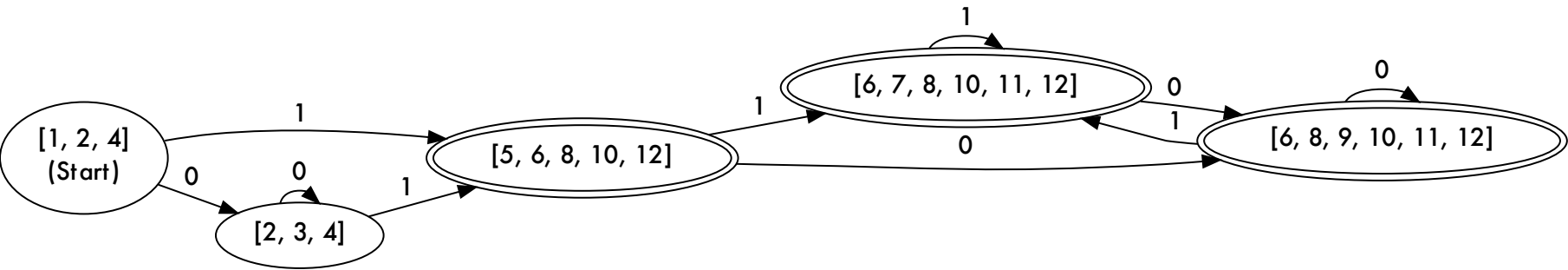
Part 1 (NFA Construction)

Command	NFA
java Show NFA ''	
java Show NFA 'ab'	
java Show NFA 'a b'	
java Show NFA 'ab '	
java Show NFA 'ab*'	

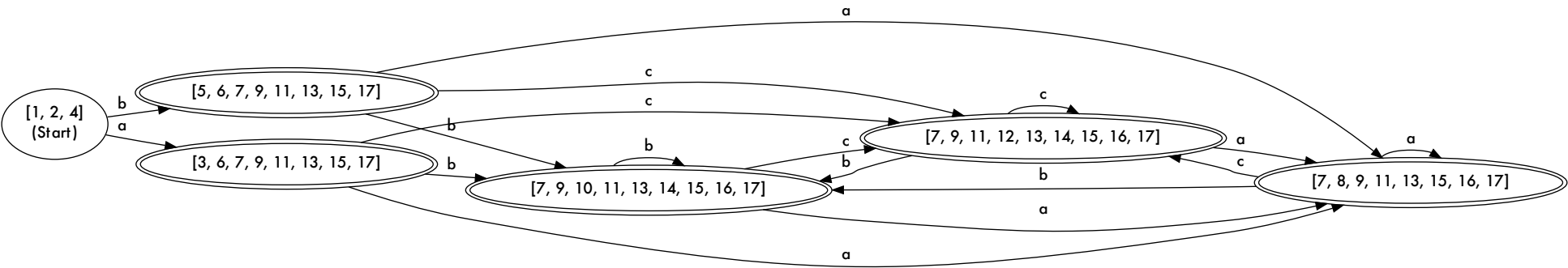
Command	NFA
java Show NFA '(ab)*'	<pre>graph LR; 1((1 (Start))) -- ε --&gt; 2((2)); 2 -- 'a' --&gt; 3((3)); 3 -- 'b' --&gt; 4((4)); 4 -- ε --&gt; 2; 4 -- ε --&gt; 5(((5))); 1 -- ε --&gt; 5;</pre>
java Show NFA '(ab c ) *'	<pre>graph LR; 1((1 (Start))) -- ε --&gt; 10((10)); 10 -- ε --&gt; 2((2)); 2 -- 'a' --&gt; 3((3)); 3 -- 'b' --&gt; 4((4)); 4 -- ε --&gt; 9((9)); 10 -- ε --&gt; 8((8)); 8 -- ε --&gt; 5((5)); 5 -- 'c' --&gt; 6((6)); 6 -- ε --&gt; 9; 10 -- ε --&gt; 10; 9 -- ε --&gt; 11((11)); 11 -- ε --&gt; 12(((12))); 1 -- ε --&gt; 12;</pre>

Part 2 (DFA Construction)

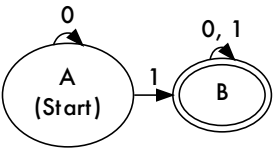
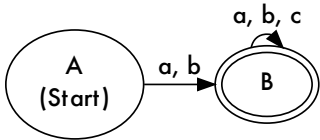
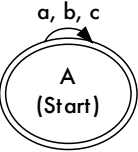
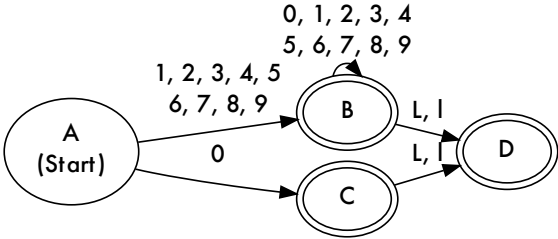
```
java Show DFA-DETAIL '0*1(1|0)*'
```



```
java Show DFA-DETAIL '(a|b)(a|b|c)*'
```



Part 3 (DFA Optimization)

Command	DFA
<pre>java Show DFA-OPT '0*1(1 0)*'</pre>	
<pre>java Show DFA-OPT (a b)(a b c)*</pre>	
<pre>java Show DFA-OPT (a b )(a b c)*</pre>	
<pre>java Show DFA-OPT '((0 ((1 2 3 4 5 6 7 8 9) ((0 (1 2 3 4 5 6 7 8 9)) (0 (1 2 3 4 5 6 7 8 9))*  )))((1 L) ))'</pre>	

## Part 4 (Tokenization)

```
java Tokenize simple-tok.txt ab.txt
```

```
001:01 A2(aaa)
001:04 B1(bbaa)
001:08 A2(aa)
003:03 A2(aa)
003:06 B2(bb)
003:09 A2(aa)
005:01 A2(a)
005:02 B2(b)
005:03 A2(a)
005:04 B1(bbaa)
005:08 A1(aabb)
005:12 A2(a)
EOF.
```

```
cat num.txt | java Tokenize num-tok.txt
```

```
001:01 SpecialNumber(123)
001:06 DecimalIntegerLiteral(1231)
001:12 DecimalIntegerLiteral(92399239L)
001:23 HexIntegerLiteral(0x1231)
001:31 DecimalIntegerLiteral(0)
001:32 DecimalIntegerLiteral(987L)
003:01 HexIntegerLiteral(0x123)
003:06 DecimalFloatingPointLiteral(.23)
004:01 DecimalFloatingPointLiteral(23e-123)
EOF.
```