

## Crafting a Compiler

**Exercise 3.3:** Write regular expressions that define the strings recognized by the FA's in Figure 3.33 on page 107

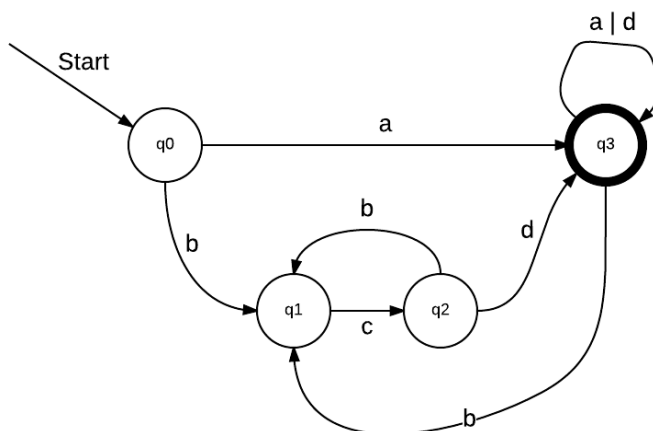
**Figure 1:**  $(a(b)^*a) \mid (b(a)^*b)$

**Figure 2:**  $a \mid (a(bc \mid c)da)^+$

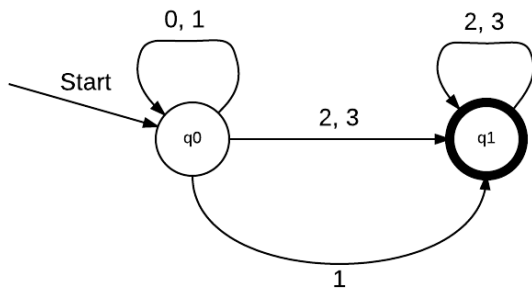
**Figure 3:**  $\{ \} \mid a(b)^*c$

**Exercise 3.4:** Write DFA's that recognize the tokens defined by the following regular expressions:

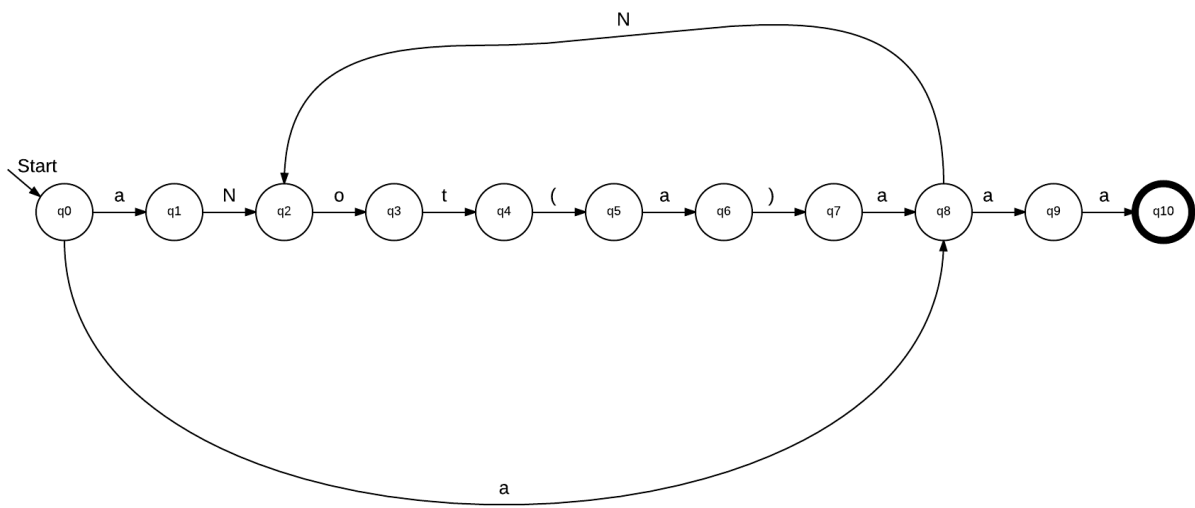
a)



**b)**

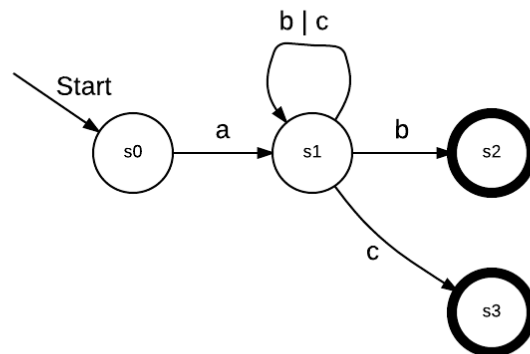


**c)**



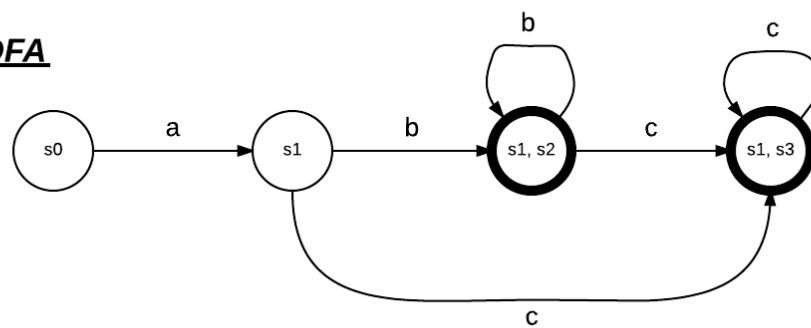
**Exercise 3.15:**

**NFA**



	<b>a</b>	<b>b</b>	<b>c</b>
<b>s0</b>	s1	s0 -	s0 -
<b>s1</b>	s1 -	{s1, s2}	{s1, s3}
<b>{s1, s2}</b>	{s1, s2} -	{s1, s2}	{s1, s3}
<b>{s1, s3}</b>	{s1, s3} -	{s1, s3}	{s1, s3}

**DFA**



## DragonBook

**Ex 3.3.4:**

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