

Quiz #7 Exercise (1/2)

1 Start \rightarrow S \$
 2 S \rightarrow A C
 3 C \rightarrow c
 4 | λ
 5 A \rightarrow a B C d
 6 | B Q
 7 B \rightarrow b B
 8 | λ
 9 Q \rightarrow q
 10 | λ

Show the process of
 bottom-up parsing for
 a b c d \$
 (Reference Slide 13)

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Exercise #7 Exercise (2/2) (Parse Table)

State	a	b	c	d	q	\$	Start	S	A	B	C	Q
0	3	2	8		8	8	accept	4	1	5		
1			11			4					14	
2		2	8	8	8	8				15		
3		2	8	8						9		
4						8						
5			10		7	10						6
6			6			6						
7			9			9						
8						1						
9			11	4							10	
10				12								
11				3		3						
12			5			5						
13			7	7	7	7						
14						2						

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Parsing: a b c d \$

0	Initial Configuration	abcd\$
0 a(3)	Shift a	bcd\$
0 a(3) b(2)	Shift b	cd\$
0 a(3) b(2)	Reduce λ To B	Bcd\$
0 a(3) b(2) B(13)	Shift B	cd\$
0 a(3)	Reduce bB to B	Bcd\$
0 a(3) B(9)	Shift B	cd\$
0 a(3) B(9) c(11)	Shift c	d\$
0 a(3) B(9)	Reduce c to C	Cd\$
0 a(3) B(9) C(10)	Shift C	d\$
0 a(3) B(9) C(10) d(12)	Shift d	\$
0	Reduce aBCd to A	A\$
0 A(1)	Shift A	\$

0 A(1)	Reduce λ To C	C\$
0 A(1) C(14)	Shift C	\$
0	Reduce AC to S	S\$
0 S(4)	Shift S	\$
0 S(4) \$(8)	Shift \$	\$
0	Reduce S\$ to Start	Start\$
0 start(0)	Shift Start	\$
Accept		