

Grammatiche esercizio

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2° semestre 3° anno

1 Grammar 1

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$$\begin{aligned} S &\rightarrow BAS \mid \epsilon \\ A &\rightarrow BSS \mid ab \\ B &\rightarrow AS \mid ba \end{aligned}$$

States	a	b	\$	S	A	B	Symbol map
s0	s2/r2	s3/r2	r2	1	4	5	[]
s1			acc				[S]
s2		s6					[a]
s3	s7						[b]
s4	s2/r2	s3/r2	r2	8	4	5	[A]
s5	s2/r2	s3/r2	r2	10	9	5	[B]
s6	r4	r4	r4				[ab]
s7	r6	r6	r6				[ba]
s8	r5	r5	r5				[AS]
s9	s2/r2	s3/r2	r2	11	4	5	[BA]
s10	s2/r2	s3/r2	r2	12	4	5	[BS]
s11	r1/r5	r1/r5	r1/r5				[BAS]
s12	r3	r3	r3				[BSS]

Tabella 1: Tabella di parsing LR(0)

States	a	b	\$	S	A	B	Symbol map
s0	s2/r2	s3/r2	r2	1	4	5	[]
s1			acc				[S]
s2		s6					[a]
s3	s7						[b]
s4	s2/r2	s3/r2	r2	8	4	5	[A]
s5	s2/r2	s3/r2	r2	10	9	5	[B]
s6	r4	r4	r4				[ab]
s7	r6	r6	r6				[ba]
s8	r5	r5	r5				[AS]
s9	s2/r2	s3/r2	r2	11	4	5	[BA]
s10	s2/r2	s3/r2	r2	12	4	5	[BS]
s11	r1/r5	r1/r5	r1/r5				[BAS]
s12	r3	r3	r3				[BSS]

Tabella 2: Tabella di parsing SLR(1)

Symbol	Firstset	Followset	Nullable
S	a,b	a,b,\$	Yes
A	a,b	a,b,\$	No
B	a,b	a,b,\$	No

2 Grammar 2

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$$S \rightarrow aA \mid bB \mid c$$

$$A \rightarrow aA \mid d$$

$$B \rightarrow bB \mid e$$

States	a	b	c	d	e	\$	S	A	B	Symbol map
s0	s2	s3	s4				1			[]
s1						acc				[S]
s2	s6			s7				5		[a]
s3		s9			s10				8	[b]
s4	r3	r3	r3	r3	r3	r3				[c]
s5	r1	r1	r1	r1	r1	r1				[aA]
s6	s6			s7				11		[aa]
s7	r5	r5	r5	r5	r5	r5				[ad]
s8	r2	r2	r2	r2	r2	r2				[bB]
s9		s9			s10				12	[bb]
s10	r7	r7	r7	r7	r7	r7				[be]
s11	r4	r4	r4	r4	r4	r4				[aaA]
s12	r6	r6	r6	r6	r6	r6				[bbB]

Tabella 3: Tabella di parsing LR(0)

States	a	b	c	d	e	\$	S	A	B	Symbol map
s0	s2	s3	s4				1			[]
s1						acc				[S]
s2	s6			s7				5		[a]
s3		s9			s10				8	[b]
s4						r3				[c]
s5						r1				[aA]
s6	s6			s7				11		[aa]
s7						r5				[ad]
s8						r2				[bB]
s9		s9			s10				12	[bb]
s10						r7				[be]
s11						r4				[aaA]
s12						r6				[bbB]

Tabella 4: Tabella di parsing SLR(1)

Symbol	Firstset	Followset	Nullable
S	a,b,c	\$	No
A	a,d	\$	No
B	b,e	\$	No

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Grammar 3

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$$S \rightarrow ASaB \mid SS \mid \epsilon$$

$$A \rightarrow AaB \mid Sac$$

$$B \rightarrow aB \mid Sb \mid \epsilon$$

States	a	b	c	\$	S	A	B	Symbol map
s0	r3	r3	r3	r3	1	2		[]
s1	s4/r3	r3	r3	acc/r3	3	2		[S]
s2	s6/r3	r3	r3	r3	5	2		[A]
s3	s4/r2/r3	r2/r3	r2/r3	r2/r3	3	2		[SS]
s4			s7					[Sa]
s5	s8/r3	r3	r3	r3	3	2		[AS]
s6	s10/r3/r8	r3/r8	r3/r8	r3/r8	11	2	9	[Aa]
s7	r5	r5	r5	r5				[Sac]
s8	s10/r3/r8	r3/r8	s7/r3/r8	r3/r8	11	2	12	[ASa]
s9	r4	r4	r4	r4				[AaB]
s10	s10/r3/r8	r3/r8	r3/r8	r3/r8	11	2	13	[Aaa]
s11	s4/r3	s14/r3	r3	r3	3	2		[AaS]
s12	r1	r1	r1	r1				[ASaB]
s13	r6	r6	r6	r6				[AaaB]
s14	r7	r7	r7	r7				[AaSb]

Tabella 5: Tabella di parsing LR(0)

States	a	b	c	\$	S	A	B	Symbol map
s0	r3	r3		r3	1	2		[]
s1	s4/r3	r3		acc/r3	3	2		[S]
s2	s6/r3	r3		r3	5	2		[A]
s3	s4/r2/r3	r2/r3		r2/r3	3	2		[SS]
s4			s7					[Sa]
s5	s8/r3	r3		r3	3	2		[AS]
s6	s10/r3/r8	r3/r8		r3/r8	11	2	9	[Aa]
s7	r5							[Sac]
s8	s10/r3/r8	r3/r8	s7	r3/r8	11	2	12	[ASa]
s9	r4							[AaB]
s10	s10/r3/r8	r3/r8		r3/r8	11	2	13	[Aaa]
s11	s4/r3	s14/r3		r3	3	2		[AaS]
s12	r1	r1		r1				[ASaB]
s13	r6	r6		r6				[AaaB]
s14	r7	r7		r7				[AaSb]

Tabella 6: Tabella di parsing SLR(1)

Symbol	Firstset	Followset	Nullable
S	a	a,b,\$	Yes
A	a	a	No
B	a,b	a,b,\$	Yes

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Grammar 4

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$$S \rightarrow aB \mid bcSa \mid AB$$

$$A \rightarrow B \mid BabA$$

$$B \rightarrow S \mid c \mid bS$$

States	a	b	c	\$	S	A	B	Symbol map
s0	s2	s3	s4		1	5	6	[]
s1	r6	r6	r6	acc/r6				[S]
s2	s2	s3	s4		8	5	7	[a]
s3	s2	s3	s9		10	5	6	[b]
s4	r7	r7	r7	r7				[c]
s5	s2	s3	s4		8	5	11	[A]
s6	s12/r4	r4	r4	r4				[B]
s7	s12/r1/r4	r1/r4	r1/r4	r1/r4				[aB]
s8	r6	r6	r6	r6				[aS]
s9	s2/r7	s3/r7	s4/r7	r7	13	5	6	[bc]
s10	r8/r6	r8/r6	r8/r6	r8/r6				[bS]
s11	s12/r3/r4	r3/r4	r3/r4	r3/r4				[AB]
s12		s14						[Ba]
s13	s15/r6	r6	r6	r6				[bcS]
s14	s2	s3	s4		8	16	6	[Bab]
s15	r2	r2	r2	r2				[bcSa]
s16	s2/r5	s3/r5	s4/r5	r5	8	5	11	[BabA]

Tabella 7: Tabella di parsing LR(0)

States	a	b	c	\$	S	A	B	Symbol map
s0	s2	s3	s4		1	5	6	[]
s1	r6	r6	r6	acc/r6				[S]
s2	s2	s3	s4		8	5	7	[a]
s3	s2	s3	s9		10	5	6	[b]
s4	r7	r7	r7	r7				[c]
s5	s2	s3	s4		8	5	11	[A]
s6	s12/r4	r4	r4					[B]
s7	s12/r1/r4	r1/r4	r1/r4	r1				[aB]
s8	r6	r6	r6	r6				[aS]
s9	s2/r7	s3/r7	s4/r7	r7	13	5	6	[bc]
s10	r8/r6	r8/r6	r8/r6	r8/r6				[bS]
s11	s12/r3/r4	r3/r4	r3/r4	r3				[AB]
s12		s14						[Ba]
s13	s15/r6	r6	r6	r6				[bcS]
s14	s2	s3	s4		8	16	6	[Bab]
s15	r2	r2	r2	r2				[bcSa]
s16	s2/r5	s3/r5	s4/r5		8	5	11	[BabA]

Tabella 8: Tabella di parsing SLR(1)

Symbol	Firstset	Followset	Nullable
S	a,b,c	a,b,c,\$	No
A	a,b,c	a,b,c	No
B	a,b,c	a,b,c,\$	No

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Grammar 5

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$$S \rightarrow BcA \mid \epsilon$$

$$A \rightarrow c \mid aAbSS$$

$$B \rightarrow b \mid ABS$$

States	a	b	c	\$	S	A	B	Symbol map
s0	s2/r2	s3/r2	s4/r2	r2	1	5	6	[]
s1				acc				[S]
s2	s2		s4			7		[a]
s3	r5	r5	r5	r5				[b]
s4	r3	r3	r3	r3				[c]
s5	s2	s3	s4			5	8	[A]
s6			s9					[B]
s7		s10						[aA]
s8	s2/r2	s3/r2	s4/r2	r2	11	5	6	[AB]
s9	s2		s4			12		[Bc]
s10	s2/r2	s3/r2	s4/r2	r2	13	5	6	[aAb]
s11	r6	r6	r6	r6				[ABS]
s12	r1	r1	r1	r1				[BcA]
s13	s2/r2	s3/r2	s4/r2	r2	14	5	6	[aAbS]
s14	r4	r4	r4	r4				[aAbSS]

Tabella 9: Tabella di parsing LR(0)

States	a	b	c	\$	S	A	B	Symbol map
s0	s2/r2	s3/r2	s4/r2	r2	1	5	6	[]
s1				acc				[S]
s2	s2		s4			7		[a]
s3	r5	r5	r5					[b]
s4	r3	r3	r3	r3				[c]
s5	s2	s3	s4			5	8	[A]
s6			s9					[B]
s7		s10						[aA]
s8	s2/r2	s3/r2	s4/r2	r2	11	5	6	[AB]
s9	s2		s4			12		[Bc]
s10	s2/r2	s3/r2	s4/r2	r2	13	5	6	[aAb]
s11	r6	r6	r6					[ABS]
s12	r1	r1	r1	r1				[BcA]
s13	s2/r2	s3/r2	s4/r2	r2	14	5	6	[aAbS]
s14	r4	r4	r4	r4				[aAbSS]

Tabella 10: Tabella di parsing SLR(1)

Symbol	Firstset	Followset	Nullable
S	a,b,c	a,b,c,\$	Yes
A	a,c	a,b,c,\$	No
B	a,b,c	a,b,c	No

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$$S \rightarrow Ab \mid aB$$

$$A \rightarrow c \mid BA$$

$$B \rightarrow S \mid bBa$$

States	a	b	c	\$	S	A	B	Symbol map
s0	s2	s3	s4		1	5	6	[]
s1	r5	r5	r5	acc/r5				[S]
s2	s2	s3	s4		8	5	7	[a]
s3	s2	s3	s4		8	5	9	[b]
s4	r3	r3	r3	r3				[c]
s5		s10						[A]
s6	s2	s3	s4		8	11	6	[B]
s7	s2/r2	s3/r2	s4/r2	r2	8	11	6	[aB]
s8	r5	r5	r5	r5				[aS]
s9	s12	s3	s4		8	11	6	[bB]
s10	r1	r1	r1	r1				[Ab]
s11	r4	s10/r4	r4	r4				[BA]
s12	s2/r6	s3/r6	s4/r6	r6	8	5	7	[bBa]

Tabella 11: Tabella di parsing LR(0)

States	a	b	c	\$	S	A	B	Symbol map
s0	s2	s3	s4		1	5	6	[]
s1	r5	r5	r5	acc/r5				[S]
s2	s2	s3	s4		8	5	7	[a]
s3	s2	s3	s4		8	5	9	[b]
s4		r3						[c]
s5		s10						[A]
s6	s2	s3	s4		8	11	6	[B]
s7	s2/r2	s3/r2	s4/r2	r2	8	11	6	[aB]
s8	r5	r5	r5	r5				[aS]
s9	s12	s3	s4		8	11	6	[bB]
s10	r1	r1	r1	r1				[Ab]
s11		s10/r4						[BA]
s12	s2/r6	s3/r6	s4/r6	r6	8	5	7	[bBa]

Tabella 12: Tabella di parsing SLR(1)

Symbol	Firstset	Followset	Nullable
S	a,b,c	a,b,c,\$	No
A	a,b,c	b	No
B	a,b,c	a,b,c,\$	No

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$$S \rightarrow AS \mid ABbBA \mid Sb$$

$$A \rightarrow Bb \mid Aa \mid \epsilon$$

$$B \rightarrow SS \mid \epsilon$$

States	a	b	\$	S	A	B	Symbol map
s0	r6/r8	r6/r8	r6/r8	1	2	3	[]
s1	r6/r8	s4/r6/r8	acc/r6/r8	5	2	3	[S]
s2	s8/r6/r8	r6/r8	r6/r8	6	2	7	[A]
s3		s9					[B]
s4	r3	r3	r3				[Sb]
s5	r7/r6/r8	s4/r7/r6/r8	r7/r6/r8	5	2	3	[SS]
s6	r1/r6/r8	s4/r1/r6/r8	r1/r6/r8	5	2	3	[AS]
s7		s10					[AB]
s8	r5	r5	r5				[Aa]
s9	r4	r4	r4				[Bb]
s10	r4/r6/r8	r4/r6/r8	r4/r6/r8	12	2	11	[ABb]
s11	r6/r8	s9/r6/r8	r6/r8	12	13	3	[ABbB]
s12	r6/r8	s4/r6/r8	r6/r8	5	2	3	[ABbS]
s13	s8/r2/r6/r8	r2/r6/r8	r2/r6/r8	6	2	7	[ABbBA]

Tabella 13: Tabella di parsing LR(0)

States	a	b	\$	S	A	B	Symbol map
s0	r6/r8	r6/r8	r6/r8	1	2	3	[]
s1	r6/r8	s4/r6/r8	acc/r6/r8	5	2	3	[S]
s2	s8/r6/r8	r6/r8	r6/r8	6	2	7	[A]
s3		s9					[B]
s4	r3	r3	r3				[Sb]
s5	r7/r6/r8	s4/r7/r6/r8	r7/r6/r8	5	2	3	[SS]
s6	r1/r6/r8	s4/r1/r6/r8	r1/r6/r8	5	2	3	[AS]
s7		s10					[AB]
s8	r5	r5	r5				[Aa]
s9	r4	r4	r4				[Bb]
s10	r4/r6/r8	r4/r6/r8	r4/r6/r8	12	2	11	[ABb]
s11	r6/r8	s9/r6/r8	r6/r8	12	13	3	[ABbB]
s12	r6/r8	s4/r6/r8	r6/r8	5	2	3	[ABbS]
s13	s8/r2/r6/r8	r2/r6/r8	r2/r6/r8	6	2	7	[ABbBA]

Tabella 14: Tabella di parsing SLR(1)

Symbol	Firstset	Followset	Nullable
S	a,b	a,b,\$	No
A	a,b	a,b,\$	Yes
B	a,b	a,b,\$	Yes

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Grammar 8

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$$S \rightarrow aSa \mid ABA \mid \epsilon$$

$$A \rightarrow Ab \mid B \mid a$$

$$B \rightarrow Ba \mid A \mid b$$

States	a	b	\$	S	A	B	Symbol map
s0	s2/r3	s3/r3	r3	1	4	5	[]
s1			acc				[S]
s2	s2/r6/r3	s3/r6/r3	r6/r3	6	4	5	[a]
s3	r9	r9	r9				[b]
s4	s9/r8	s8/r8	r8		10	7	[A]
s5	s11/r5	r5	r5				[B]
s6	s12						[aS]
s7	s14/r5	s3/r5	r5		13	5	[AB]
s8	r4/r9	r4/r9	r4/r9				[Ab]
s9	r6	r6	r6				[Aa]
s10	r8	s15/r8	r8				[AA]
s11	r7	r7	r7				[Ba]
s12	r1	r1	r1				[aSa]
s13	r2/r8	s15/r2/r8	r2/r8				[ABA]
s14	r7/r6	r7/r6	r7/r6				[ABa]
s15	r4	r4	r4				[AAb]

Tabella 15: Tabella di parsing LR(0)

States	a	b	\$	S	A	B	Symbol map
s0	s2/r3	s3	r3	1	4	5	[]
s1			acc				[S]
s2	s2/r6/r3	s3/r6	r6/r3	6	4	5	[a]
s3	r9	r9	r9				[b]
s4	s9/r8	s8/r8	r8		10	7	[A]
s5	s11/r5	r5	r5				[B]
s6	s12						[aS]
s7	s14/r5	s3/r5	r5		13	5	[AB]
s8	r4/r9	r4/r9	r4/r9				[Ab]
s9	r6	r6	r6				[Aa]
s10	r8	s15/r8	r8				[AA]
s11	r7	r7	r7				[Ba]
s12	r1		r1				[aSa]
s13	r2/r8	s15/r8	r2/r8				[ABA]
s14	r7/r6	r7/r6	r7/r6				[ABa]
s15	r4	r4	r4				[AAb]

Tabella 16: Tabella di parsing SLR(1)

Symbol	Firstset	Followset	Nullable
S	a,b	a,\$	Yes
A	a,b	a,b,\$	No
B	a,b	a,b,\$	No

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$$\begin{aligned}
 S &\rightarrow SAB \mid \epsilon \\
 A &\rightarrow BSS \mid BE \mid a \\
 B &\rightarrow AA \mid SE \mid b \\
 E &\rightarrow e \mid \epsilon
 \end{aligned}$$

States	a	b	e	\$	S	A	B	E	Symbol map
s0	r2	r2	r2	r2	1				[]
s1	s3/r2	s4/r2	r2	acc/r2	5	2	6		[S]
s2	s3/r2	s4/r2	r2	r2	5	8	7		[SA]
s3	r5	r5	r5	r5					[Sa]
s4	r8	r8	r8	r8					[Sb]
s5	s3/r2/r10	s4/r2/r10	s10/r2/r10	r2/r10	5	2	6	9	[SS]
s6	r2/r10	r2/r10	s10/r2/r10	r2/r10	11			12	[SB]
s7	r1/r2/r10	r1/r2/r10	s10/r1/r2/r10	r1/r2/r10	11			12	[SAB]
s8	s3/r6/r2	s4/r6/r2	r6/r2	r6/r2	5	8	6		[SAA]
s9	r7	r7	r7	r7					[SSE]
s10	r9	r9	r9	r9					[SSe]
s11	s3/r2	s4/r2	r2	r2	13	2	6		[SBS]
s12	r4	r4	r4	r4					[SBE]
s13	s3/r3/r2/r10	s4/r3/r2/r10	s10/r3/r2/r10	r3/r2/r10	5	2	6	9	[SBSS]

Tabella 17: Tabella di parsing LR(0)

States	a	b	e	\$	S	A	B	E	Symbol map
s0	r2	r2	r2	r2	1				[]
s1	s3/r2	s4/r2	r2	acc/r2	5	2	6		[S]
s2	s3/r2	s4/r2	r2	r2	5	8	7		[SA]
s3	r5	r5	r5	r5					[Sa]
s4	r8	r8	r8	r8					[Sb]
s5	s3/r2/r10	s4/r2/r10	s10/r2/r10	r2/r10	5	2	6	9	[SS]
s6	r2/r10	r2/r10	s10/r2/r10	r2/r10	11			12	[SB]
s7	r1/r2/r10	r1/r2/r10	s10/r1/r2/r10	r1/r2/r10	11			12	[SAB]
s8	s3/r6/r2	s4/r6/r2	r6/r2	r6/r2	5	8	6		[SAA]
s9	r7	r7	r7	r7					[SSE]
s10	r9	r9	r9	r9					[SSe]
s11	s3/r2	s4/r2	r2	r2	13	2	6		[SBS]
s12	r4	r4	r4	r4					[SBE]
s13	s3/r3/r2/r10	s4/r3/r2/r10	s10/r3/r2/r10	r3/r2/r10	5	2	6	9	[SBSS]

Tabella 18: Tabella di parsing SLR(1)

Symbol	Firstset	Followset	Nullable
S	a,b,e	a,b,e,\$	Yes
A	a,b,e	a,b,e,\$	Yes
B	a,b,e	a,b,e,\$	Yes
E	e	a,b,e,\$	Yes

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Grammar 10

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$$S \rightarrow BAS \mid \epsilon$$

$$B \rightarrow AS \mid ab$$

$$A \rightarrow BSS \mid ba$$

States	a	b	\$	S	B	A	Symbol map
s0	s2/r2	s3/r2	r2	1	4	5	[]
s1			acc				[S]
s2		s6					[a]
s3	s7						[b]
s4	s2/r2	s3/r2	r2	9	4	8	[B]
s5	s2/r2	s3/r2	r2	10	4	5	[A]
s6	r4	r4	r4				[ab]
s7	r6	r6	r6				[ba]
s8	s2/r2	s3/r2	r2	11	4	5	[BA]
s9	s2/r2	s3/r2	r2	12	4	5	[BS]
s10	r3	r3	r3				[AS]
s11	r1/r3	r1/r3	r1/r3				[BAS]
s12	r5	r5	r5				[BSS]

Tabella 19: Tabella di parsing LR(0)

States	a	b	\$	S	B	A	Symbol map
s0	s2/r2	s3/r2	r2	1	4	5	[]
s1			acc				[S]
s2		s6					[a]
s3	s7						[b]
s4	s2/r2	s3/r2	r2	9	4	8	[B]
s5	s2/r2	s3/r2	r2	10	4	5	[A]
s6	r4	r4	r4				[ab]
s7	r6	r6	r6				[ba]
s8	s2/r2	s3/r2	r2	11	4	5	[BA]
s9	s2/r2	s3/r2	r2	12	4	5	[BS]
s10	r3	r3	r3				[AS]
s11	r1/r3	r1/r3	r1/r3				[BAS]
s12	r5	r5	r5				[BSS]

Tabella 20: Tabella di parsing SLR(1)

Symbol	Firstset	Followset	Nullable
S	a,b	a,b,\$	Yes
B	a,b	a,b,\$	No
A	a,b	a,b,\$	No

$$\begin{aligned}
S &\rightarrow ASS \mid \epsilon \\
A &\rightarrow SB \mid BA \mid a \mid \epsilon \\
B &\rightarrow AB \mid b \mid \epsilon
\end{aligned}$$

States	a	b	\$	S	A	B	Symbol map
s0	s2/r2/r6/r9	s3/r2/r6/r9	r2/r6/r9	1	4	5	[]
s1	s2/r2/r6/r9	s3/r2/r6/r9	acc/r2/r6/r9	7	4	6	[S]
s2	r5	r5	r5				[a]
s3	r8	r8	r8				[b]
s4	s2/r2/r6/r9	s3/r2/r6/r9	r2/r6/r9	8	4	9	[A]
s5	s2/r2/r6/r9	s3/r2/r6/r9	r2/r6/r9	7	10	5	[B]
s6	s2/r3/r2/r6/r9	s3/r3/r2/r6/r9	r3/r2/r6/r9	7	10	5	[SB]
s7	s2/r2/r6/r9	s3/r2/r6/r9	r2/r6/r9	7	4	6	[SS]
s8	s2/r2/r6/r9	s3/r2/r6/r9	r2/r6/r9	11	4	6	[AS]
s9	s2/r7/r2/r6/r9	s3/r7/r2/r6/r9	r7/r2/r6/r9	7	10	5	[AB]
s10	s2/r4/r2/r6/r9	s3/r4/r2/r6/r9	r4/r2/r6/r9	8	4	9	[BA]
s11	s2/r1/r2/r6/r9	s3/r1/r2/r6/r9	r1/r2/r6/r9	7	4	6	[ASS]

Tabella 21: Tabella di parsing LR(0)

States	a	b	\$	S	A	B	Symbol map
s0	s2/r2/r6/r9	s3/r2/r6/r9	r2/r6/r9	1	4	5	[]
s1	s2/r2/r6/r9	s3/r2/r6/r9	acc/r2/r6/r9	7	4	6	[S]
s2	r5	r5	r5				[a]
s3	r8	r8	r8				[b]
s4	s2/r2/r6/r9	s3/r2/r6/r9	r2/r6/r9	8	4	9	[A]
s5	s2/r2/r6/r9	s3/r2/r6/r9	r2/r6/r9	7	10	5	[B]
s6	s2/r3/r2/r6/r9	s3/r3/r2/r6/r9	r3/r2/r6/r9	7	10	5	[SB]
s7	s2/r2/r6/r9	s3/r2/r6/r9	r2/r6/r9	7	4	6	[SS]
s8	s2/r2/r6/r9	s3/r2/r6/r9	r2/r6/r9	11	4	6	[AS]
s9	s2/r7/r2/r6/r9	s3/r7/r2/r6/r9	r7/r2/r6/r9	7	10	5	[AB]
s10	s2/r4/r2/r6/r9	s3/r4/r2/r6/r9	r4/r2/r6/r9	8	4	9	[BA]
s11	s2/r1/r2/r6/r9	s3/r1/r2/r6/r9	r1/r2/r6/r9	7	4	6	[ASS]

Tabella 22: Tabella di parsing SLR(1)

Symbol	Firstset	Followset	Nullable
S	a,b	a,b,\$	Yes
A	a,b	a,b,\$	Yes
B	a,b	a,b,\$	Yes

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$$S \rightarrow aSbA \mid bAaS \mid \epsilon$$

$$A \rightarrow AaA \mid ba$$

States	a	b	\$	S	A	Symbol map
s0	s2/r3	s3/r3	r3	1		[]
s1			acc			[S]
s2	s2/r3	s3/r3	r3	4		[a]
s3		s6			5	[b]
s4		s7				[aS]
s5	s8					[bA]
s6	s9					[bb]
s7		s6			10	[aSb]
s8	s2/r3	s13/r3	r3	11	12	[bAa]
s9	r5	r5	r5			[bba]
s10	s14/r1	r1	r1			[aSbA]
s11	r2	r2	r2			[bAaS]
s12	s14/r4	r4	r4			[bAaA]
s13	s9	s6			5	[bAab]
s14		s6			12	[aSbAa]

Tabella 23: Tabella di parsing LR(0)

States	a	b	\$	S	A	Symbol map
s0	s2	s3/r3	r3	1		[]
s1			acc			[S]
s2	s2	s3/r3	r3	4		[a]
s3		s6			5	[b]
s4		s7				[aS]
s5	s8					[bA]
s6	s9					[bb]
s7		s6			10	[aSb]
s8	s2	s13/r3	r3	11	12	[bAa]
s9	r5	r5	r5			[bba]
s10	s14	r1	r1			[aSbA]
s11		r2	r2			[bAaS]
s12	s14/r4	r4	r4			[bAaA]
s13	s9	s6			5	[bAab]
s14		s6			12	[aSbAa]

Tabella 24: Tabella di parsing SLR(1)

Symbol	Firstset	Followset	Nullable
S	a,b	b,\$	Yes
A	a,b	a,b,\$	No

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Grammar 13

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$$S \rightarrow AB \mid CA$$

$$A \rightarrow a$$

$$B \rightarrow BC \mid AB \mid b$$

$$C \rightarrow aB \mid b$$

States	a	b	\$	S	A	B	C	Symbol map
s0	s2	s3		1	4		5	[]
s1			acc					[S]
s2	s7/r3	s8/r3	r3		9	6		[a]
s3	r8	r8	r8					[b]
s4	s7	s8			9	10		[A]
s5	s7				11			[C]
s6	s13/r7	s3/r7	r7				12	[aB]
s7	r3	r3	r3					[aa]
s8	r6	r6	r6					[ab]
s9	s7	s8			9	14		[aA]
s10	s13/r1	s3/r1	r1				12	[AB]
s11	r2	r2	r2					[CA]
s12	r4	r4	r4					[aBC]
s13	s7	s8			9	6		[aBa]
s14	s13/r5	s3/r5	r5				12	[aAB]

Tabella 25: Tabella di parsing LR(0)

States	a	b	\$	S	A	B	C	Symbol map
s0	s2	s3		1	4		5	[]
s1			acc					[S]
s2	s7/r3	s8/r3	r3		9	6		[a]
s3	r8	r8	r8					[b]
s4	s7	s8			9	10		[A]
s5	s7				11			[C]
s6	s13/r7	s3/r7	r7				12	[aB]
s7	r3	r3	r3					[aa]
s8	r6	r6	r6					[ab]
s9	s7	s8			9	14		[aA]
s10	s13	s3	r1				12	[AB]
s11			r2					[CA]
s12	r4	r4	r4					[aBC]
s13	s7	s8			9	6		[aBa]
s14	s13/r5	s3/r5	r5				12	[aAB]

Tabella 26: Tabella di parsing SLR(1)

Symbol	Firstset	Followset	Nullable
S	a,b	\$	No
A	a	a,b,\$	No
B	a,b	a,b,\$	No
C	a,b	a,b,\$	No

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$$\begin{aligned}
 S &\rightarrow ABC \mid \epsilon \\
 A &\rightarrow aAb \mid B \mid \epsilon \\
 B &\rightarrow bBc \mid C \mid \epsilon \\
 C &\rightarrow cCd \mid a \mid \epsilon
 \end{aligned}$$

States	a	b	c	d	\$	S	A	B	C	Symbol map
s0	s2/r2/r5/r8/r11	s3/r2/r5/r8/r11	s4/r2/r5/r8/r11	r2/r5/r8/r11	r2/r5/r8/r11	1	5	6	7	[]
s1					acc					[S]
s2	s2/r10/r5/r8/r11	s3/r10/r5/r8/r11	s4/r10/r5/r8/r11	r10/r5/r8/r11	r10/r5/r8/r11		8	6	7	[a]
s3	s10/r8/r11	s3/r8/r11	s4/r8/r11	r8/r11	r8/r11			9	7	[b]
s4	s10/r11	r11	s4/r11	r11	r11				11	[c]
s5	s10/r8/r11	s3/r8/r11	s4/r8/r11	r8/r11	r8/r11			12	7	[A]
s6	r4	r4	r4	r4	r4					[B]
s7	r7	r7	r7	r7	r7					[C]
s8		s13								[aA]
s9			s14							[bB]
s10	r10	r10	r10	r10	r10					[ba]
s11				s15						[cC]
s12	s10/r11	r11	s4/r11	r11	r11				16	[AB]
s13	r3	r3	r3	r3	r3					[aAb]
s14	r6	r6	r6	r6	r6					[bBc]
s15	r9	r9	r9	r9	r9					[cCd]
s16	r1	r1	r1	r1	r1					[ABC]

Tabella 27: Tabella di parsing LR(0)

States	a	b	c	d	\$	S	A	B	C	Symbol map
s0	s2/r5/r8/r11	s3/r5/r8/r11	s4/r5/r8/r11	r11	r2/r5/r8/r11	1	5	6	7	[]
s1					acc					[S]
s2	s2/r10/r5/r8/r11	s3/r10/r5/r8/r11	s4/r10/r5/r8/r11	r10/r11	r10/r5/r8/r11		8	6	7	[a]
s3	s10/r8/r11	s3/r8/r11	s4/r8/r11	r11	r8/r11			9	7	[b]
s4	s10/r11	r11	s4/r11	r11	r11				11	[c]
s5	s10/r8/r11	s3/r8/r11	s4/r8/r11	r11	r8/r11			12	7	[A]
s6	r4	r4	r4	r4	r4					[B]
s7	r7	r7	r7	r7	r7					[C]
s8		s13								[aA]
s9			s14							[bB]
s10	r10	r10	r10	r10	r10					[ba]
s11				s15						[cC]
s12	s10/r11	r11	s4/r11	r11	r11				16	[AB]
s13	r3	r3	r3	r3	r3					[aAb]
s14	r6	r6	r6	r6	r6					[bBc]
s15	r9	r9	r9	r9	r9					[cCd]
s16					r1					[ABC]

Tabella 28: Tabella di parsing SLR(1)

Symbol	Firstset	Followset	Nullable
S	a,b,c	\$	Yes
A	a,b,c	a,b,c,\$	Yes
B	a,b,c	a,b,c,\$	Yes
C	a,c	a,b,c,d,\$	Yes

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$$S \rightarrow SAB \mid CD \mid \epsilon$$

$$A \rightarrow aA \mid bC \mid \epsilon$$

$$B \rightarrow bB \mid c \mid \epsilon$$

$$C \rightarrow Cd \mid e \mid \epsilon$$

$$D \rightarrow Da \mid b \mid \epsilon$$

States	a	b	c	d	e	\$	S	A	B	C	D	Symbol map
s0	r3/r12	r3/r12	r3/r12	r3/r12	s2/r3/r12	r3/r12	1			3		[]
s1	s5/r6	s6/r6	r6	r6	r6	acc/r6		4				[S]
s2	r11	r11	r11	r11	r11	r11						[e]
s3	r15	s9/r15	r15	s8/r15	r15	r15					7	[C]
s4	r9	s11/r9	s12/r9	r9	r9	r9			10			[SA]
s5	s5/r6	s6/r6	r6	r6	r6	r6		13				[Sa]
s6	r12	r12	r12	r12	s2/r12	r12				14		[Sb]
s7	s15/r2	r2	r2	r2	r2	r2						[CD]
s8	r10	r10	r10	r10	r10	r10						[Cd]
s9	r14	r14	r14	r14	r14	r14						[Cb]
s10	r1	r1	r1	r1	r1	r1						[SAB]
s11	r9	s11/r9	s12/r9	r9	r9	r9			16			[SAb]
s12	r8	r8	r8	r8	r8	r8						[SAc]
s13	r4	r4	r4	r4	r4	r4						[SaA]
s14	r5	r5	r5	s8/r5	r5	r5						[SbC]
s15	r13	r13	r13	r13	r13	r13						[CDa]
s16	r7	r7	r7	r7	r7	r7						[SAbB]

Tabella 29: Tabella di parsing LR(0)

States	a	b	c	d	e	\$	S	A	B	C	D	Symbol map
s0	r3/r12	r3/r12	r3/r12	r12	s2	r3/r12	1			3		[]
s1	s5/r6	s6/r6	r6			acc/r6		4				[S]
s2	r11	r11	r11	r11		r11						[e]
s3	r15	s9/r15	r15	s8		r15					7	[C]
s4	r9	s11/r9	s12/r9			r9			10			[SA]
s5	s5/r6	s6/r6	r6			r6		13				[Sa]
s6	r12	r12	r12	r12	s2	r12				14		[Sb]
s7	s15/r2	r2	r2			r2						[CD]
s8	r10	r10	r10	r10		r10						[Cd]
s9	r14	r14	r14			r14						[Cb]
s10	r1	r1	r1			r1						[SAB]
s11	r9	s11/r9	s12/r9			r9			16			[SAb]
s12	r8	r8	r8			r8						[SAc]
s13	r4	r4	r4			r4						[SaA]
s14	r5	r5	r5	s8		r5						[SbC]
s15	r13	r13	r13			r13						[CDa]
s16	r7	r7	r7			r7						[SAbB]

Tabella 30: Tabella di parsing SLR(1)

Symbol	Firstset	Followset	Nullable
S	a,b,c,d,e	a,b,c,\$	Yes
A	a,b	a,b,c,\$	Yes
B	b,c	a,b,c,\$	Yes
C	d,e	a,b,c,d,\$	Yes
D	a,b	a,b,c,\$	Yes

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$$S \rightarrow SaS \mid SbS \mid ab \mid \epsilon$$

States	a	b	\$	S	Symbol map
s0	s2/r4	r4	r4	1	[]
s1	s3	s4	acc		[S]
s2		s5			[a]
s3	s2/r4	r4	r4	6	[Sa]
s4	s2/r4	r4	r4	7	[Sb]
s5	r3	r3	r3		[ab]
s6	s3/r1	s4/r1	r1		[SaS]
s7	s3/r2	s4/r2	r2		[SbS]

Tabella 31: Tabella di parsing LR(0)

States	a	b	\$	S	Symbol map
s0	s2/r4	r4	r4	1	[]
s1	s3	s4	acc		[S]
s2		s5			[a]
s3	s2/r4	r4	r4	6	[Sa]
s4	s2/r4	r4	r4	7	[Sb]
s5	r3	r3	r3		[ab]
s6	s3/r1	s4/r1	r1		[SaS]
s7	s3/r2	s4/r2	r2		[SbS]

Tabella 32: Tabella di parsing SLR(1)

Symbol	Firstset	Followset	Nullable
S	a,b	a,b,\$	Yes

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$$S \rightarrow AS \mid BS \mid CS \mid \epsilon$$

$$A \rightarrow aA \mid b$$

$$B \rightarrow bB \mid c \mid \epsilon$$

$$C \rightarrow cC \mid d$$

States	a	b	c	d	\$	S	A	B	C	Symbol map
s0	s2/r4/r9	s3/r4/r9	s4/r4/r9	s5/r4/r9	r4/r9	1	6	7	8	[]
s1					acc					[S]
s2	s2	s10					9			[a]
s3	r6/r9	s12/r6/r9	s13/r6/r9	r6/r9	r6/r9			11		[b]
s4	r8	r8	s15/r8	s5/r8	r8				14	[c]
s5	r11	r11	r11	r11	r11					[d]
s6	s2/r4/r9	s3/r4/r9	s4/r4/r9	s5/r4/r9	r4/r9	16	6	7	8	[A]
s7	s2/r4/r9	s3/r4/r9	s4/r4/r9	s5/r4/r9	r4/r9	17	6	7	8	[B]
s8	s2/r4/r9	s3/r4/r9	s4/r4/r9	s5/r4/r9	r4/r9	18	6	7	8	[C]
s9	r5	r5	r5	r5	r5					[aA]
s10	r6	r6	r6	r6	r6					[ab]
s11	r7	r7	r7	r7	r7					[bB]
s12	r9	s12/r9	s13/r9	r9	r9			11		[bb]
s13	r8	r8	r8	r8	r8					[bc]
s14	r10	r10	r10	r10	r10					[cC]
s15			s15	s5					14	[cc]
s16	r1	r1	r1	r1	r1					[AS]
s17	r2	r2	r2	r2	r2					[BS]
s18	r3	r3	r3	r3	r3					[CS]

Tabella 33: Tabella di parsing LR(0)

States	a	b	c	d	\$	S	A	B	C	Symbol map
s0	s2/r9	s3/r9	s4/r9	s5/r9	r4/r9	1	6	7	8	[]
s1					acc					[S]
s2	s2	s10					9			[a]
s3	r6/r9	s12/r6/r9	s13/r6/r9	r6/r9	r6/r9			11		[b]
s4	r8	r8	s15/r8	s5/r8	r8				14	[c]
s5	r11	r11	r11	r11	r11					[d]
s6	s2/r9	s3/r9	s4/r9	s5/r9	r4/r9	16	6	7	8	[A]
s7	s2/r9	s3/r9	s4/r9	s5/r9	r4/r9	17	6	7	8	[B]
s8	s2/r9	s3/r9	s4/r9	s5/r9	r4/r9	18	6	7	8	[C]
s9	r5	r5	r5	r5	r5					[aA]
s10	r6	r6	r6	r6	r6					[ab]
s11	r7	r7	r7	r7	r7					[bB]
s12	r9	s12/r9	s13/r9	r9	r9			11		[bb]
s13	r8	r8	r8	r8	r8					[bc]
s14	r10	r10	r10	r10	r10					[cC]
s15			s15	s5					14	[cc]
s16					r1					[AS]
s17					r2					[BS]
s18					r3					[CS]

Tabella 34: Tabella di parsing SLR(1)

Symbol	Firstset	Followset	Nullable
S	a,b,c,d	\$	Yes
A	a,b	a,b,c,d,\$	No
B	b,c	a,b,c,d,\$	Yes
C	c,d	a,b,c,d,\$	No

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Grammar 18

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$$S \rightarrow AaB \mid b$$

$$A \rightarrow BcBaA \mid \epsilon$$

$$B \rightarrow \epsilon$$

States	a	b	c	\$	S	A	B	Symbol map
s0	r4/r5	s2/r4/r5	r4/r5	r4/r5	1	3	4	[]
s1				acc				[S]
s2	r2	r2	r2	r2				[b]
s3	s5							[A]
s4			s6					[B]
s5	r5	r5	r5	r5			7	[Aa]
s6	r5	r5	r5	r5			8	[Bc]
s7	r1	r1	r1	r1				[AaB]
s8	s9							[BcB]
s9	r4/r5	r4/r5	r4/r5	r4/r5		10	4	[BcBa]
s10	r3	r3	r3	r3				[BcBaA]

Tabella 35: Tabella di parsing LR(0)

States	a	b	c	\$	S	A	B	Symbol map
s0	r4/r5	s2	r5	r5	1	3	4	[]
s1				acc				[S]
s2				r2				[b]
s3	s5							[A]
s4			s6					[B]
s5	r5		r5	r5			7	[Aa]
s6	r5		r5	r5			8	[Bc]
s7				r1				[AaB]
s8	s9							[BcB]
s9	r4/r5		r5	r5		10	4	[BcBa]
s10	r3							[BcBaA]

Tabella 36: Tabella di parsing SLR(1)

Symbol	Firstset	Followset	Nullable
S	a,b,c	\$	No
A	c	a	Yes
B		a,c,\$	Yes

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Grammar 19

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$$S \rightarrow bA \mid aB$$

$$A \rightarrow bAA \mid aS \mid a \mid bBB$$

$$B \rightarrow b \mid SB$$

States	a	b	\$	S	A	B	Symbol map
s0	s2	s3		1			[]
s1			acc				[S]
s2	s2	s5		6		4	[a]
s3	s8	s9			7		[b]
s4	r2	r2	r2				[aB]
s5	s8/r7	s9/r7	r7		7		[ab]
s6	s2	s5		6		10	[aS]
s7	r1	r1	r1				[bA]
s8	s2/r5	s3/r5	r5	11			[ba]
s9	s14	s15		6	12	13	[bb]
s10	r8	r8	r8				[aSB]
s11	r4	r4	r4				[baS]
s12	s8	s9			16		[bbA]
s13	s2	s5		6		17	[bbB]
s14	s2/r5	s5/r5	r5	18		4	[bba]
s15	s14/r7	s15/r7	r7	6	19	13	[bbb]
s16	r3	r3	r3				[bbAA]
s17	r6	r6	r6				[bbBB]
s18	s2/r4	s5/r4	r4	6		10	[bbaS]
s19	s8/r1	s9/r1	r1		16		[bbbA]

Tabella 37: Tabella di parsing LR(0)

States	a	b	\$	S	A	B	Symbol map
s0	s2	s3		1			[]
s1			acc				[S]
s2	s2	s5		6		4	[a]
s3	s8	s9			7		[b]
s4	r2	r2	r2				[aB]
s5	s8/r7	s9/r7	r7		7		[ab]
s6	s2	s5		6		10	[aS]
s7	r1	r1	r1				[bA]
s8	s2/r5	s3/r5	r5	11			[ba]
s9	s14	s15		6	12	13	[bb]
s10	r8	r8	r8				[aSB]
s11	r4	r4	r4				[baS]
s12	s8	s9			16		[bbA]
s13	s2	s5		6		17	[bbB]
s14	s2/r5	s5/r5	r5	18		4	[bba]
s15	s14/r7	s15/r7	r7	6	19	13	[bbb]
s16	r3	r3	r3				[bbAA]
s17	r6	r6	r6				[bbBB]
s18	s2/r4	s5/r4	r4	6		10	[bbaS]
s19	s8/r1	s9/r1	r1		16		[bbbA]

Tabella 38: Tabella di parsing SLR(1)

Symbol	Firstset	Followset	Nullable
S	a,b	a,b,\$	No
A	a,b	a,b,\$	No
B	a,b	a,b,\$	No

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Grammar 20

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$$S \rightarrow aSbA \mid ab \mid \epsilon$$

$$A \rightarrow bAaS \mid bS \mid \epsilon$$

States	a	b	\$	S	A	Symbol map
s0	s2/r3	r3	r3	1		[]
s1			acc			[S]
s2	s2/r3	s4/r3	r3	3		[a]
s3		s5				[aS]
s4	r2	r2	r2			[ab]
s5	r6	s7/r6	r6		6	[aSb]
s6	r1	r1	r1			[aSbA]
s7	s2/r3/r6	s7/r3/r6	r3/r6	9	8	[aSbb]
s8	s10					[aSbbA]
s9	r5	r5	r5			[aSbbS]
s10	s2/r3	r3	r3	11		[aSbbAa]
s11	r4	r4	r4			[aSbbAaS]

Tabella 39: Tabella di parsing LR(0)

States	a	b	\$	S	A	Symbol map
s0	s2/r3	r3	r3	1		[]
s1			acc			[S]
s2	s2/r3	s4/r3	r3	3		[a]
s3		s5				[aS]
s4	r2	r2	r2			[ab]
s5	r6	s7/r6	r6		6	[aSb]
s6	r1	r1	r1			[aSbA]
s7	s2/r3/r6	s7/r3/r6	r3/r6	9	8	[aSbb]
s8	s10					[aSbbA]
s9	r5	r5	r5			[aSbbS]
s10	s2/r3	r3	r3	11		[aSbbAa]
s11	r4	r4	r4			[aSbbAaS]

Tabella 40: Tabella di parsing SLR(1)

Symbol	Firstset	Followset	Nullable
S	a	a,b,\$	Yes
A	b	a,b,\$	Yes

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Grammar 21

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$$\begin{aligned}
 S &\rightarrow AS \mid b \\
 A &\rightarrow SA \mid a \mid \epsilon
 \end{aligned}$$

States	a	b	\$	S	A	Symbol map
s0	s2/r5	s3/r5	r5	1	4	[]
s1	s2/r5	s3/r5	acc/r5	6	5	[S]
s2	r4	r4	r4			[a]
s3	r2	r2	r2			[b]
s4	s2/r5	s3/r5	r5	7	4	[A]
s5	s2/r3/r5	s3/r3/r5	r3/r5	7	4	[SA]
s6	s2/r5	s3/r5	r5	6	5	[SS]
s7	s2/r1/r5	s3/r1/r5	r1/r5	6	5	[AS]

Tabella 41: Tabella di parsing LR(0)

States	a	b	\$	S	A	Symbol map
s0	s2/r5	s3/r5		1	4	[]
s1	s2/r5	s3/r5	acc	6	5	[S]
s2	r4	r4				[a]
s3	r2	r2	r2			[b]
s4	s2/r5	s3/r5		7	4	[A]
s5	s2/r3/r5	s3/r3/r5		7	4	[SA]
s6	s2/r5	s3/r5		6	5	[SS]
s7	s2/r1/r5	s3/r1/r5	r1	6	5	[AS]

Tabella 42: Tabella di parsing SLR(1)

Symbol	Firstset	Followset	Nullable
S	a,b	a,b,\$	No
A	a,b	a,b	Yes

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Grammar 22

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$$\begin{aligned}
 S &\rightarrow AaB \mid BbB \\
 A &\rightarrow BABABA \mid \epsilon \\
 B &\rightarrow b \mid \epsilon
 \end{aligned}$$

States	a	b	\$	S	A	B	Symbol map
s0	r4/r6	s2/r4/r6	r4/r6	1	3	4	[]
s1			acc				[S]
s2	r5	r5	r5				[b]
s3	s5						[A]
s4	r4/r6	s6/r4/r6	r4/r6		7	8	[B]
s5	r6	s2/r6	r6			9	[Aa]
s6	r5/r6	s2/r5/r6	r5/r6			10	[Bb]
s7	r6	s2/r6	r6			11	[BA]
s8	r4/r6	s2/r4/r6	r4/r6		7	8	[BB]
s9	r1	r1	r1				[AaB]
s10	r2	r2	r2				[BbB]
s11	r4/r6	s2/r4/r6	r4/r6		12	8	[BAB]
s12	r6	s2/r6	r6			13	[BABA]
s13	r4/r6	s2/r4/r6	r4/r6		14	8	[BABAB]
s14	r3	r3	r3				[BABABA]

Tabella 43: Tabella di parsing LR(0)

States	a	b	\$	S	A	B	Symbol map
s0	r4/r6	s2/r4/r6	r6	1	3	4	[]
s1			acc				[S]
s2	r5	r5	r5				[b]
s3	s5						[A]
s4	r4/r6	s6/r4/r6	r6		7	8	[B]
s5	r6	s2/r6	r6			9	[Aa]
s6	r5/r6	s2/r5/r6	r5/r6			10	[Bb]
s7	r6	s2/r6	r6			11	[BA]
s8	r4/r6	s2/r4/r6	r6		7	8	[BB]
s9			r1				[AaB]
s10			r2				[BbB]
s11	r4/r6	s2/r4/r6	r6		12	8	[BAB]
s12	r6	s2/r6	r6			13	[BABA]
s13	r4/r6	s2/r4/r6	r6		14	8	[BABAB]
s14	r3	r3					[BABABA]

Tabella 44: Tabella di parsing SLR(1)

Symbol	Firstset	Followset	Nullable
S	a,b	\$	No
A	b	a,b	Yes
B	b	a,b,\$	Yes

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$$S \rightarrow aSb \mid cA \mid Bc \mid AB$$

$$A \rightarrow aSb \mid cA$$

$$B \rightarrow Bc \mid \epsilon$$

States	a	b	c	\$	S	A	B	Symbol map
s0	s2/r8	r8	s3/r8	r8	1	4	5	[]
s1				acc				[S]
s2	s2/r8	r8	s3/r8	r8	6	4	5	[a]
s3	s8		s9			7		[c]
s4	r8	r8	r8	r8			10	[A]
s5			s11					[B]
s6		s12						[aS]
s7	r2/r6	r2/r6	r2/r6	r2/r6				[cA]
s8	s2/r8	r8	s3/r8	r8	13	4	5	[ca]
s9	s8		s9			14		[cc]
s10	r4	r4	s15/r4	r4				[AB]
s11	r3/r7	r3/r7	r3/r7	r3/r7				[Bc]
s12	r1/r5	r1/r5	r1/r5	r1/r5				[aSb]
s13		s16						[caS]
s14	r6	r6	r6	r6				[ccA]
s15	r7	r7	r7	r7				[ABc]
s16	r5	r5	r5	r5				[caSb]

Tabella 45: Tabella di parsing LR(0)

States	a	b	c	\$	S	A	B	Symbol map
s0	s2	r8	s3/r8	r8	1	4	5	[]
s1				acc				[S]
s2	s2	r8	s3/r8	r8	6	4	5	[a]
s3	s8		s9			7		[c]
s4		r8	r8	r8			10	[A]
s5			s11					[B]
s6		s12						[aS]
s7		r2/r6	r6	r2/r6				[cA]
s8	s2	r8	s3/r8	r8	13	4	5	[ca]
s9	s8		s9			14		[cc]
s10		r4	s15	r4				[AB]
s11		r3/r7	r7	r3/r7				[Bc]
s12		r1/r5	r5	r1/r5				[aSb]
s13		s16						[caS]
s14		r6	r6	r6				[ccA]
s15		r7	r7	r7				[ABc]
s16		r5	r5	r5				[caSb]

Tabella 46: Tabella di parsing SLR(1)

Symbol	Firstset	Followset	Nullable
S	a,c	b,\$	No
A	a,c	b,c,\$	No
B	c	b,c,\$	Yes

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Grammar 24

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$$S \rightarrow aSbA \mid bAaS \mid \epsilon$$

$$A \rightarrow Aab \mid ba$$

States	a	b	\$	S	A	Symbol map
s0	s2/r3	s3/r3	r3	1		[]
s1			acc			[S]
s2	s2/r3	s3/r3	r3	4		[a]
s3		s6			5	[b]
s4		s7				[aS]
s5	s8					[bA]
s6	s9					[bb]
s7		s6			10	[aSb]
s8	s2/r3	s12/r3	r3	11		[bAa]
s9	r5	r5	r5			[bba]
s10	s13/r1	r1	r1			[aSbA]
s11	r2	r2	r2			[bAaS]
s12	r4	s6/r4	r4		5	[bAab]
s13		s14				[aSbAa]
s14	r4	r4	r4			[aSbAab]

Tabella 47: Tabella di parsing LR(0)

States	a	b	\$	S	A	Symbol map
s0	s2	s3/r3	r3	1		[]
s1			acc			[S]
s2	s2	s3/r3	r3	4		[a]
s3		s6			5	[b]
s4		s7				[aS]
s5	s8					[bA]
s6	s9					[bb]
s7		s6			10	[aSb]
s8	s2	s12/r3	r3	11		[bAa]
s9	r5	r5	r5			[bba]
s10	s13	r1	r1			[aSbA]
s11		r2	r2			[bAaS]
s12	r4	s6/r4	r4		5	[bAab]
s13		s14				[aSbAa]
s14	r4	r4	r4			[aSbAab]

Tabella 48: Tabella di parsing SLR(1)

Symbol	Firstset	Followset	Nullable
S	a,b	b,\$	Yes
A	a,b	a,b,\$	No