The action of an LALR parser for grammar G_1 on the string `(x+y*z)*x`

```
0:(x+y*z)*x$
s4
0(4:x+y*z)*x$
s5
0(4x5:+y*z)*x$
r6, goto 3
0(4F3:+y*z)*x$ F->x
r4, goto 2
0(4T2:+y*z)*x$ T->F
r2, goto 1
0(4E8:+y*z)*x$ E->T
s6
0(4E8+6:y*z)*x$
s5
0(4E8+6y5:*z)*x$
r6, goto 3
0(4E8+6F3:*z)*x$ F->y
r4, goto 9
0(4E8+6T9:*z)*x$ T->F
s7
0(4E8+6T9*7:z)*x$
s5
0(4E8+6T9*7z5:)*x$
r6, goto 10
0(4E8+6T9*7F10:)*x$
r3, goto 9
0(4E8+6T9:)*x$ T->T*F
r1, goto 8
0(4E8:)*x$ E->E+T
s11
0(4E8)11:*x$ E->E+T
r5, goto 3
0F3:*x$ F->(E)
r4, goto 2
0T2:*x$ T->F
s7
0T2*7:x$
s5
0T2*7x5:$
r6, goto 10
0T2*7F10:$
r3, goto 2
0T2:$
r2, goto 1
0E1:$
halt
```

1. $E \longrightarrow E_{1 \text{ or } 8} +_6 T_9$
2. $E \longrightarrow T_2$
3. $T \longrightarrow T_{2 \text{ or } 9} *_7 F_{10}$
4. $T \longrightarrow F_3$
5. $F \longrightarrow (_4 E_8)_{11}$
6. $F \longrightarrow \text{id}_5$

	id	+	*	(	)	eof	E	T	F
0	s5			s4			1	2	3
1		s6				halt			
2		r2	s7		r2	r2			
3		r4	r4		r4	r4			
4	s5			s4			8	2	3
5		r6	r6		r6	r6			
6	s5			s4				9	3
7	s5			s4					10
8		s6			s11				
9		r1	s7		r1	r1			
10		r3	r3		r3	r3			
11		r5	r5		r5	r5			

ACTION GOTO

Figure 1: Grammar G_1 and an LALR Parser for that Grammar

1. $S \longrightarrow a_2$
2. $S \longrightarrow w_3\ S_4$
3. $S \longrightarrow i_5\ S_6$
4. $S \longrightarrow i_5\ S_6\ e_7\ S_8$
5. $S \longrightarrow b_9\ L_{10}\ n_{11}$
6. $L \longrightarrow L_{10}\ S_{12}$
7. $L \longrightarrow$ epsilon

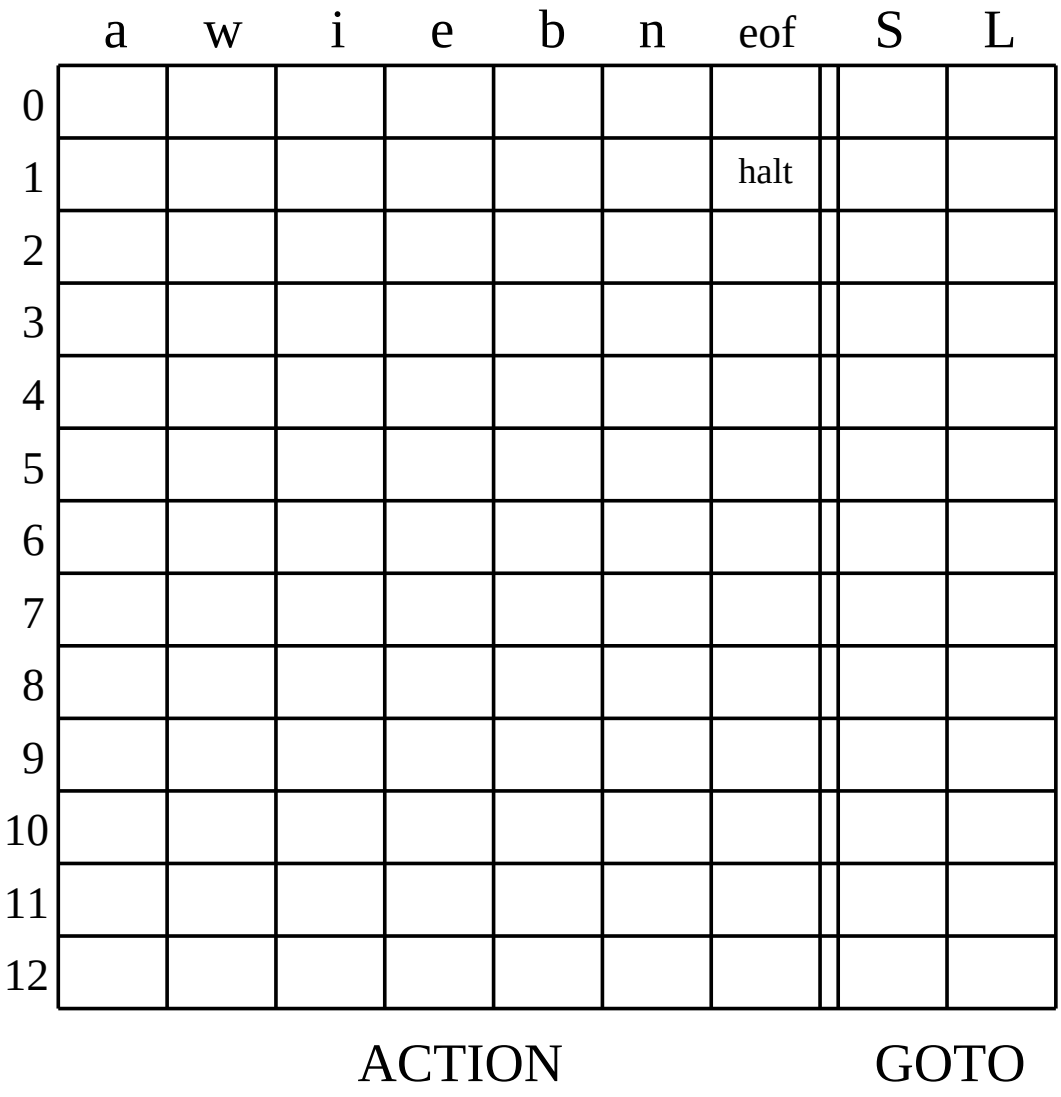


Figure 2: Another Context-free Grammar and an LALR Parser Table to Fill in