$$A \to a \mid CC$$
$$B \to AC$$
$$C \to b$$
$$S \to SA \mid SB \mid AA$$

Input: a   b   b   a   a   b   b   a   b   a

CYK chart (coordinate in each cell shown in parentheses):

Terminal row: A_1, C_2, C_3, A_4, A_5, C_6, C_7, A_8, C_9, A_10

(00) B_1	(01) A_2	(02)	(03) S_4	(04) B_5	(05) A_6	(06)	(07) B_8	(08)
(10) S_1	(11) S_3	(12)	(13)	(14) S_5	(15) S_7	(16)	(17)	(18)
(20) S_3	(21) S_4	(22)	(23) S_5	(24) S_7	(25)	(26)	(27)	
(30) S_4	(31) S_4	(32)	(33) S_7	(34) S_7	(35)	(36)		
(40) S_4	(41) S_5	(42)	(43) S_7	(44) S_9	(45)			
(50) S_5	(51) S_7	(52)	(53) S_9	(54)				
(60) S_7	(61) S_7	(62)	(63)					
(70) S_7	(71) S_9	(72)						
(80) S_9	(81)							
(90)								

1

S9
├─ A1 — a
└─ S9
   ├─ A2
   │ ├─ C2 — b
   │ └─ C3 — b
   └─ S9
      ├─ S7
      │ ├─ S5
      │ │ ├─ A4 — a
      │ │ └─ S5
      │ │   ├─ B5
      │ │   │ ├─ A5 — a
      │ │   │ └─ C6 — b
      │ │   └─ C7 — b
      │ └─ B8
      │   ├─ A8 — a
      │   └─ C9 — b
      └─ A10 — a