BY: Shamoon Khan <2112245@szabist-isb.pk>

Grammar:

S→AA(P1)

A→aA(P2)

A→b(P3)

SLR(1) Parse Table:

STATE	ACTION			GOTO	
	а	b	\$	Α	S
0	S3	S4		2	1
1			ACCEPT		
2	S 3	S4		5	
3	S 3	S4		6	
4	r3	r3	r3		
5			r1		
6	r2	r2	r2		

STACK IMPLEMENTATION

STACK	INPUT	Action
0	aabb\$	Table[0][a] = S3, Push a and 3
0a3	abb\$	Table[3][a] = S3, Push a and 3
0a3a3	bb\$	Table[3][b] = S4, Push b and 4
0a3a3b4	b\$	Table[4][b] = r3, Len(RHS(P3))=1, Pop Lenx2=2 Entries, Push LHS(P3)
0a3a3A	b\$	Table[3][A] = 6, Push 6
0a3a3A6	b\$	Table[6][b] = r2, Len(RHS(P2))=2, Pop Lenx2=4 Entries, Push LHS(P2)
0a3A	b\$	Table[3][A] = 6, Push 6
0a3A6	b\$	Table[6][b] = r2, Len(RHS(P2))=2, Pop Lenx2=4 Entries, Push LHS(P2)
0A	b\$	Table[0][A] = 2, Push 2
0A2	b\$	Table[2][b] = S4, Push b and 4
0A2b4	\$	Table[4][\$] = r3, Len(RHS(P3))=1, Pop Lenx2=2 Entries, Push LHS(P3)
0A2A	\$	Table[2][A] = 5, Push 5
0A2A5	\$	Table[5][\$] = r1, Len(RHS(P1))=2, Pop Lenx2=4 Entries, Push LHS(P1)
OS	\$	Table[0][S] = 1, Push 1
0S1	\$	Table[1][\$] = ACCEPT