Ví dụ: Dựa vào văn phạm LR(1) cho ngôn ngữ máy tính (Hình 2.25 trong sách) và bảng phân tích cú pháp SLR(1) (Hình 2.28 trong sách). Ta phân tích cú pháp cho chương trình dưới đây:

read A

res := A + 1

write res

|  |  |  |
| --- | --- | --- |
| Stack | Input stream | Comment |
| 0 | read A… |  |
| 0 read 1 | A res… | action[0, read] = s1 |
| 0 | stmt res… | action[1, id(A)] = b5 |
| 0 | smtm\_list res… | action[0, stmt] = b3 |
| 0 stmt\_list 2 | res :=… | action[0, stmt\_list] = s2 |
| 0 stmt\_list 2 id 3 | := A… | action[2, id(res)] = s3 |
| 0 stmt\_list 2 id 3 := 5 | A + 1… | action[3, :=] = s5 |
| 0 stmt\_list 2 id 3 := 5 | factor + 1… | action[5, id(A)] = b12 |
| 0 stmt\_list 2 id 3 := 5 | term + 1… | action[5, factor] = b9 |
| 0 stmt\_list 2 id 3 := 5 term 7 | + 1… | action[5, term] = s7 |
| 0 stmt\_list 2 id 3 := 5 | expr + 1… | action[7, +] = r7 |
| 0 stmt\_list 2 id 3 := 5 expr 9 | + 1… | action[5, expr] = s9 |
| 0 stmt\_list 2 id 3 := 5 expr 9 | add\_op 1… | action[9, +] = b14 |
| 0 stmt\_list 2 id 3 := 5 expr 9 add\_op 10 | 1 write… | action[9, add\_op] = s10 |
| 0 stmt\_list 2 id 3 := 5 expr 9 add\_op 10 | factor write… | action[10, number(1)] = b13 |
| 0 stmt\_list 2 id 3 := 5 expr 9 add\_op 10 | term write… | action[10, factor] = b9 |
| 0 stmt\_list 2 id 3 := 5 expr 9 add\_op 10 term 13 | write res… | action[10, term] = s13 |
| 0 stmt\_list 2 id 3 := 5 | expr write res… | action[13, write] = r8 |
| 0 stmt\_list 2 id 3 := 5 expr 9 | write res… | action[5, expr] = s9 |
| 0 stmt\_list 2 | stmt write res… | action[9, write] = r4 |
| 0 | stmt\_list write res… | action[2, stmt] = b2 |
| 0 stmt\_list 2 | write res… | action[0, stmt\_list] = s2 |
| 0 stmt\_list 2 write 4 | res $$ | action[2, write] = s4 |
| 0 stmt\_list 2 write 4 | factor $$ | action[4, id(res)] = b12 |
| 0 stmt\_list 2 write 4 | term $$ | action[4, factor] = b9 |
| 0 stmt\_list 2 write 4 term 7 | $$ | action[4, term] = s7 |
| 0 stmt\_list 2 write 4 | expr $$ | action[7, $$] = r7 |
| 0 stmt\_list 2 write 4 expr 6 | $$ | action[4, expr] = s6 |
| 0 stmt\_list 2 | stmt $$ | action[6, $$] = r6 |
| 0 | stmt\_list $$ | action[2, stmt] = b2 |
| 0 stmt\_list 2 | $$ | action[0, stmt\_list] = s2 |
| 0 | program | action[2, $$] = b1 |
| [done] |  |  |