SimpleAPL BNF 1

```
 \langle APL\_Prog \rangle \; ::= \; "BeliefUpdates:" \; \langle updatespecs \rangle \\ | \; "Beliefs:" \; \langle pliterals \rangle \\ | \; "Goals": \; \langle literals \rangle \\ | \; "PG \; rules:" \; \langle pgrules \rangle \\ \langle updatespecs \rangle \; ::= \; [\langle updatespec \rangle \; ("," \; \langle updatespec \rangle)^*] \\ \langle updatespec \rangle \; ::= \; "\{" \; \langle literals \rangle \; "\}" \; \langle aliteral \rangle \; "\{" \; \langle literals \rangle \; "\}" \\ \langle pliterals \rangle \; \; ::= \; [\langle pliteral \rangle \; ("," \; \langle pliteral \rangle)^*] \\ \langle literals \rangle \; \; ::= \; [\langle literal \rangle \; ("," \; \langle literal \rangle)^*] \\ \langle plan \rangle \; \; ::= \; \langle baction \rangle \; | \; \langle seqplan \rangle \; | \; \langle whileplan \rangle
```

where $\langle literal \rangle$ ($\langle pliteral \rangle$) denotes belief and goal literals (positive literals).

SimpleAPL BNF 2

```
\langle baction \rangle
                      ::= \aliteral\ | \testbelief\ | \testgoal\
\langle testbelief \rangle ::= \langle bquery \rangle "?"
\langle testgoal \rangle ::= \langle gquery \rangle "!"
⟨bquery⟩
                        := \langle literal \rangle \mid \langle bquery \rangle  "and" \langle bquery \rangle \mid
                               ⟨bquery⟩ "or" ⟨bquery⟩
\langle gquery \rangle
                        ::= \langle literal \rangle | \langle gquery \rangle "or" \langle gquery \rangle
(segplan)
                        ::= \langle plan \rangle ";" \langle plan \rangle
⟨ifplan⟩
                ::= "if" \langle bquery \rangle "then {" \langle plan \rangle "}" ["else {" \langle plan \rangle "}"]
⟨whileplan⟩ ::= "while" ⟨bquery⟩ "do {" ⟨plan⟩ "}"
⟨pgrules⟩
                        ::= [\langle pgrule \rangle (", " \langle pgrule \rangle)^*]
⟨pgrule⟩
                        ::= [\langle gauerv \rangle] "<-" \langle bauerv \rangle "|" \langle plan \rangle
```

where *(aliteral)* denotes the name of a belief update action