Pushdown Machines

A pushdown machine is described by:

- A finite set of input symbols including an end marker
- A finite set of stack symbols including a bottom marker
- A finite set of states including a starting state
- A control which assigns an exit or transition to each combination of input symbol, stack symbol and state
- A starting stack

Each transition consists of a stack operation, a state operation and an input operation.

Stack operations:

- PUSH(A) - push the symbol A onto the stack
- POP - pop the top stack symbol
- Leave the stack unchanged

State operations:

- STATE(S) - set the next state to state S

Input operations:

- ADVANCE - get the next input symbol
- RETAIN - do not advance, ie. retain the current input