A Pushdown automata (PDA) works similar as DFA.

A DFA can remember a finite amount of information, but a PDA can remember an infinite amount of information.

A PDA can be formally described as a 7-tuple (Q, ∑, S, δ, q0, I, F) −

1. Q: Finite number of states
2. ∑: Input alphabet
3. S: Stack
4. δ: Transition function: Q × (∑ ∪ {ε}) × S × Q × S*
5. q0: Initial state (q0 ∈ Q)
6. I: Initial stack top symbol (I ∈ S)
7. F: Final state

PDA = FSM + Stack

Where, FSM for finite state machine.

Components of PDA are,

1. Input tape
2. Control unit
3. Stack

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