Input: set of facts & set of rules

1. Go through all rules and for every rule:
   a) Check whether the antecedent is true given the known facts: The antecedent needs to **match** a fact[1] in the database; then the rule **fires**.
   b) If yes (=the rule fires): Check whether the consequent is already known (matches the database)
      i. If not: Add consequent to the set of known facts
2. Repeat 1 (go through all rules again) until no more new facts are added in one cycle.

Forward Chaining Example in Propositional Logic

Facts: A,B,C,D,E

Rules:

R1: Y & D → Z
R2: X & B & E → Y
R3: A → X
R4: C → L
R5: L & M → N

Cycle	Fired rules	Added facts
1	R3 R4	X L
2	R2	Y
3	R1	Z
4		

[[Rules-Based System]]