Pattern Matching NFA Includes

- A transition table containing a non-deterministic automaton N for the composite pattern of $p_1|p_2|...|p_n$
  - Create an NFA for each pattern p_i
  - Add a new start state s_0
  - Link s_0 to the start state of each $N(p_i)$
- The combined NFA must recognize the longest prefix of the input that is matched by a pattern.
- Method
  1. Add an accepting state to the current set of states
  2. Record the current input position and the pattern p_i corresponding to the accepting state
  3. Continue making transitiions until termination is reached, and mark as accepting state positions.
  4. On termination, move the forward pointer to the last match that occurred.
- If no pattern matches, then an error has occurred.

References

[1] Jeffrey D. Ulman, Ravi Sethi, Alfred V. Aho *Compilers: Principles, Techniques and Tools* copywrite 1986 by Bell Telephone Laboratories, Incorporated page 130-131