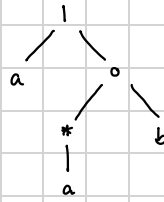


$$a|a^*b \equiv (a)|(a^*b)$$

Parse tree



NFA

Construction of NFA $M \equiv$ regular expression $/a|a^*b/$.

$$M = (Q, \Sigma, \delta, q_1, F);$$

$$Q = \{q_i \mid 1 \leq i \leq 9\},$$

$$\Sigma = \{a, b\},$$

$$\delta: Q \times \Sigma \cup \{\epsilon\} \rightarrow P(Q) = \{R \mid R \subseteq Q\},$$

$$F = \{q_9\}.$$

