$L_1 = \{ \text{words that end with } 0 \}$

$L_2 = \{ \text{words that start and end with the same letter} \}$

$L_1 \cup L_2 \text{ “product FA”}$
unreachable nodes (blue) and redundant node (red)

$L_1 \cup L_2$ optimized
$L_1 = \{\text{words that end with 0}\}$

$L_2 = \{\text{words that start and end with the same letter}\}$

$L_1 \cap L_2 \text{ "product FA"}$

$L_1 \cap L_2 \text{ optimized}$
\( L_1 = \{ \text{words that end with 0} \} \)

\( L_2 = \{ \text{words that start and end with the same letter} \} \)

\[ L_1 \cap L_2 = \{ u \cdot v \mid u \in L_1 \text{ and } v \in L_2 \} \]
NFA for $L_1 \cup L_2$