In-class Practice 8: Distinguishable Strings

An equivalence class for a language $L$ is a maximal set of strings that are pairwise indistinguishable with respect to $L$.

For a certain language $L \subseteq \{a, b\}^*$:

• there are exactly four equivalence classes;
• the strings $\varepsilon$, $a$, $ab$, and $b$ are all in different equivalence classes;
• the three strings $a$, $aa$, and $aaa$ are equivalent;
• the two strings $b$ and $aba$ are equivalent;
• $abb$ is in $L$;
• neither $\varepsilon$ nor $a$ is in $L$;
• no string beginning with $b$ is in $L$.

Draw an FA accepting $L$. 