In-class Practice 9: Regular Languages

Consider the language $M$ of all binary strings with equal numbers of 0’s and 1’s.

1. Provide an infinite set of strings that are pairwise distinguishable with respect to $M$.
2. Provide an infinite set of strings that are pairwise indistinguishable with respect to $M$.
3. Is the complement of $M$ regular or not? Justify your answer.