This homework is concerned with sets of finite length strings of 0’s and 1’s. Design finite automata for each of the following problems:

1. Every substring of three symbols contains a 1.
2. All strings of length divisible by 2 or 5.
3. Every string that contain two consecutive 0’s or two consecutive 1’s.
4. Every string that contains exactly one 1.
5. The complement of the set in item 4.