

Construct DFA that accept each of the following languages over the alphabet $\{0, 1\}$. We won't get to all of these in section.

1. (a) $(0 + 1)^*$
(b) \emptyset
(c) $\{\epsilon\}$
2. Every string except **000**.
3. All strings containing the substring **000**.
4. All strings *not* containing the substring **000**.
5. All strings in which the reverse of the string is the binary representation of a integer divisible by 3.
6. All strings w such that *in every prefix of w* , the number of **0**s and **1**s differ by at most 2.