1. NFAs
(a) What language does the following NFA accept?

(b) Create an NFA for the language “all binary strings that have a 1 as one of the last three digits”.

2. DFAs & Minimization
(a) Convert the NFA from 1a to a DFA, then minimize it.

(b) Minimize the following DFA:
3. Irregularity

(a) Let $\Sigma = \{0, 1\}$. Prove that $\{0^n1^n0^n : n \geq 0\}$ is not regular.

(b) Let $\Sigma = \{0, 1, 2\}$. Prove that $\{0^n(12)^m : n \geq m \geq 0\}$ is not regular.