Assignment 1

Automata & Theory of Computation

Student ID: **Name:**

1-1. Draw the transition graph that represents the following dfa

$$M = (\{q_0, q_1, q_2\}, \{0, 1\}, \delta, q_0, \{q_1\}),$$

where δ is given by

$$\delta(q_0, 0) = q_2, \quad \delta(q_0, 1) = q_1,$$
$$\delta(q_1, 0) = q_0, \quad \delta(q_1, 1) = q_1,$$
$$\delta(q_2, 0) = q_0, \quad \delta(q_2, 1) = q_1.$$

1-2. Show the accepted strings among 00, 01, 10, 11.

2. Find a dfa that accepts all the strings on {0, 1}, except those containing the substring 01.