Problem #1: Convert the following non-deterministic automata to deterministic automata. Describe the language accepted by this automata. (20 points)

Problem #2: Describe and write down the hybrid automata models for systems of sections 2.2.6 to 2.2.15 in the textbook. (50 points)

Problem #3: Describe a system different from the ones covered in the class or the textbook, that you might have encountered in your research, that can be modeled as a hybrid system. Give the hybrid automata model of the system. (10 points)