## Homework 2: Regular Languages and NFAs Theory of Computation (CSCI 3500) Total Points: 4

Soft Deadline: Friday, Feb. 26 by 11:59pm Hard Deadline: Tuesday, Mar. 2 by 11:59pm

Write the solution to each question on its own page.

All questions must be in order.

Your name must be on each page.

Then email me a single PDF file of your solution set.

All assignments not adhering to this will not be graded.

0.	Using the mathematical definition of a NFA prove that any NFA $M$ with more than one final state is equivalent to a NFA with a single final state.
1.	Give an NFA for the language of binary numbers who is a multiple of three.
2.	Using the mathematical definition of an NFA show that any finite language is regular. This time you should give a rigorous proof.