Reading. Read Chapter 3: “Regular Languages and Regular Grammars.” and Section 4.1: “Closure Properties of Regular Language.” There are several pre-recorded lectures pertaining to this assignment. They can be found following the links on the grid of notes or on Canvas under “Panoto Recording.”

A lot of material is covered. Two new mechanisms are introduced: regular expressions and grammars.

Assignment. Do some small number of the following exercises.

- Section 1.2: 14(a–f), 17(a–i)
- Section 3.1: All the problems are good, e.g., 9(a–d).
- Section 3.2: All the problems are good, e.g., 1–12.
- Section 3.3: Problems 1–7.
- Section 4.1: Problems 1–6.

We are especially interested in clear exposition and proof technique. (Some solutions sketches are in the back of the book.)

Challenge Problem. Prove that regular languages are closed under set difference by direct construction as in for intersection in Theorem 4.1.

Submission. Write up the solutions. You may use pen and paper, plain text, or \LaTeX. A single clear PDF document is preferred and that seems what most students are producing, so that is working out well. (Make sure scans of handwriting come out with enough contrast.) Submit it on Canvas by the end of the day Thu, 4 June 2020. (Actually anytime before 8am EST Friday is OK, but no later.)

Questions. If you have questions about how to do the problems attend one of the two Google Meets on Wed, 18 May 2020. You are welcome to send me e-mail: ryan@fit.edu.

Assessment. Ultimately the written proofs, your choice of exercises, and your participation in answering and asking questions, will determine your course grade. In small groups on-line, you will present an occasional solution and learn from the presentation of other students.