CS510 Fall 2021 Assignment #3

1. PDA: Exercise 2.10 (Note: in addition to informal description create your PDA on JFLAP and test it on multiple inputs.)
2. Pumping lemma for CFL: Problem 2.32
3. Construct PDA from CFG: Exercise 2.11 (Create your PDA on JFLAP, test it on multiple inputs, and save as JFLAP file.)
4. Turing machine: Exercise 3.1(a)
5. Turing machine: Exercise 3.2(c)
6. Turing machine: Exercise 3.8 (b)
7. Decidable language: Exercise 3.15 (b)(d)
8. Turing-recognizable language: Exercise 3.16 (c)
9. Formulate Church-Turing thesis. Is it a mathematical theorem? Explain your answer.

What to submit:

1. Type your answers. Use JFLAP software to create and test the automata from the assignment. Save automata as images and insert into your answers.
2. Submit your answers (including images of automata) as a pdf file.