EE 457 Class Project

Part A: You are to perform the design exercise on page 493-494 of your text. Qualifications to this assignment are:

1. You should use the Eagle Power System without the additional substation added per the chapter 10 (EE 456) design project. You can download power flow data EX2.sav from the website. This data contains positive sequence impedances that you can use to perform the fault analysis.
2. You do not need to write your own program for the fault analysis but rather use the PSS/E program. Instructions on using the PSS/E program will be provided.
3. Perform steps 5-a, b, and c on page 494 under the stated assumptions, and report on your work per the instructions at the bottom of the page.

Part B: You are to perform the design exercise on page 527 of your text using the Eagle Power System.

Part C: You are to perform the design exercise on pp. 578-579 of your text. Qualifications to this assignment are:

1. Again, use the Eagle Power System used in Parts A and B.
2. Use the PSS/E transient stability program. You will receive instructions on how to use this program.
3. You should only perform the analysis for faults on the low-voltage side of the transformers connecting generators to the network.
4. Summarize your analysis in terms of which machines were stable and which were not for clearing times of 0.1 seconds, and for those that were not, what you had to do to stabilize them. Provide relative rotor angle plots for each stable case.