

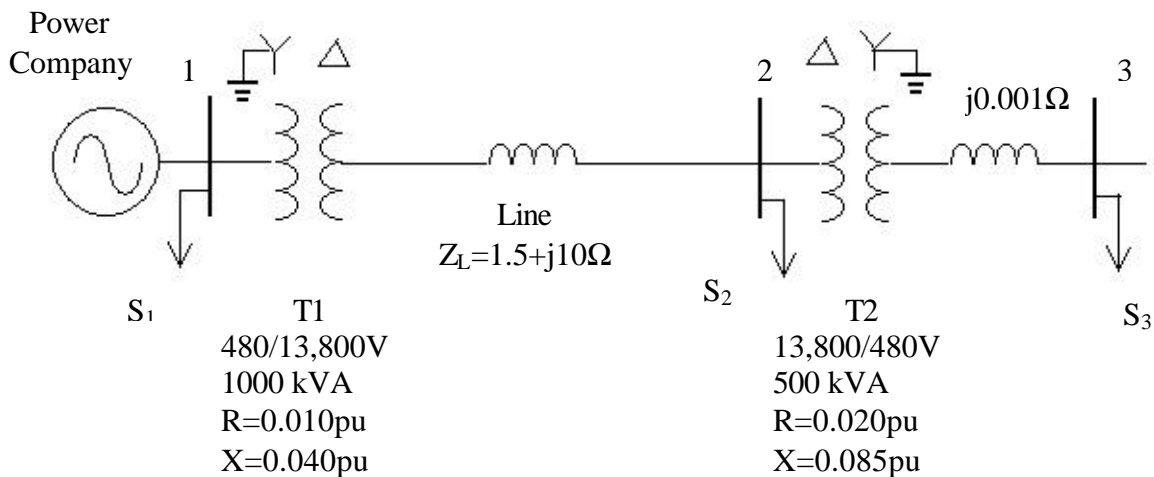
EE341 Projects

Part A: Use **Matlab** to analyze the following problems

Part B: Write a **C or C++ program** to solve the problems

Assume load at bus one is 1000kVA at power factor of 0.85 lagging, and at bus 2 is 1000kVA and power factor of 0.8 lagging, and at bus 3 is 500kVA and power factor of 0.9 leading. Assume the power company voltage is at 460V (line-line) and remains fix under the loads.

1. Give a table and compute voltage at bus 2 and 3 and the active and reactive power needed to be supplied.
2. Determine what it needs to be done to make the voltage at bus 2 within 3% of the rated and at bus 3 within 5% of the rated values.
3. Give a table and compute the active and reactive power needed for part 1 and 2. Analyze your results.
4. Attach your program as an appendix. Your program should be documented.



Note:

1. Projects will be performed by a team of two students
2. A report (in Word format) needs to be submitted by each team. No electronic submission will be accepted (do NOT send as Email attachments).
3. Part A (Matlab simulation) is Due on **Nov. 18th**
4. Part B (C programming) is Due on **Wed. of Final Exam week**