Course Project (10 marks)

The project objective is to develop a CAD (Computer Aided Design) tool to simulate simple AC circuits that contains only (independent voltage sources, independent current sources, dependent voltage source, dependent current source, resistors, capacitors, and inductors) to calculate the power delivered/absorbed by each component.

The project deliverable is **an executable file** that its input is a text file that contains the circuit netlist and the output file should show the voltages at all nodes and the currents in all branches in any optional output format (i.e., text file or display screen). Also, the students should submit **a Readme file** describing their CAD tool input file and output file details.

- The project can be done in groups of **3-4 students.**
- The submission will be through the email to the course TA.
- The project deadline is **Dec. 25, 2019 midnight. No extension will be granted.**

-The user should enter the used frequency

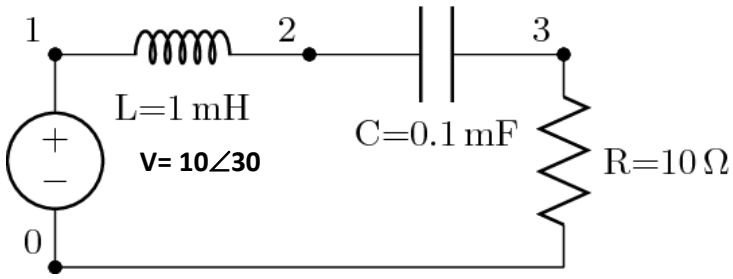
Example of input netlist:

Vs 1 0 10 30

L1 1 2 .001

C2 2 3 0.0001

R3 3 0 10



The output should be as follows: (Assuming V(0) = 0V)

Power (Vs) =

Power (L1) =

Power (C2) =

Power (R3) =