Project Plan Feedback

- Introduction
    - The plan has no mention about saving or loading circuits from files (also missing from UML)
    - Elaborate on what kind of analysis you are performing. You mentioned RMS values (typically used in steady state AC analysis). What aspects of the simulation results are you planning to display graphically?
        - DC steady state? (jatkuvan tilan DC analyysi)
            - Inductors look like short circuits
            - Capacitors look like open circuits
            - No need to solve differential equations
        - AC steady state? (jatkuvan tilan AC analyysi)
            - Usually done with phasors (osoitinlaskenta)
                - Generalized Ohm's law with impedances (complex numbers)
            - Time domain plots can be generated from phasors is desired
        - Transient? (muutosilmiöanalyysi)
            - You need to solve the circuit using differential equations, or alternatively using algebraic equations in the Laplace domain and get time-domain function with the inverse transformation.
- Software structure
    - GUI is specified only as a simple object. What is the structure of its internals? I.e. what kind of buttons, views, and shortcuts, etc. are you planning on adding to the GUI?
    - How does the GUI interact with the solver and the associated circuit?
    - You should think about proper division between simulation logic and GUI logic. I.e. the logic for setting up a simulation should not be dependent on the GUI logic, and ideally you could add other interfaces setting up circuits and simulations. This would be also useful for testing purposes.
    - The architecture seems to assume that every component has two terminals, even the ground label.
    - How does the solver interact with the circuit?
    - Missing components related to saving and loading netlists. This could be done in the Circuit class with member functions or static methods.
- Libraries used
    - Linear algebra (matrix multiplication and inversions) seem to be used in all types of analysis. It is not recommended to write your own code for this (error prone and libraries are **heavily** optimized)
    - How are you going to use odeint? Are you planning to do transient analysis in the time domain?
- Schedule

- GUI development can be started earlier (at least for the general layout, etc). This can be surprisingly time consuming.