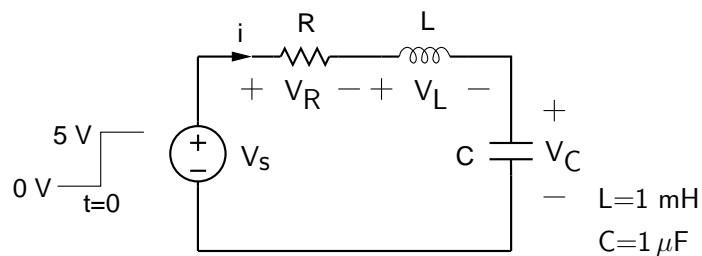


## ee101\_rlc\_2.sqproj

### Description



For the circuit shown in the figure,

1. Show that the condition for critically damped response is  $R = 63.2\text{ }\Omega$ .
2. For  $R = 20\text{ }\Omega$ , derive expressions for  $i(t)$  and  $V_L(t)$  for  $t > 0$  (Assume that  $V_C(0^-) = 0\text{ V}$  and  $i_L(0^-) = 0\text{ A}$ ). Plot them versus time.
3. Repeat (2) for  $R = 100\text{ }\Omega$ .
4. Compare your answers with simulation results.