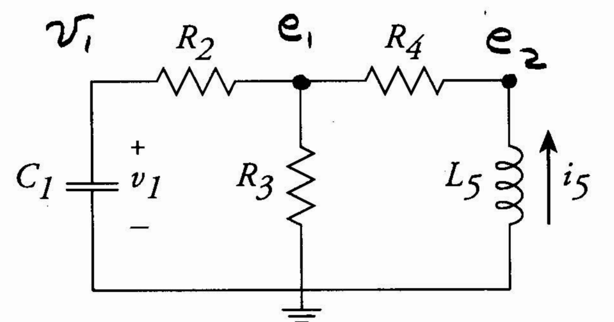
To find state-space equations for this system,

1. Treat v_1, i_5 as sources
2. Find i_1, v_5 in terms of v_1, i_5
3. Use constitutive laws to find $\frac{d}{dt} v_1$, $\frac{d}{dt} i_5$

We can use the loop method or node method. I will use the node method (even though loop method would have one fewer equation)



The node equations are:

$$e_1: \quad (G_2 + G_3 + G_4)\, e_1 - G_4 e_2 = G_2 v_1$$
$$e_2: \quad -G_4 e_1 + G_4 e_2 = i_5$$

Plugging in numbers,

$$1.5\, e_1 - e_2 = 0.25\, v_1$$
$$-e_2 + e_2 = i_5$$

Solving (by row reduction or matrix inverse),

$$\begin{pmatrix} e_1 \\ e_2 \end{pmatrix} = \begin{pmatrix} 0.5 v_1 + 2 i_5 \\ 0.5 v_1 + 3 i_5 \end{pmatrix}$$

Now, find $\dot{v}_1$, $\dot{i}_5$

$$\dot{v}_1 = \frac{1}{C_1} i_1 = 2 i_1$$

i_1 can be found by applying KCL @ v_1:

$$i_1 + \frac{v_1 - e_1}{R_2} = 0$$

$$\Rightarrow i_1 = \frac{e_1 - v_1}{R_2} = \frac{1}{4}\left[(0.5 v_1 + 2 i_5) - v_1\right]$$

$$= -0.125 v_1 + 0.5 i_5$$

$$\Rightarrow \dot{v}_1 = 2 i_1 = -0.25 v_1 + i_5$$

To find $\dot{i}_5$, use

$$\dot{i}_5 = \frac{1}{L_5} v_5 = \frac{1}{L_5}(-e_2)$$

$$= \frac{1}{2}\left(-0.5 v_1 - 3 i_5\right)$$

$$= -0.25 v_1 - 1.5 i_5$$

Therefore,

$$\frac{d}{dt}\begin{bmatrix} v_1 \\ i_5 \end{bmatrix} = \begin{bmatrix} -0.25 & 1 \\ -0.25 & -1.5 \end{bmatrix}\begin{bmatrix} v_1 \\ i_5 \end{bmatrix}$$