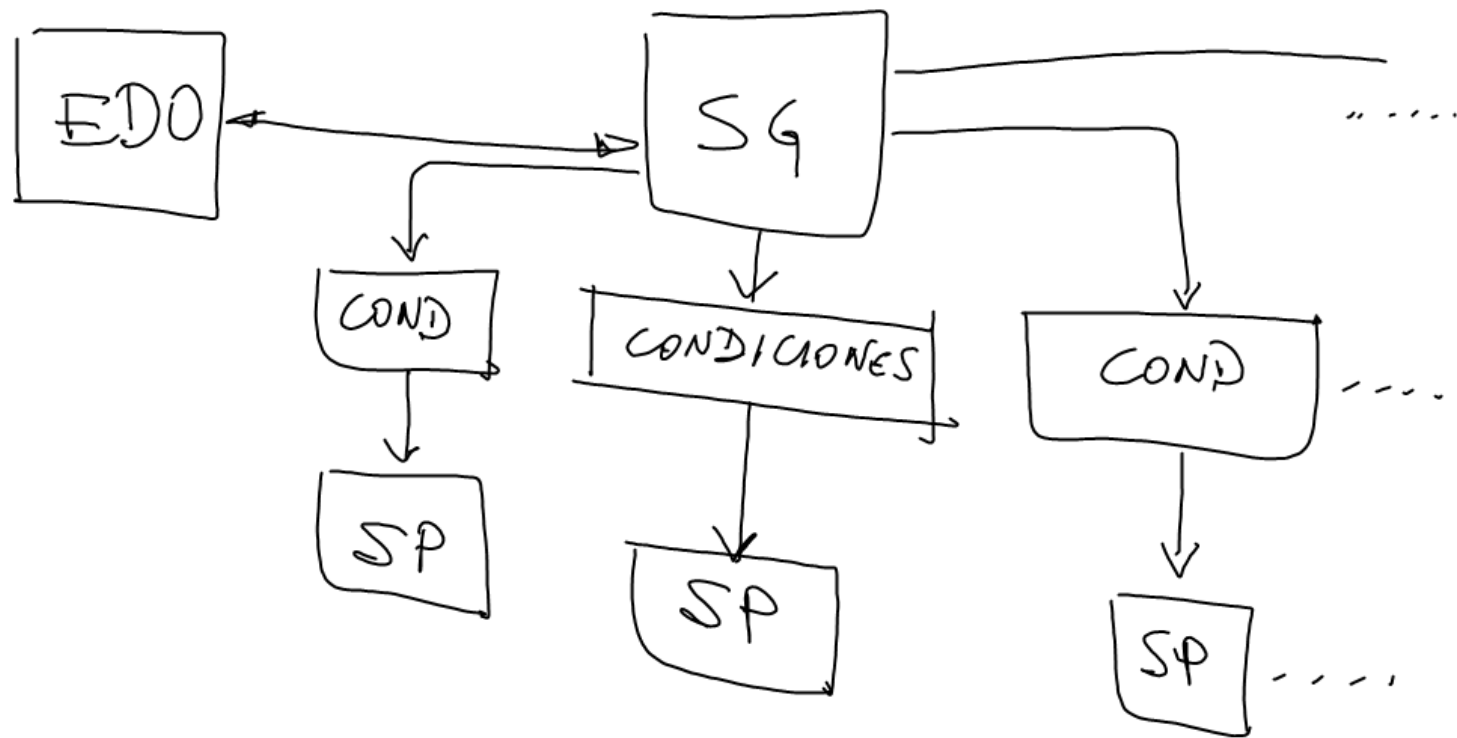


$\left\{ \begin{array}{l} \text{Solución general} \\ \text{soluciones particulares} \end{array} \right.$

Clasificación general de las ED.



$$\frac{d^2 y}{dt^2} + g = 0 \rightarrow y = -\frac{g}{2} t^2 + C_1 t + C_2$$

SOLUCIÓN GENERAL

$$t=0 \quad y(0) = 2 \text{ m} \quad y'(0) = (67) \operatorname{sen}\left(\frac{\pi}{4}\right)$$

$$-\frac{g}{2}(0)^2 + C_1(0) + C_2 = 2 \Rightarrow C_2 = 2$$

$$\frac{dy}{dt} = -gt + C_1$$

$$-g(0) + C_1 = 67 \operatorname{sen}\left(\frac{\pi}{4}\right) \Rightarrow C_1 = 67 \operatorname{sen}\left(\frac{\pi}{4}\right)$$

$$y = -\frac{9.81}{2} t^2 + 67 \operatorname{sen}\left(\frac{\pi}{4}\right) t + 2$$

SOLUCIÓN PARTICULAR

