

Contoh:

* Double Integrator :



$$\dot{x} = \underbrace{\begin{bmatrix} 0 & 1 \\ 0 & 0 \end{bmatrix}}_A x + \begin{bmatrix} 0 \\ 1 \end{bmatrix} u$$

$$\begin{aligned} \dot{x}_1 &= x_2 \\ \dot{x}_2 &= u \end{aligned}$$

$$\det[\lambda I - A] = 0$$

$$\det \left\{ \begin{bmatrix} \lambda & 0 \\ 0 & \lambda \end{bmatrix} - \begin{bmatrix} 0 & 1 \\ 0 & 0 \end{bmatrix} \right\} = 0$$

$$\det \begin{bmatrix} \lambda & -1 \\ 0 & \lambda \end{bmatrix} = \lambda^2 = 0$$

$$\lambda_1 = \lambda_2 = 0$$

non-negative

TIDAK
STABIL

