GENERALIZED L.S.PONTRYAGIN'S TEST EXAMPLE

\[ x^{(k)} + a_{k-1}x^{(k-1)} + \ldots + a_1x^{(1)} + a_0x = u, \]
\[ y^{(s)} + b_{s-1}y^{(s-1)} + \ldots + b_1y^{(1)} + b_0y = v, \]
\[ t \in [0, T], \quad x, y \in R^2, \quad u \in P, \quad v \in Q \]

\( u \) – the first player control
\( v \) – the second player control

Payoff: \( \varphi(x(T), y(T)) = |x(T) - y(T)| \)

The first player minimizes the payoff value, the second one maximizes it.