A **deviation constraint mechanism** (dc-mechanism) is a triple (M, D_i, g). As usual, the joint strategy space $M = \Pi_{i \in N} M_i$ where M_i stands for the strategy set of agent i. The outcome function g maps every joint strategy to an alternative, i.e. $g : M \to A$. For each agent i, a constraint function, D_i, maps each **joint strategy of the others** m_{-i} to a subset of M_i, i.e. $D_i : M_{-i} \to M_i$. In a dc-mechanism, if an agent i would best respond to strategy m_{-i}, he is constraint to choose his strategy from $D_i(m_{-i})$.

Given a preference profile R, a joint strategy m is an equilibrium of the dc-mechanism, (M, D_i, g), at R if and only if for each $i \in N$ and $m'_i \in D_i(m)$, $g(m)\ R_i\ g(m'_i, m_{-i})$. We denote the equilibria of (M, D_i, g) at R, by $E(M, D_i, g, R)$.

Given $N \geq 3$, prove or disprove that F is Nash-implementable if and only if there exists a dc-mechanism, (M, D_i, g), such that for each preference profile R, $F(R) = E(M, D_i, g, R)$.