Part 1 (Composition Synthesis)
Given the following target $T$ service and available services $A_1$, $A_2$, check whether a composition exists. If it does exist, produce the output relation of orchestrator generator. If not, single out the target state that cannot be simulated (ND-simulated), and propose a change to the available services so as to guarantee the composition.

(Notice: to check for composition existence, build asynchronous product of available services and check simulation/ND-simulation as appropriate.)

Part 2 (Theoretical Question)
Prove that the following well-known theorem holds.

**Theorem:** Let $s$, $t$ be two states of two finite transition systems. If there exists a bisimulation between $s$ and $t$, then $s$ and $t$ satisfy (make true) the same formulas of HennessyMilner Logic.